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RECORD OF CORRECTIONS

The table below is to record Section IV Notice to Mariners corrections affecting this volume.
Sub paragraph numbers in the margin of the body of the book are to assist the user with corrections to this volume from these amendments.

Weekly Notices to Mariners (Section IV)

2004	2005	2006	2007

IMPORTANT – SEE RELATED ADMIRALTY PUBLICATIONS

This is one of a series of publications produced by the United Kingdom Hydrographic Office which should be consulted by users of Admiralty Charts. The full list of such publications is as follows:

Notices to Mariners (Annual, permanent, temporary and preliminary), Chart 5011 (Symbols and abbreviations), The Mariner's Handbook (especially Chapters 1 and 2 for important information on the use of UKHO products, their accuracy and limitations), Sailing Directions (Pilots), List of Lights and Fog Signals, List of Radio Signals, Tide Tables and their digital equivalents.

All charts and publications should be kept up to date with the latest amendments.

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NP 46

MEDITERRANEAN PILOT

Volume II

The south coast of France from Cap Cerbère to the Franco–Italian Frontier; the islands of Corse and Sardegna; the west coast of Italy from the Franco–Italian Frontier to Latitude 39° North, including Arcipelago Toscano.

ELEVENTH EDITION
2004

PUBLISHED BY THE UNITED KINGDOM HYDROGRAPHIC OFFICE

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First published 1877
2nd Edition 1885
3rd Edition 1895
4th Edition 1905
5th Edition 1916
6th Edition 1925
7th Edition 1937
8th Edition 1952
9th Edition 1965
10th Edition 1978

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PREFACE

The Eleventh Edition of the Mediterranean Pilot Volume II has been compiled by Lieutenant Commander M. J. Danson–Hatcher, Royal Navy, and contains the latest information received in the United Kingdom Hydrographic Office to the date given below.

This edition supersedes the Tenth Edition (1978) and Supplement No 10 (1998), which are cancelled.

Information on currents and ice has been based on data supplied by the Meteorological Office, Exeter.

The following sources of information, other than UKHO Publications and Ministry of Defence papers, have been consulted:

British

Fairplay Ports Guide 2003
Ports of the World 2002
Whitaker's Almanack 2003
The Statesman's Yerarbook 2004
Lloyds List

French

French Charts
Instructions Nautiques D2.1 De la frontière espagnol au Cap de l'Aigle 2000
Instructions Nautiques D2.2 Du Cap Croisette à la frontière italienne 2001
Instructions Nautiques D2.3 côtes de Corse 2001
Local Port Authorities
Port Handbooks produced by Port Authorities

Italian

Italian Charts
Portolano del Mediterraneo Generalità – Parte 1 1979
Portolano del Mediterraneo Volume 1/A 1999
Portolano del Mediterraneo Volume 1/B 1999
Portolano P1 Dal confine italo – francese a Marinella 2002
Portolano P2 Da Marina di Carrara a Sabaudia e Corsica 2002
Portolano P3 Sardegna e Bocche di Bonifacio 2002
Istituto Idrografico della Marina – basi misurate 1987
Local Port Authorities
Port Handbooks produced by Port Authorities

Dr D W Williams
United Kingdom National Hydrographer

The United Kingdom Hydrographic Office
Admiralty Way
Taunton
Somerset TA1 2DN
England
25th March 2004

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EXPLANATORY NOTES

Admiralty Sailing Directions are intended for use by vessels of 12 m or more in length. They amplify charted detail and contain information needed for safe navigation which is not available from Admiralty charts, or other hydrographic publications. They are intended to be read in conjunction with the charts quoted in the text.

This volume of the Sailing Directions will be kept up-to-date by the issue of a new edition at intervals of approximately 3 years, without the use of supplements. In addition important amendments which cannot await the new edition are published in Section IV of the weekly editions of *Admiralty Notices to Mariners*. A list of such amendments and notices in force is published in the last weekly edition for each month. Those still in force at the end of the year are reprinted in the *Annual Summary of Admiralty Notices to Mariners*.

This volume should not be used without reference to Section IV of the weekly editions of Admiralty Notices to Mariners.

CD–ROM

Status. A compact disc is provided at the back of this volume. The paper publication of Sailing Directions satisfies the requirements of Chapter V of the International Convention for the Safety of Life at Sea. The CD version does not satisfy these requirements and should only be used in conjunction with the paper publication and any amendments affecting the paper publication. Where any discrepancy exists between data on the CD and in the paper publication of Sailing Directions, the paper publication (inclusive of amendments) is to be relied upon.

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References to hydrographic and other publications

The Mariner's Handbook gives general information affecting navigation and is complementary to this volume.

Ocean Passages for the World and *Routeing Charts* contain ocean routeing information and should be consulted for other than coastal passages.

Admiralty List of Lights should be consulted for details of lights, lanbys and fog signals, as these are not fully described in this volume.

Admiralty List of Radio Signals should be consulted for information relating to coast and port radio stations, radio details of pilotage services, radiobeacons and direction finding stations, meteorological services, radio navigational aids, Global Maritime Distress and Safety System (GMDSS) and Differential Global Positioning System (DGPS) stations, as these are only briefly referred to in this volume.

Admiralty Maritime Communications is a comprehensive guide on all aspects of maritime communications for the yachtsman and small craft user. It provides general information on Global Maritime Distress and Safety System (GMDSS), the management of VHF, Maritime Safety Information, NAVTEX, Inmarsat and Radio Facsimile, and detailed information and procedures for marinas and harbours used by small craft.

Annual Summary of Admiralty Notices to Mariners contains in addition to the temporary and preliminary notices, and amendments and notices affecting Sailing Directions, a number of notices giving information of a permanent nature covering radio messages and navigational warnings, distress and rescue at sea and exercise areas.

The International Code of Signals should be consulted for details of distress and life-saving signals, international ice-breaker signals as well as international flag signals.

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Remarks on subject matter

Buoys are generally described in detail only when they have special navigational significance, or where the scale of the chart is too small to show all the details clearly.

Chart index diagrams in this volume show only those Admiralty charts of a suitable scale to give good coverage of the area. Mariners should consult NP 131 *Catalogue of Admiralty Charts and Publications* for details of larger scale charts.

Chart references in the text normally refer to the largest scale Admiralty chart but occasionally a smaller scale chart may be quoted where its use is more appropriate.

Firing, practice and exercise areas. Except for submarine exercise areas, details of firing, practice and exercise areas are not mentioned in Sailing Directions, but signals and buoys used in connection with these areas are sometimes mentioned if significant for navigation. Attention is invited to the Annual Notice to Mariners on this subject.

Names have been taken from the most authoritative source. When an obsolete name still appears on the chart, it is given in brackets following the proper name at the principal description of the feature in the text and where the name is first mentioned.

Tidal information relating the daily vertical movements of the water is not given; for this *Admiralty Tide Tables* should be consulted. Changes in water level of an abnormal nature are mentioned.

Time difference used in the text when applied to the time of High Water found from the *Admiralty Tide Tables*, gives the time of the event being described in the Standard Time kept in the area of that event. Due allowance must be made for any seasonal daylight saving time which may be kept.

Wreck information is included where drying or below-water wrecks are relatively permanent features having significance for navigation or anchoring.

Units and terminology used in this volume

Latitude and Longitude given in brackets are approximate and are taken from the chart quoted.

Bearings and directions are referred to the true compass and when given in degrees are reckoned clockwise from 000° (North) to 359°
Bearings used for positioning are given from the reference object.
Bearings of objects, alignments and light sectors are given as seen from the vessel.
Courses always refer to the course to be made good over the ground.

Winds are described by the direction from which they blow.

Tidal streams and currents are described by the direction towards which they flow.

Distances are expressed in sea miles of 60 to a degree of latitude and sub-divided into cables of one tenth of a sea mile.

Depths are given below chart datum, except where otherwise stated.

Heights of objects refer to the height of the structure above the ground and are invariably expressed as "... m in height".

Elevations, as distinct from heights, are given above Mean High Water Springs or Mean Higher High Water whichever is quoted in *Admiralty Tide Tables*, and expressed as, "an elevation of ... m". However the elevation of natural features such as hills may alternatively be expressed as "... m high" since in this case there can be no confusion between elevation and height.

Metric units are used for all measurements of depths, heights and short distances, but where feet/fathoms charts are referred to, these latter units are given in brackets after the metric values for depths and heights shown on the chart.

Time is expressed in the four-figure notation beginning at midnight and is given in local time unless otherwise stated. Details of local time kept will be found in *Admiralty List of Radio Signals Volume 2*.

Bands is the word used to indicate horizontal marking.

Stripes is the word used to indicate markings which are vertical, unless stated to be diagonal.

Conspicuous objects are natural and artificial marks which are outstanding, easily identifiable and clearly visible to the mariner over a large area of sea in varying conditions of light. If the scale is large enough they will normally be shown on the chart in bold capitals and may be marked "conspic".

Prominent objects are those which are easily identifiable, but do not justify being classified as conspicuous.

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ABBREVIATIONS

The following abbreviations are used in the text.

Directions

N	north (northerly, northward, northern, northernmost)
NNE	north-north-east
NE	north-east
ENE	east-north-east
E	east
ESE	east-south-east
SE	south-east
SSE	south-south-east
S	south
SSW	south-south-west
SW	south-west
WSW	west-south-west
W	west
WNW	west-north-west
NW	north-west
NNW	north-north-west

Navigation

AIS	Automatic Indentification System
CVTS	Co–operative Vessel Traffic System
DGPS	Differential Global Positioning System
GPS	Global Positioning System
Lanby	Large automatic navigation buoy
MCTS	Marine Communications and Traffic Services Centres
ODAS	Ocean Data Acquisition System
Satnav	Satellite navigation
TSS	Traffic Separation Scheme
VMRS	Vessel Movement Reporting System
VTC	Vessel Traffic Centre
VTS	Vessel Traffic Services
VTMS	Vessel Traffic Management System

Offshore operations

ALC	Articulated loading column
ALP	Articulated loading platform
CALM	Catenary anchor leg mooring
CBM	Conventional buoy mooring
ELSBM	Exposed location single buoy mooring
FPSO	Floating production storage and offloading vessel
FSO	Floating storage and offloading vessel
PLEM	Pipe line end manifold
SALM	Single anchor leg mooring system
SALS	Single anchored leg storage system
SBM	Single buoy mooring
SPM	Single point mooring

Organizations

IALA	International Association of Lighthouse Authorities
IHO	International Hydrographic Organization
IMO	International Maritime Organization
NATO	North Atlantic Treaty Organization
RN	Royal Navy
UKHO	United Kingdom Hydrographic Office

Radio

DF	direction finding
HF	high frequency
LF	low frequency
MF	medium frequency
Navtex	Navigational Telex System
RT	radio telephony
UHF	ultra high frequency
VHF	very high frequency
WT	radio (wireless) telegraphy

Rescue and distress

AMVER	Automated Mutual Assistance Vessel Rescue System
EPIRB	Emergency Position Indicating Radio Beacon
GMDSS	Global Maritime Distress and Safety System
JRCC	Joint Rescue Cooperation Centre
MRCC	Maritime Rescue Co-ordination Centre
MRSC	Maritime Rescue Sub-Centre
SAR	Search and Rescue

Tides

HAT	Highest Astronomical Tide
HW	High Water
LAT	Lowest Astronomical Tide
LW	Low Water
MHHW	Mean Higher High Water
MHLW	Mean Higher Low Water
MHW	Mean High Water
MHWN	Mean High Water Neaps
MHWS	Mean High Water Springs
MLHW	Mean Lower High Water
MLLW	Mean Lower Low Water
MLW	Mean Low Water
MLWN	Mean Low Water Neaps
MLWS	Mean Low Water Springs
MSL	Mean Sea Level

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Times

ETA	estimated time of arrival	UT	Universal Time
ETD	estimated time of departure	UTC	Co-ordinated Universal Time

Units and miscellaneous

°C	degrees Celsius	kHz	kilohertz
DG	degaussing	km	kilometre(s)
dwt	deadweight tonnage	kn	knot(s)
DZ	danger zone	kW	kilowatt(s)
feu	forty foot equivalent unit	m	metre(s)
fm	fathom(s)	mb	millibar(s)
ft	foot (feet)	MHz	megahertz
g/cm^3	gram per cubic centimetre	mm	millimetre(s)
GRP	glass reinforced plastic	MW	megawatt(s)
grt	gross register tonnage	No	number
gt	gross tonnage	nrt	nett register tonnage
hp	horse power	teu	twenty foot equivalent unit
hPa	hectopascal		

Vessels and cargo

CDC	Certain Dangerous Cargo	MV	Motor Vessel
HMS	Her (His) Majesty's Ship	MY	Motor Yacht
HSC	High Speed Craft	POL	Petrol, Oil & Lubricants
LASH	Lighter Aboard Ship	RMS	Royal Mail Ship
LHG	Liquefied Hazardous Gas	Ro-Ro	Roll-on, Roll-off
LNG	Liquefied Natural Gas	SS	Steamship
LOA	Length overall	ULCC	Ultra Large Crude Carrier
LPG	Liquefied Petroleum Gas	VLCC	Very Large Crude Carrier

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GLOSSARY

Terms occasionally found on the charts and in Sailing Directions; and to assist the mariner in the use of French and Italian charts and publications

FRENCH

French	*English*
abri, abrité	shelter, sheltered
aigu, –e	pointed, sharp
aiguille	needle
amer	landmark, beacon
amont	upstream, landward
appontement	landing stage
anse	bay, cove
argile	clay
arrière–port	inner port
asséchant	drying
aval	downstream, seaward
avant–port	outer port
azur	blue
baie	bay
balise	beacon
baliser	to mark
banc	bank
barre	bar
bas,–se	low
basse	shoal
basse mer	low water
bassin	basin, dock
bassin à flot	wet basin
batterie	battery
blanc, –he	white
bleu, –e	blue
bois	woods
bouche	mouth of a river
boue	mud
bouée	buoy
brisant, brisants	shoal, breakers
brise–lames	breakwater
brouillard	fog
brume	mist
butte	knoll, mound
caboteur	coaster
cale	ramp, slip
canal	canal, channel
cap	cape, headland
carré, –e	square
chaîne	chain, range of mountains
champ–de–tir	firing range
chantier	dockyard
château	castle
château d'eau	water tower
chausée	bank, causeway
chenal	channel
clocher	steeple, belfry
col	neck, mountain pass
colline	hill
côte	coast
courant	current, stream
couvent	convent
crête	ridge, crest
crique	creek
croix	cross
darse	basin
débarcadère	wharf, landing place
découvrant	uncovering, drying
détroit	strait, narrow
déversoir	weir
digue	mole, breakwater
douane	customs
droit	right (side)
duc d'albe	dolphin
dur, –e	hard
échouage	beaching
écluse	lock of a canal or basin, sluice
écueil	rock, reef
église	church
épave	wreck
épi	short mole, spur
est	east
estuaire	estuary
étale	slack water
étier	a creek which can receive small vessels
falaise	cliff
flèche	spire
fleuve	river, stream
flot	flood tide
forêt	forest
fosse	ditch, a deep
gabare	lighter
galets	shingle
gauche	left (side)
golfe	gulf
goulet	inlet, narrow entrance
grand, –e	great
gravier	gravel
grève	sandy beach
gris, –e	grey
gros, –se	coarse, large
guérite	watch–tower, turret
guet	lookout
haut, –e	high, tall
haut–fond	a shoal
hauturier	deep–sea
havre	haven
île	island, isle
îlot	islet
jaune	yellow
jetée	jetty
jusant	ebb tide
lac	lake
lamanage	inshore pilotage
large	broad, wide
maison	house
marais	swamp, marsh
marée	tide
menhir	a large raised stone
mer	sea
méridional, –e	southern
milieu	middle
môle	mole, pier
mont, montagne	mount, mountain
morte–eau	neap tide
mouillage	anchorage
moulin	mill
mur	wall
musoir	mole, pierhead

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FRENCH (continued)

French	*English*
neuf, –ve	new
nez	nose, promontory
noeud	knot
noir, –e	black
nord	north
nouveau, –el, –elle	new
occidental, –e	western
oriental, –e	eastern
ouest	west
passe	passage, pass
pertuis	opening or strait
petit,–e	small
phare	lighthouse
pic	peak
pierre	stone
pignon	gable
pin	pine or fir tree
plage	shore, beach
plaine	plain
plat, –e	flat, level
plateau	table land, or flat below water
pleine mer	high water
pointe	point
pont	bridge, deck
port	port, harbour
presqu'île	peninsula
quai	quay, wharf
rade	road, roadstead
raz	race, violent tidal stream
récif	reef
redoute	redoubt, fort

French	*English*
ressac	surf
rivage	shore
rive	bank of river
rivière	river
roche	rock
rocher	rock generally above water
rond, –e	round
rouge	red
roux, rousse	reddish
ruisseau	rivulet
sable	sand
sablon	fine sand
saline	salt water lagoon, salt works
septentrional, –e	northern
sommet	summit
sud	south
tenue	holding ground
terre–plein	levelled ground, platform
tertre	hillock, knoll
tête	head
torrent	stream, torrent
tour	tower
tourelle	small tower, turret
traverse	shallow ridge across channel or river
val	narrow valley
vallée	valley
vasière	mudbank
vert, –e	green
vieil, vieille, vieux	old, ancient
village	village
ville	town
vive–eau	spring tide

ITALIAN

Italian	*English*
alto, alta	high, lofty
ancorraggio	anchorage
antemurale	seawall
arcipelago	archipelago
avamporto	outer harbour
bacino	basin, dock
baia	bay
banchina	quay, wharf
banco, banchi	bank, banks
barra	bar
bassafondo	shoal, shallow
bianco	white
bocca, bocche	mouth of river, strait, s
cala, calanca	creek, small bay
calata	wharf
campanile	belfry, steeple
campo	plain
canale	canal, channel
canneto	reedy marsh
capo	cape, headland
casa	house
casino	country house
castel, castellazo, castello	castle
castelluccio	small castle
chiesa	church
citta	city, town
collina	hill
darsena	basin, wet dock
diga	breakwater, mole

Italian	*English*
fiumara	river
fiume	river
fiumicino	rivulet
forte	fort
fortino	small fort
fossa	cutting
golfo	gulf, bay
grande	great
imboccatura	mouth of a river
insenatura	cove, inlet
isola, isole	island, islands
isolotto	islet
istmo	isthmus
lago	lake
levante	east
macchia	thicket
mare	sea
marina	beach, landing place
mezzo	middle
molo	mole
montagna	mountain
monte	mount, mountain, hill
nero	black
nuovo	new
palude	swamp, marsh
passagio	passage
passo	pass, channel

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ITALIAN (continued)

Italian	*English*
penisola	peninsula
piano	plain, flat
picco	peak
piccolo, picciolo	small, little
pietra	stone
poggio	mound, small hill
ponente	west
ponte	bridge
pontile	pier
porticciolo	small entrance
porto	port, harbour
promontorio	promontory
punta	point, summit
rada	roadstead
rocca	fortress on rock
rosso	red
rotondo	round
sabbia	sand
salina	salt water lagoon
santo	holy, sacred
scali	steps
scalo	landing place
scirocco	south–east
scogli	reef
scoglio	rock, reef
scogliera	ridge of rocks
secca	shoal, sandbank
secche	group of shoals, reef
seno	small bay, creek
spiaggia	beach
stagno	lake, pond
strada	road
stretto	strait
taglio	cut
testa, testata	head
tondo	round
torre	tower
torrente	stream, torrrent
tramontana	north
valle	valley
vecchio	old, ancient
via	road, street
villa	villa
vortici	eddy, whirlpool

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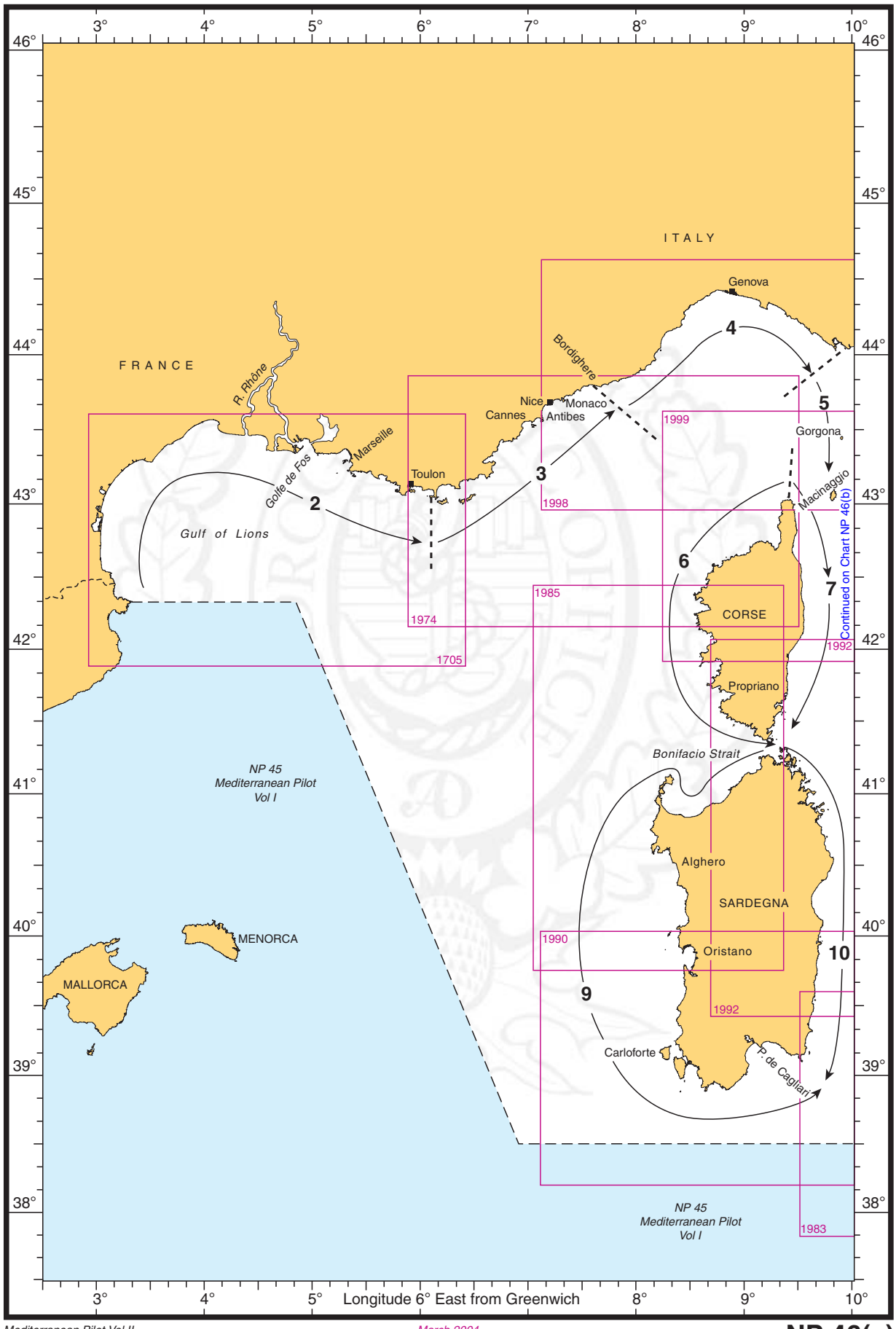
Chapter Index Diagram



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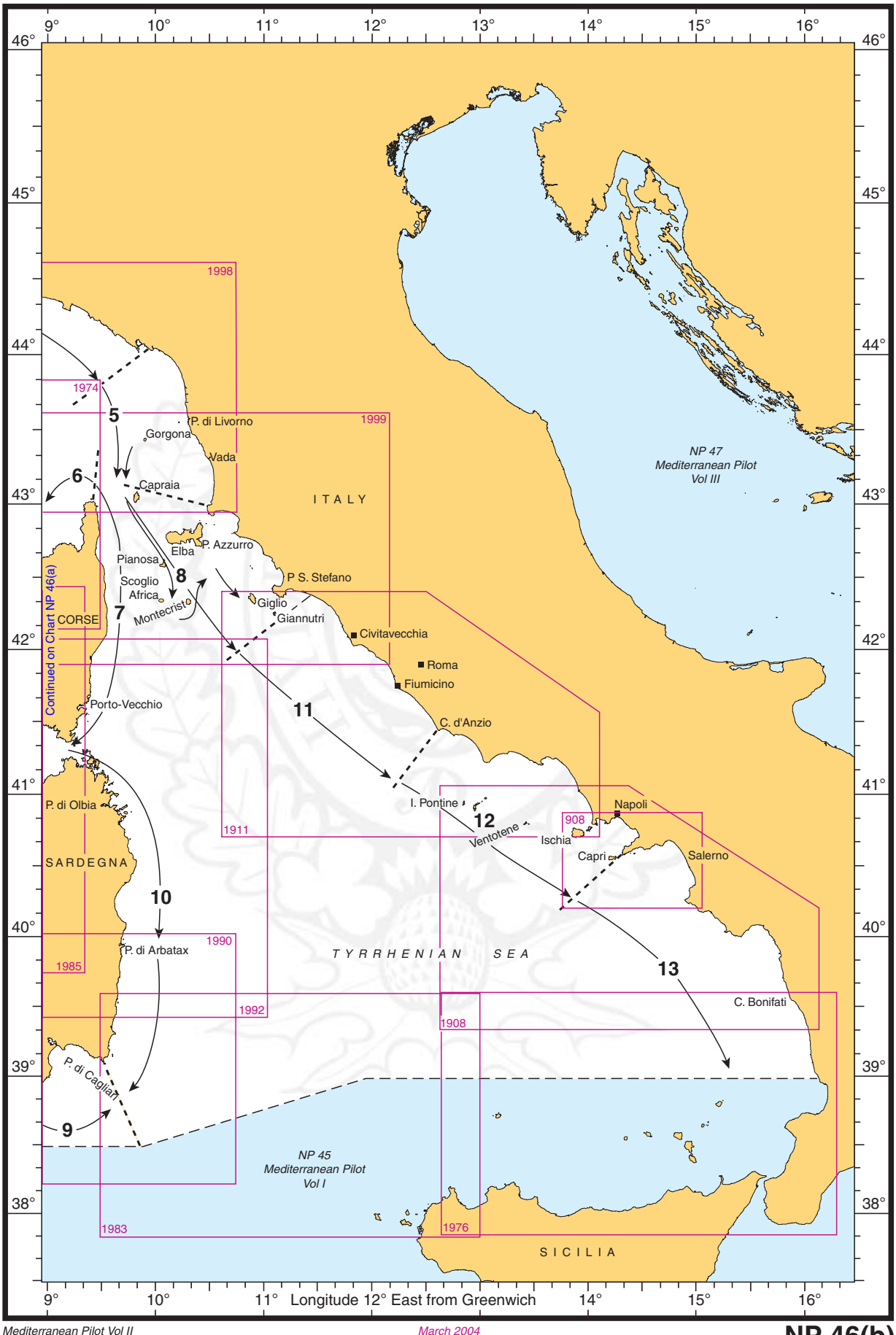
Chapter Index Diagram



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LAWS AND REGULATIONS APPERTAINING TO NAVIGATION

While, in the interests of the safety of shipping, the United Kingdom Hydrographic Office makes every endeavour to include in its hydrographic publications details of the laws and regulations of all countries appertaining to navigation, it must be clearly understood:-

(a) that no liability whatsoever can be accepted for failure to publish details of any particular law or regulation, and

(b) that publication of details of a law or regulation is solely for the safety and convenience of shipping and implies no recognition of the international validity of the law or regulation.

MEDITERRANEAN PILOT VOLUME II

CHAPTER 1

NAVIGATION AND REGULATIONS COUNTRIES AND PORTS NATURAL CONDITIONS

NAVIGATION AND REGULATIONS

LIMITS OF THE BOOK

Charts 1780, 1440

Area covered

1.1

1 This volume contains sailing directions for the Mediterranean coast of France, the W coast of Italy to a position close N of Capo Suvero (39°00′N, 16°10′E) and the islands of Corse (France) and Sardegna (Italy).

1.2

1 The seaward limit is bounded by;

	Lat N	Long E
Spain/France border	42°26′	3°10′
E to position	42°26′	5°00′
Thence SSE to position	38°30′	7°00′
Thence E to position	38°30′	10°00′
Thence ENE to position	39°00′	12°00′
Thence E to close N of Capo Suvero	39°00′	16°10′

NAVIGATIONAL DANGERS AND HAZARDS

General navigation

1.3

1 The area covered by this volume contains a number of important ocean routes linking major national ports with the W and E regions of the Mediterranean and beyond. The position of Corse and Sardegna, and particularly the Bonifacio Strait which separates them, concentrates traffic S of Sardegna and creates alternative routes between the W basin of the Mediterranean Sea and the W coast of Italy and the E basin of the Mediterranean and S coast of France which increase the complexity of traffic patterns in the area. However navigation in the sea areas is straightforward. Navigation close inshore and between the smaller islands is more demanding and local knowledge may be required even for small craft.

Coastal conditions

1.4

1 In all coastal areas covered by this volume mariners must keep a good lookout for fishing activity (1.6), particularly the remaining tunny fisheries.

The generally good climate and attractive topography make the area popular for yachts and pleasure craft and there is a high level of activity particularly during the summer.

The proximity of mountains to many of the coasts can affect wind strength and direction and local sea state.

TRAFFIC AND OPERATIONS

Traffic

1.5

1 **Concentrations of shipping**. Important routes connecting the W Mediterranean and the major French ports within the Gulf of Lions and the principal Italian port of Genova intersect about 30 miles SSE of Toulon with routes between these ports and the E Mediterranean.

2 Another significant concentration of shipping occurs S of Sardegna where the main W-E routes are joined by routes leading between major ports along the European coasts and the E part of the Mediterranean Sea.

Shipping is also concentrated in the approaches to the Bonifacio Strait which leads between Corse and Sardegna.

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Ferries. Numerous ferry routes criss-cross the area covered by this volume linking national mainlands and associated islands. There are also regular ferry routes between N African ports and European Mediterranean ports. Many cross main shipping routes and mariners are advised to keep a good lookout.

3 **High speed ferries** operate throughout this part of the Mediterranean and mariners are advised to keep a good lookout. Some high speed craft (HSC) generate large waves which can have a serious effect on small craft and their moorings close inshore and over shallow off-lying banks. Additional information on HSC is available in the *Annual Summary of Admiralty Notices to Mariners*.

Pleasure craft. Numerous pleasure craft operate throughout the area covered by this volume, especially during the summer months. Particularly high numbers can be expected in the vicinity of the mainland coast and in the vicinity of the main island groups. Mariners are advised to keep a good lookout.

Fishing

1.6

1 **General remarks**. Fishing is carried out throughout the year with seasonal concentrations in various localities. Much of the fishing activity occurs in coastal waters.

Fishing methods. The principal methods of sea fishing, within the area covered by this volume, are: trawling, pair-trawling, gill-netting, long-lining, seabed otter trawling and potting. A general description of the fishing methods common in European waters, as well as a description of associated equipment and types of vessels, is provided in *The Mariner's Handbook.*

2 **Tunny fishing.** During certain seasons of the year fishing nets of large size are moored off many of the coasts covered by this volume for the purpose of catching tunny fish. These nets, which sometimes extend up to 7 miles offshore, should be avoided. The nets can obviously be damaged if vessels pass over them however the nets are usually of such strength that, should the propeller become fouled, the vessel may be unable to navigate safely.

In most cases the nets are marked by buoys or boats carrying lights. The areas where these nets may be encountered are detailed in the text of the book.

3 Since 1985 tunny fisheries in the Mediterranean have declined and many semi-permanent obstructions associated with the nets have been lifted.

Tunny nets and fishing technique. The nets are 30 to 40 m in depth and held in position by a system of mooring lines; the upper part of the net is attached by vertical lines to a hawser (sommo) which is secured by anchors at suitable intervals and kept afloat by bundles of corks. Another hawser (piombo) is attached to the lower side of the net and weighted with large pieces of stone. The nets guide the fish which seldom attempt to pierce them.

4 The tunnery proper is divided into several chambers which are closed or opened by raising or lowering net coverings. Watchmen in boats are constantly on the lookout for the fish and by means of the net coverings the fish are allowed to pass through the various chambers until they reach the last (the chamber of death). This last chamber, which is made of close and heavy hemp netting, has a bottom and is hauled over a pontoon. This causes the fish to come to the surface where they are despatched using a gaffs fastened to short poles.

5 **Tunny fishing season**. In Italian waters the season is from March to November.

Tunny fishing areas. Tunny fishing usually takes place in depths of 15 m to 40 m within 10 miles of the coast. On dark nights small vessels may be encountered fishing by the light of flares. The motion of these vessels may give the flares the appearance of flashing lights and care should be taken not confuse them with navigational lights.

6 **Marking of tunny nets in Italian waters**. Tunny nets are marked exclusively with IALA special marks.

Lights and marks are established on boats or floats at the outer central part of the net. Extensive nets may have two marks, one at each corner, on the seaward end of the nets.

7 **Drift net fishing for swordfish** may be encountered off Italian coasts. In some areas, including the approaches to ports, there are specific prohibitions of this type of fishing.

Night fishing with gill nets takes place in Italian waters during the summer months up to 30 miles from the coast. Fishing utilises staked nets, marked on the surface by a long line of white lights. Mariners should keep a good look-out for small craft which are difficult to see against a background of lighted nets.

8 **Trawling** in Italian waters from sailing or powered vessels is prohibited within 3 miles of the coast where the depth of water is less than 50 m.

Pair-trawling. When trawlers are working in pairs and it is necessary to warn an approaching vessel not to pass between them a flare will be exhibited on the same side as the trawl in addition to the lights prescribed by the *International Regulations for the Prevention of Collisions at Sea*.

9 **Marine farms** may be encountered throughout the area covered by this volume. They usually consist of moored or fixed structures and should be given a wide berth. Some farms are charted but positions may only be approximate and mariners are cautioned that additional farms may be established without notice. The farms are generally marked with buoys and beacons which are sometimes lit.

10 **Shellfish beds** are encountered in shallow water throughout the area covered by this volume. Underwater and surface obstructions are associated with them.

Marine reserves

1.7

1 Marine reserves have been established at a number of locations within the area covered by this volume. In general the following prohibitions are likely to apply to the area of the reserve:

Navigation, approaching and stopping by all craft unless authorised.

Anchoring, unless authorised.

The removal of or damage to geological or mineral formations.

Underwater swimming with or without breathing apparatus unless authorised for study purposes.

2 The hunting, capture, collection, injury or any activity which could constitute a danger or agitation for any animal or plant species, including the introduction of foreign species.

Activities which could damage or disturb any study programme or scientific research being conducted in the reserve zone.

3 Most reserves will be marked by notice boards ashore and by light-buoys (special), usually with radar conspicuous top-marks, offshore.

In some cases the protected zone may extend to territorial coastal areas of the state littoral property where

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prohibitions and restrictions for the protection and safeguard of the coastal environment apply.

In each case the mariner should consult the appropriate chart to determine the limits of a reserve and read the relevant waterway paragraph of this book to obtain additional information.

4 Reserves are located at:
Cap de Peyrefite (2.16).
Cap Couronne and Carry-le-Rouet (2.265).
Anse Larvotto (3.163).
Promontorio di Portofino (4.148).
Anse d'Elpa Nera (6.62).
Les Moines and Îles Bruzzi (6.162).
Îles Lavezzi (6.162).
Îles Cerbicales (7.63).
Capo Mannu-Capo San Marco (9.89).
Punta Zavorra (9.198).
Capo Boi-Torre Piras (9.198).
Isole Nibani (10.77).
Tavolara-Punta Coda Cavallo (10.115).
Golfo Spurlattà (10.120).
Villa Campello (11.75).
Oasi blu di Monte Orlando (12.65).
Isole di Ventotene and Santo Stefano (12.98).
Punta Campanella (12.147).
Oasi Blu di Isca (13.123).

Exercise areas

Firing and practice areas

1.8

1 There are numerous areas in the waters described by this volume used for national naval and military exercises. In particular French naval units may be encountered within and S of the Gulf of Lions and Italian naval vessels operating from La Spezia may be encountered in the Ligurian Sea or to the E of Corse and Sardegna. Exercise areas are mentioned in the general section of geographic chapters and within the body of the text; there are also annotations on the charts. Additional information is available in the *Annual Summary of Admiralty Notices to Mariners*.

2 Major exercises, firing practices and restrictions on navigation are normally promulgated by navigational warning and in Temporary Notices to Mariners.

Submarine exercise areas

1.9

1 In French waters submarines may be encountered exercising between Marseille and Nice and in the sea area S of the Gulf of Lions and W of Corse, sometimes in company with naval ships and aircraft. In Italian waters submarines frequently exercise in the Ligurian and Tyrrhenian Seas both individually and in company with other naval units and aircraft.

2 General information on the characteristics of submarines and visual signals used by them are contained in *The Mariner's Handbook*. Details of procedures to be followed in the event of dealing with a sunken submarine are contained in *The Annual Summary of Notices to Mariners* and apply generally to foreign submarines.

Marine exploitation

1.10

1 **Seismic survey operations**. General information about vessels engaged in seismic surveys and advice on precautions in the vicinity of these vessels is given in *The Mariner's Handbook*.

Areas where seismic surveys are being conducted are promulgated as navigational warnings and in national notices to mariners.

2 **Oil and gas exploration**. The continuing quest for oil and gas has led to the development of a variety of ships, craft and structures which may be encountered in the area covered by this volume. Details about these systems and structures, navigational and visual identification marking of offshore installations, visual signals and international regulations are contained in *The Mariner's Handbook*.

Fixed drilling structures may be erected in these waters; these structures will exhibit a light (white, Morse U) and may sound a fog signal.

3 Permanent structures are shown on the charts as appropriate, mobile structure details and movement will be published as NAVAREA III Radio Navigational Warnings and/or as a weekly *Notice to Mariners*. Light details of a permanent structure will be included in the appropriate *Admiralty List of Lights and Fog Signals*.

CHARTS

Admiralty charts

1.11

1 The area described in this volume is covered by modern metric British Admiralty charts. They are adequate for passage within the area and for entry into principal ports and harbours and many secondary and minor ports, harbours and anchorages. British Admiralty charts include larger scale plans of all harbours and anchorages of consequence. Charted information in some areas has been derived from surveys by French and Italian authorities. However it is stressed that in some areas, both offshore and inshore, charted depths may rely on incomplete, small scale, lead-line surveys with soundings widely spaced, supplemented by depth information reported from time to time.

2 Mariners should be aware of the limitation of all charts and consult the Source Data Diagram, provided on all British Admiralty charts, for details of the date and scale of survey for specific areas. Further information on charts is provided in *The Mariner's Handbook*.

Admiralty Raster Chart Service (ARCS)

1.12

1 ARCS is an established official electronic charting service developed from the trusted Admiralty paper chart. Each ARCS chart is an exact reproduction of its corresponding Admiralty paper chart presented in digital form for use within electronic navigation systems. There is full ARCS coverage of the area described by this volume. Further information on ARCS is available in the *Catalogue of Admiralty Charts and Publications*.

Foreign charts

1.13

1 In some areas Admiralty charts do not show sufficient detail for navigation close inshore. These Sailing Directions have been written using foreign charts but do not quote them as reference charts in the text on the assumption that mariners wishing to navigate in these areas will have obtained suitable charts with which to do so.

2 Foreign charts may be obtained from the publishing authorities shown in this volume and in the *Catalogue of Admiralty Charts and Publications*. These charts are not issued by the UK Hydrographic Office nor are they amended by *Admiralty Notices to Mariners*.

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When comparing foreign charts with Admiralty charts the mariner must bear in mind that a difference in datum (1.14) may exist.

Datums

1.14

1 **Horizontal Datums**. Significant differences in geographical positions, in some cases as much as 2 minutes of longitude, exist between British Admiralty charts based on nineteenth century and modern British and foreign surveys based on European Datum. Notes on the charts concerned give details of the differences.

Most modern charts have either been converted to the WGS 84 geodetic survey or soon will be. All charts should indicate the geodetic reference used when the chart was produced (eg Roma 40, WGS−72, WGS−84). Notes on the chart will indicate corrections to be applied to GPS derived positions, see also 1.24.

2 When transferring positions between charts based on different horizontal datums it is advisable to do so by bearing and distance from a common reference object not by latitude and longitude.

Vertical datums (chart datum) used for the reduction of soundings equates approximately to LAT (lowest astronomical tide). An explanation of LAT and other related datums is provided in *Admiralty Tide Tables*. When determining an Under-keel Allowance mariners should consider the factors described in *The Mariner's Handbook*.

3 **Elevations**. On British Admiralty charts elevations are usually given above MHWS. On some foreign charts MSL is used as the datum. Due to the small tidal ranges in the area covered by this volume the discrepancy is negligible.

Satellite derived positions. Many charts carry a note of the corrections, where they are known, to be applied to satellite derived positions which are referred to the World Geodetic System (WGS−84) to agree with the datum used to prepare the chart. Where this correction is not shown on the chart mariners should not assume it to be negligible. Further information on this subject is available in the relevant *Admiralty List of Radio Signals.*

NAVIGATIONAL AIDS

Lights

1.15

1 Lights are the responsibility of the appropriate national authority and are only an aid to navigation. There are several types of use to the mariner (maritime, aeronautical, obstruction) all frequently exposed to extreme weather. Consequently damage and defects may result and cause them not to be exhibited as charted or described in the appropriate *Admiralty List of Lights*.

General information on different types of light, sectors, ranges, range assessment, cautionary notes and definitions is contained in *The Mariner's Handbook* and *Admiralty List of Lights*.

Aero lights

1.16

1 Information about aero lights and the associated navigational caution is contained in the explanatory notes in the forward to the relevant *Admiralty List of Lights.*

Beacons

1.17

1 **Maritime beacons** include: buoyant, lighted, tower, radar and radio as depicted on the chart. For details of the depictions see *Symbols and abbreviations used on Admiralty charts*.

Details of lighted beacons are contained in the relevant *Admiralty List of Lights.*

Details of radar beacons are contained in the relevant *Admiralty List of Radio Signals*.

2 **Land beacons**. These are usually day-beacons but in some cases can also be light-beacons. Usually such marks perform a specific function;

Marking the landing of cables and pipelines (1.34).
Marking fishing areas or equipment and marine farms (1.6).
Marking marine reserves (1.7).
Measured distances (1.80).
Port entry leading marks.

Landmarks

1.18

1 Caution is needed when evaluating the descriptions of landmarks provided in this volume. New buildings may have been erected, old ones obscured, demolished or fallen into disrepair causing a structure previously regarded as conspicuous because of its colour, shape or isolation to become difficult to identify.

Buoys

1.19

1 **IALA Maritime Buoyage System**. The IALA Maritime System (Region A) is in force throughout the area described by this volume. Details of the system are contained in *The Mariner's Handbook*.

Direction of buoyage. The Conventional Direction of Buoyage is defined in two ways: Local Direction of Buoyage or General Direction of Buoyage. Details of these definitions and supporting information is provided in *The Mariner's Handbook*.

The Conventional Direction of Buoyage is indicated on the chart.

2 **Lateral marks** are generally used for well defined channels in conjunction with a Conventional Direction of Buoyage. They include the port and starboard sides of the route to be followed.

Ocean Data Acquisition System (ODAS) light-buoys may be established in the area covered by this volume. Permanent buoys are mentioned in the text and shown on the charts. The position of temporary buoys is published in NAVAREA III Radio Navigational Warnings (1.26) and *Temporary Notices to Mariners*. General information about these buoys is provided in *The Mariner's Handbook*.

BERTHING

1.20

1 **Berthing**. Many harbours are subject to silting and require regular dredging consequently depths may not be as charted. Mariners are advised to confirm available depths with the port authority before arrival.

Caution. When obtaining depth alongside information mariners should clarify the details as some ports quote depths measured a set distance off the quay.

PILOTAGE

France

General information

1.21

1 Pilotage is determined by tonnage or length of a vessel by each port authority and given in the text of this volume.

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French pilots are licensed by the state; in naval ports pilotage is undertaken by naval pilots. On boarding the pilot should be informed of the vessel's draught, speed and any special conditions affecting handling.

Pilot vessels

1.22

1 Most French pilot vessels have a black hull with narrow white band and anchor painted on the funnel, if the latter is fitted. The station letters are painted in white on the bulwarks forward and aft.

Italy

General information

1.23

1 Licensed pilots are available at the more important Italian port and harbours. At naval ports pilotage is undertaken by naval pilots. Port authorities determine the pilotage requirement based on the tonnage or length of a vessel. In some areas the condition of the vessel will determine the pilotage requirement. Details are provided in the text of this volume.

RADIO FACILITIES

Position fixing systems

Satellite navigation systems

1.24

1 **General information**. Details of satellite navigation systems are contained in the relevant *Admiralty List of Radio Signals*. See also 1.14 concerning satellite derived positions.

Differential GPS (DGPS). Beacons transmitting DGPS information are established on the French coast. see the relevant *Admiralty List of Radio Signals*.

Other electronic position fixing aids

1.25

1 **VHF direction finding**. France operates an emergency only VHF direction-finding service. Details are contained in the relevant *Admiralty List of Radio Signals*.

Racons are fitted to a number of lights and buoys along the coasts of France and Italy; they are shown on the charts and further details are contained in the relevant *Admiralty List of Radio Signals*.

Radio navigation warnings

NAVAREA III

1.26

1 The area described by this volume lies within NAVAREA III of the World Wide Navigational Warning Service (WWNWS) which provides long range information likely to be of concern to ocean-going mariners; Spain has responsibility for co-ordinating the issue of navigational warnings within the area. NAVAREA III warnings are broadcast through national coast radio stations and the SafetyNET (Enhanced Group Calling International Safety NET) Service. Details of NAVAREA warnings system are provided in the relevant volume of *Admiralty List of Radio Signals*.

Coastal navigational warnings

1.27

1 Warnings are broadcast in English at scheduled times from Italian coast radio stations. For full details see the relevant volume of *Admiralty List of Radio Signals*.

Local navigational warnings

1.28

1 Local warnings may be issued by a harbour or port authority for the sea area within its jurisdiction. They may only be issued in the national language and supplement the coastal navigational warning by giving details not routinely needed by ocean-going vessels. For broadcast details see the relevant volume of *Admiralty List of Radio Signals*.

Navtex

1.29

1 Navtex, which fulfils an integral role in the Global Maritime Distress and Safety System (1.44), is an automated direct printing service, broadcast on 518 kHz, for the promulgation of navigational and meteorological warnings to ships. It provides a low cost, simple, means of receiving maritime safety information onboard ships at sea and in coastal waters. It is available from stations in France and Italy for the area covered by this volume.

2 For further details, see the relevant *Admiralty List of Radio Signals.*

Radio weather reports

METAREA III warning and bulletins

1.30

1 The World Meteorological Organization (WMO) provides a global service of high seas weather warnings and routine weather bulletins broadcast through the SafeteyNET Service. The system uses METAREAS corresponding areas to WWNWS NAVAREAS (1.26).

2 Each METAREA has a designated national meteorological service responsible for issuing high seas weather warnings and bulletins. The designated authorities are not necessarily the same nationality as the NAVAREA co-ordinator. Weather warnings and routine bulletins are broadcast through national coast radio stations and the SafetyNET Service. Details of broadcasts are contained in the relevant volume of *Admiralty List of Radio Signals*.

Meteorological broadcasts using radio-facsimile

1.31

1 The area covered by this volume lies within the radio-facsimile broadcast coverage of coastal radio-facsimile stations. For broadcast details see the relevant volume of *Admiralty List of Radio Signals*.

National weather services

1.32

1 National weather warnings and weather bulletins are issued through national coast radio stations. For broadcast

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details see the relevant volume of *Admiralty List of Radio Signals*.

Radio medical advice

1.33

1 Medical advice can be obtained by radio from the International Radio-Medical Centre (CIRM) in Rome. Details of the service are contained in the relevant volume of *Admiralty List of Radio Signals*.

REGULATIONS

International regulations

Submarine cables and pipelines

1.34

1 Every care should be taken to avoid anchoring or trawling in the vicinity of submarine cables and pipelines. Information from the International Convention for the Protection of Submarine Cables is provided in *The Mariner's Handbook*, together with advice on the action to be taken in the event of fouling a cable or pipeline.

Pollution

1.35

1 **General information**. *The International Regulations for the Prevention of Pollution from Ships 1973* (MARPOL 1973) and the 1978 protocol to MARPOL 1973, more commonly known as MARPOL 73/78 is summarized in *The Mariner's Handbook.* Annexes I, II, III and V to MARPOL 73/78 are mandatory, Annexes IV and VI are optional.

2 The Mediterranean Sea is defined as a Special Area for the purposes of the convention.

Annex I prohibits any discharge of oil or oily mixtures in the Special Area.

Annex II deals with noxious liquids in bulk.

Annex III deals with harmful substances carried at sea in packaged form.

Annex IV deals with sewerage.

Annex V regulates the discharge of garbage from ships and contains special provisions for the Mediterranean Sea.

Reporting requirements for vessels carrying dangerous or polluting goods

1.36

1 *The Merchant Shipping (Reporting Requirements for Vessels Carrying Dangerous or Polluting Goods) Regulations 1995* implements the European Council Directive 93/75/EEC relating to vessels carrying dangerous or polluting goods to or from European Community ports. These regulations define the minimum reporting requirements for such vessels. Details of reporting schemes are contained in the relevant volume of *Admiralty List of Radio Signals.*

Traffic Separation Schemes

1.37

1 Regulations for IMO adopted schemes are contained in Rule 10 of the *International Regulations for Prevention of Collisions at Sea*. See also the *Annual Summary of Admiralty Notices to Mariners*.

An IMO adopted Vessel Traffic Service Scheme (VTSS) with mandatory routes has been established in the Bonifacio Strait (41°18′N, 9°06′E) to (41°22′N, 9°22′E).

2 National, non IMO adopted, TSS have been established in the following waterways:

Golfo di Olbia	40°58′·0N, 9°38′·0E
Sarroch Oil Terminal (SARAS No1 and 2)	39°04′·0N, 9°05′·0E
Sarroch Oil terminal (ENICHEM)	39°08′·0N. 9°04′·0E
Cagliari	39°10′·0N, 9°06′·5E
Livorno	41°31′·0N, 10°14′·0E
Civitavecchia	42°06′·0N, 11°44′·5E
Napoli	40°48′·5N, 14°17′·0E
Torre Annunziata	40°44′·0N, 14°27′·3E
Castellammare di Stabia	40°42′·1N, 14°28′·0E

National regulations

Regulations for tankers and vessels carrying dangerous substances off the south coast of France

1.38

1 **General.** Tankers and vessels which are over 1600 grt, carrying dangerous cargoes, must keep at least 7 nautical miles from the French coast in the area covered by this volume unless otherwise instructed by a Prèfet Maritime, except within:

The approach channels to Port-la-Nouvelle, Sète, Golfe de Fos-sur-Mer, Marseille, Toulon, Ajaccio, Porto Vecchio, Solenzara, Lucciana and Bastia.

1.39

1 **Compliance**. Laden vessels exceeding 1600 grt approaching or departing from these ports are required to comply with the following regulations:

To use the authorised approach and exit channels.

Inform the Port Authority on entering the approach channel.

When within these channels and waiting areas display flag "B" of the *International Code of Signals* by day and exhibit a single red light at night clearly visible all round.

Anchoring or waiting in the channels is prohibited except in an emergency, in which case the Port Authority must be informed immediately.

Vessels crossing approach or exit channels should do so as nearly as possible at right angles to the channel keeping well clear of vessels in the channel.

These regulations do not in any way absolve Masters and Pilots from the requirement to comply with *The International Regulations for Preventing Collisions at Sea (1972).*

1.40

1 **Reports**. Vessels participating in MAREP are exempt from making the following reports. Other such vessels, which intend to enter French territorial waters, or depart from a French port or anchorage must inform CROSS La Garde 6 hours prior, giving vessel details, cargo carried, ETA and ETD of entering and leaving French waters and of any defects affecting their ability to manoeuvre or navigate safely.

Changes must be reported immediately.

1.41

1 **Damage, defects and assistance**. Such vessels within 50 miles of the French coast must report to CROSS La Garde any incident which could result in damage to the vessel or cargo. Any vessel going to the assistance of a damaged vessel within 50 miles of the French coast is also required to report the same authority. In both cases the

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report must contain own vessel details, position and destination. The damaged vessel should also report her cargo and nature of the incident.

2 Vessels with defects affecting their ability to manoeuvre or navigate safely, which are within French territorial waters, are required to take such action as the Prèfet Maritime may require to ensure safety of navigation and avoid pollution.

Further details of reports required and the procedures to be followed are contained in the relevant volume of *Admiralty List of Radio Signals.*

Italy – regulations

1.42

1 **Pollution**. See 1.35. In addition tankers bound for an Italian port should signal details of their insurance certificates against oil pollution at least 24 hours prior to arrival, in accordance with the *International Convention on Civil Liability for Oil Pollution Damage (Bruxelles 1969).*

Port entry. Vessels should send their ETA and details to the appropriate port, in accordance with the information contained in the relevant *Admiralty List of Radio Signals.*

Radio frequencies. For details concerning radio telegraphy and radio telephony in territorial waters and harbours see the relevant volume of *Admiralty List of Radio Signals.*

2 **Cables and pipelines**. Along the Italian coasts the landing of cables and the limits of the associated prohibited anchorages are usually marked with balls, upper half painted yellow, lower half painted black, with the letter "E" for power and "T" for telephone cables. These marks are displayed on masts in the vicinity of buildings associated with the cable landing. The penalties for anchoring in these areas are severe.

3 **Tanker regulations for Italian ports**. Tankers greater than 1600 grt entering or leaving Italian ports, carrying petroleum, gas or chemical products or with uncleaned tanks which last carried these cargoes are required to make a comprehensive report to the Port Captain. Details of the procedure are contained in the relevant volume of *Admiralty List of Radio Signals.*

4 These vessels must establish and maintain radio contact, preferably by VHF RT, with the Port Captain advising him immediately of any incident or defect which may affect the safety of navigation or cause pollution. In some circumstances the area of compulsory pilotage may be extended for vessels carrying dangerous or potentially polluting cargoes.

SIGNALS

Storm signals

1.43

1 The International System of Visual Storm Warning Signals (ISVSWS) is used by France and Italy. The system is described in *The Mariner's Handbook.*

DISTRESS AND RESCUE

General information

Global Maritime Distress and Safety System (GMDSS)

1.44

1 The concept of GMDSS is that Search and Rescue (SAR) authorities ashore as well as shipping in the immediate vicinity of the ship, or persons in distress, will be rapidly alerted to a distress incident so that they can assist in a co-ordinated SAR operation. The GMDSS applies to all cargo ships of 300 grt and above, and to all passenger ships, regardless of size, on international voyages. For full details of GMDSS, including diagrams of the SAR Rescue Region (SRR) area boundaries, plus VHF/MF/HF Digital Selective Calling (DSC) stations and area frequency coverage, see the relevant volume of *Admiralty List of Radio Signals.*

2 For additional SAR information see *The Mariner's Handbook* and *Annual Sumary of Admiralty Notice to Mariners.*

Rescue services

France

1.45

1 France has a national search and rescue agency, Organisme d'études et de co-ordination pour la recherche et le sauvetage en mer (SECMAR), which operates three Regional Surveillance and Rescue Operation Centres, Centre Régionaux Operationels de Surveillance et de Sauvetage (CROSS), within the Mediterranean, at Adge (43°18′·6N, 3°28′·5E) (2.63), La Garde (43°06′·3N, 5°59′·5E) (2.377) and Ajaccio (41°55′N, 8°45′E) (6.111). These centres are permanent, full-time and co-operate with neighbouring foreign SAR organisations. CROSS La Garde is the French Mediterranean Maritime Rescue Co-ordination Centre (MRCC). The centres at Cap d'Adge and Ajaccio are Maritime Rescue Co-ordination Sub-Centres (MRSC) (Sous-CROSS).

The main duties of CROSS are surveillance of maritime traffic, including policing IMO agreed TSS and ITZ, SAR, surveillance of fisheries out to 12 miles (Mediterranean only) and the monitoring of pollution including tracking vessels carrying dangerous and potentially harmful cargoes.

2 Signal stations and naval lookout stations are established at prominent positions on the coast within each CROSS region. The stations, manned by the French Navy, operate continuously (vigie) or by day (sémaphore) communicating urgent safety information by VHF radio or, if necessary, using visual signalling. The stations also display storm signals and inform and direct lifeboats.

Italy

1.46

1 The national SAR agency is the Corpo delle Capitanerie di Porto-Guardia Costiera. MRCC Roma is responsible for the co-ordination of all SAR operations within Italian waters and for liaison with neighbouring foreign SAR organisations.

2 The Italian Automated Search and Rescue System (ARES) operates within the Mediterranean Sea. The system utilises reports from Italian vessels to provide an initial search area in the event of an emergency. Foreign vessels are encouraged to participate in the scheme. See the relevant volume of *Admiralty List of Radio Signals.*

Lifeboat stations

1.47

1 **France**. La Société Nationale de Sauvetage en Mer (SNSM) provides lifeboats in French waters. The society is similar to the RNLI having paid officers and staff and relying on volunteer crews. However half of SNSM funding is through local and national taxation the remainder provided by donation.

All weather lifeboats are stationed at:

Port-Vendres (2.21).
Sète (2.67).
Port de Carro (2.182).

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La Ciotat (2.339).
Hyères (3.37).
Saint-Tropez (3.82).
Monaco (3.178).
Bonifacio (6.197).
Macinaggio (7.25)
Bastia (7.13).

Inshore lifeboats, some of which are RIB or inflatable craft, are also stationed at:

Arglès-Le Racou (2.32)
Saint-Cyprien (2.33).
Canet-en-Roussillon (2.34).
Le Bacarès, Port Saint-Ange (2.36).
Port-Leucate (2.37).
Port-la-Nouvelle (2.45).
Gruissan (2.58).
Valras-Plage (2.61).
Grau d'Adge (2.62).
Mèze (2.103).
Palavas-les-Flots (2.130).
La Grand-Motte (2.132).
Port-Camargue (2.134).
Saintes-Maries-de-la-Mer (2.136).
Port-Saint-Louis-du-Rhône (2.184).
Martigues (2.241).
Carro (2.182).
Marseille (2.284).
Bandol (2.363).
La Seyne-sur-Mer (2.418).
Porquerolles (3.26).
Le Lavandou (3.45).
Cavalaire (3.46).
Fréjus (3.84).
Théoule-sur-Mer (3.118).
Cannes (3.114).
Antibes (3.154).
Cros-de-Cagnes (3.156).
Nice (3.142).
Menton (3.176).
Saint-Florent (6.24).
Calvi (6.45).
Cargèse (6.102).
Ajaccio (6.116)
Propriano (6.146).
Solenzara (7.55).

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COUNTRIES AND PORTS

FRANCE

General description

1.48

1 France, La République Française, is the largest country in Western Europe and lies on the W side of that continent between the parallels of 43°20′N and 51°05′N.

The population is about 58·5 million (1999) of which approximately 2 million are resident foreigners, mainly Portuguese, Algerian and Moroccan.

National limits

1.49

1 **Territorial sea**. France claims 12 miles from the baselines.

Exclusive Economic Zone. France does not claim an EEZ in the Mediterranean.

Fishery limit. France claims a 12 mile fishery limit.

For further information see *The Mariner's Handbook* and the *Annual Summary of Notices to Mariners.*

History

1.50

1 France, descended from the Roman province of Gaul, may be said to have come into being in 987 when Hugh Capet, ruler of the western Franks, first became king of France.

Medieval France was a feudal monarchy which grew in strength, reaching its apogee in the reign of Louis XIV (1643–1715).

2 The French Monarchy was overthrown by the revolution of 1789–1792 and the First Republic came into being, lasting until 1804. The period had a notable achievement in the prodution of the Metric weights and measures system, since adopted by many countries.

3 In 1804 Napoleon Bonaparte became Emperor and for the next ten years continued his career of conquest, which at one time made him master of most of Europe. After the Napoleonic wars the monarchy was restored in 1815 and lasted until the revolution of 1848, when it gave way to the Second Republic. Louis Napoleon, nephew of Napoleon Bonaparte, was elected President and later ruled as Napoleon II until the Franco-Prussian war of 1870. The period is known as the Second Empire.

4 The Third Republic, which came into existence in 1871 and lasted until 1940, was a period of comparative calm and prosperity, marred only by World War I (1914–1918). During the German occupation, between 1940 and 1944 during World War II (1939–1945), Marshal Petain ruled France as a dictator.

Following the liberation of Paris in 1944 a provisional government was formed under General de Gaulle.

5 The Fourth Republic, following a referendum, was set up in 1944. Its constitution however favoured political instability and France had 26 governments in the subsequent 14 year period. In 1958 General de Gaulle was temporarily invested with dictatorial powers and invited to reform the Constitution, introducing the Fifth Republic.

Government

1.51

1 Under the constitution of the Fifth Republic France is governed by a President elected by univeral sufferage for a period of seven years. The President may assume special powers in an emergency, dissolve Parliament and submit disputed legislation to a referendum.

2 A Prime Minister is appointed by the President and is responsible to Parliament which consists of a Senate and a National Assembly.

There is a Constitutional Council which supervises elections and referenda and must be consulted before the President assumes emergency powers.

3 For administrative purposes the country is divided into 96 Departments within each of which Government is represented by a resident Préfet. The Departments are divided into Arrondissments (sous-préfectures) or Municipal Wards, and further sub-divided into Cantons which contain a number of Communes or parishes with local administrative authority. Each commune is presided over by an elected mayor or municipal council.

4 The Departments are also grouped into 22 Regions, each under a Regional Préfet. The coastal regions and their headquarters covered by this volume are Languedoc-Roussillon (Montpellier), Provence-Alpes-Côte d'Azur (Marseilles) and Corse (Ajaccio).

For defence purposes, policing of coastal waters, pilotage and fisheries the Mediterranean coast of France is administered by the Préfet Maritime de la Méditerranée at Toulon.

Corse

1.52

1 Corse has a population of 260 000 (1999) and is a municipal department of France. The island, once part of the Roman Empire, was subsequently invaded by Vandals, Byzantines and Saracens. The Genoese ruled the island for much of the period between the 11th and 18th centuries however in 1768, following two years of British occupation, the island was declared French.

2 During World War II the island was occupied by German and Italian forces between 1942 and 1943. Corsican resistance was such that, after the capitulation of Italy, the island was rapidly liberated with assistance from the Allies.

Language

1.53

1 The principal and official language of the country is French. The French Academy, founded in 1635, has worked to establish "le bon usage" equivalent to "The Queen's English" in Britain. However there are a number of regional dialects and Corse is still widely used on the island.

International relations

1.54

1 France is a permanent member of the Security Council of the United Nations and a member of the European Union, the Council of Europe, the Organisation for Economic Co-operation and Development and the North Atlantic Treaty Organisation. It is also the focus of the French community which formally links it with its former colonies in Africa.

Coastal features and navigable rivers

1.55

1 The S coast of France, between Cap Cerbère and the Franco-Italian border 400 miles NE, is dominated in the W by the Pyrénées and to the E by the Alpes Maritimes. The W part of the Gulf of Lions is low lying and much of the coast is sandy beach backed by areas of marshland and broad plains. The E part of the gulf and the Côte d'Azur, which extends NE to the Italian border, is more rugged

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although there are still areas of sandy beach. Numerous rivers flow into the sea but apart from Rivière Rhône they are without importance. Although the Rhône enters the sea through a delta encumbered with mud banks they are avoided by several canals connecting it to the important inland waterway system of the country.

2 Corse, the most mountainous island in the Mediterranean, is traversed by a range of mountains from N to S. The principal peaks are conspicuous from seaward. There are numerous rivers which have the character of torrents.

Industry and trade

1.56

1 France has a mixed economy and is the largest agricultural producer in Europe. Wine production remains a significant part of the agricultural sector; other important products include sugar-beet, dairy products, cereals and oilseeds, potatoes, early vegetables, fruit and hops. Forestry is also important and fishing meets the countries needs.

2 Coal, iron ore, bauxite, uranium, potash, and sulphur are mined but there is insufficient quantity to meet the requirement for these raw materials. Oil is produced from fields in the Landes area and there are natural gas deposits in the foothills of the Pyrénées however France is a net importer of crude oil for processing in its important refining industry. Other important heavy industries include the production of iron, steel and aluminium.

3 Imports are mainly of raw materials but also include machine tools and other manufactured products. Exports are chiefly agricultural products, wines, manufactured goods including vehicles and luxury goods. France has been a member of the European Single Currency since January 1999. Economically France benefits from her comparative self-sufficiency and consequently is less dependent on foreign trade than her neighbours.

MONACO

General description

1.57

1 The Principality of Monaco, Principauté de Monaco, occupies a narrow strip of land, approximately 2 miles long, on the Mediterranean coast of France and is bounded to the S by the Mediterranean Sea.

The Principality has a population of 32 000 (2000) however only 7175 have full citizenship and the right to vote.

History

1.58

1 The principality, ruled by the Grimaldi family since 1297, was abolished during the French Revolution and re-established in 1815 under the protection of the Kingdom of Sardegna. In 1861 Monaco came under the protection of France.

The 1962 constitution maintained the traditional hereditary monarchy but gave the elected National Council greater power.

Government

1.59

1 The eighteen member National Council is elected by universal sufferage. Legislative power is held jointly by the Head of State and the elected National Council; executive power is exercised by the Head of State and a four member Council of Government headed by a Minister of State provided by France.

Language

1.60

1 French is the official language of Monaco; Monégasque, a mixture of Provençal French and Ligurian Italian, is the local dialect.

International relations

1.61

1 Monaco is a member of the United Nations, The Organisation for Security and Co-operation in Europe.

The Head of State represents the principality in its relations with foreign powers and signs and ratifies treaties. Monégasque relations with France are based on conventitions dating from 1963.

Coastal features

1.62

1 Monaco occupies 1 square km and is entirely built over; there are some notable public and private gardens but no agricultural land.

Industry and trade

1.63

1 The Monégasque economy is based on transactional revenue and tourism. There is a small and developing light industry sector. Monaco has no natural resources and imports electricity from France.

Monaco has been a member of the European Single Currency since January 1999.

ITALY

General description

1.64

1 Italy, Repubblica Italiana, is primarily a large peninsula projecting 500 miles SSE from the Alps into the central Mediterranean Sea but also includes the islands of Elba, Sardegna, Sicilia and approximately seventy other small islands; the peninsula varies from 70 to 150 miles in breadth.

Italy has a population of about 57·5 million (2001).

National limits

1.65

1 **Territorial sea**. Italy claims a limit of 12 miles and also for its fishery zone.

History

1.66

1 Italy was part of the Roman Empire and under the Holy Roman Empire that succeeded it consisted of a number of independent states and city states. The country was unified in 1861 as the Kingdom of Italy under the consitutional monarchy of the House of Savoy, the rulers of Piedmont.

Rome was added to the Kingdom in 1870 and became the capital the following year. During World War I Italy fought against Germany and in the peace gained some formerly Austrian territory along the NE frontier, including Trieste. In 1922 Mussolini came to power and in the subsequent years established a fascist government with the monarch as titular Head of State.

2 Italy entered World War II in 1940 siding with Germany however, following the Allied invasion of Italy in 1943, signed an armistice and thereafter supported the Allies. Hostilities against the remaining German forces continued until the end of the war in Europe and during this period Mussolini was executed by resistance fighters.

3 Following a referendum in 1946 the monarchy was abolished and Italy declared a republic. The 1947 peace

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treaty removed much of the territory gained in Yugoslavia following the First World War but retained Trieste. Italy is a member of the United Nations, the military and political unions of NATO and the EU.

Government

1.67

1 Italy is a democratic republic and under the Constitution dating from 1948 the President is elected for a period of seven years by an electoral college which consists of the two houses of parliament and delegates from the Regional Councils.

Parliament consists of the Chamber of Deputies, elected for a five year term by universal sufferage, and the Senate, elected on a regional basis by electors over the age of twenty five.

2 For administrative purposes the country is divided into regions, provinces and municipalities. Regions are autonomous with their own parliaments and government.

Sardegna

1.68

1 Sardegna has a population of 1·6 million (2000) and is one of the Autonomous Regions of Italy. Like Corse Sardegna has been colonized and exploited by a succession of European powers including the Cartheginians, Romans, Vandals, Goths, Saracens, Pisans, Aragonese and Spanish. However the mountainous E-central part of the island was never successfully conquered.

Since 1870 Sardegna has formed part of Italy. In World War II the island was occupied by a large German garrison, which in 1943 was expelled by Italian and Allied forces. In 1948 Sardegna became an Autonomous Region of Italy.

Language

1.69

1 The official language of the country is Italian, a Romance language derived from Latin. However there are regional dialects showing French, Spanish, German and Arabic influence and in the vicinity of borders with neighbouring countries pockets of French or German speakers.

The Sard dialect is almost a separate language close to pure Latin and spoken widely on the island of Sardegna.

International relations

1.70

1 Italy is a member of the United Nations, North Atlantic Treaty Organisation, Organisation for Economic Co-operation and Development and Council of Europe. In recent years Italy has played an important role in developing Europe's relations with a number of Middle Eastern countries.

Coastal features and navigable rivers.

1.71

1 The W coast of Italy forms the E shores of the Ligurian and Tyrrhenian Seas. Volcanic action has caused changes in the level of the coasts which have extended from alluvial deposits. Much of this coast is sandy but is generally bold; in places it is rugged and backed closely by mountains. The area around and S of Napoli is a vast volcanic region.

The principal rivers are Fiume Arpo, Cecina, Ombrone, Tevere, Garigliano and Volturno. With the exception of Fiume Tevere (11.69) the estuaries of these rivers are very shallow and suitable only for small craft.

2 Sardegna is mountainous with the principal range extending from N to S parallel with and close to the E coast. Much of the island is elevated and there are several extensive plains.

Industry and trade

1.72

1 Italy has a mixed economy with agriculture remaining a significant part of it. The principal crops are sugar-beet, grain, grapes, tomatoes, olives and fruit. Italy has the largest grape crop in the world and ranks with France as one of the largest wine producers in the world.

Italy is poor in natural resources although iron ore, iron pyrites, sulphur, lignite and mercury are mined or extracted. Of these only mercury and sulphur provide a surplus for export. Oil and gas deposits are exploited but they are insufficient to meet Italy's needs.

2 The textile, clothing, leather and footwear industries are the largest and most important industries. Other significant sectors are machine manufacture, metal and timber products, mineral products, electrical equipment, chemicals and pharmaceuticals. Amongst the heavy industries ship building and vehicle manufacture are significant.

Tourism makes a significant contribution to the Italian economy.

3 Italy has been a member of the European Single Currency since January 1999.

PRINICIPAL PORTS HARBOURS AND ANCHORAGES

1.73

France

Place and position	*Remarks*
Port-Vendres (2.21) (42°31′N, 3°07′E) Anchorage	Commercial harbour
Port-la-Nouvelle (2.45) (43°01′N, 3°04′E)	Commercial harbour
Sète (2.67) (43°24′N, 3°42′E)	Commercial harbour and tanker terminal connected inland waterways
Port de Fos (2.152) (43°25′N, 4°52′E)	Large commercial and industrial harbour connected to inland waterways
Port de Bouc (2.207) (43°24′N, 4°59′E) Anchorage	Commercial harbour connected inland waterways
Marseille (2.284) (43°20′N, 5°21′E)	The principal port of France
Toulon (2.388) (43°07′N, 5°55′E)	Large naval and commercial port
Nice (3.142) (43°42′N, 7°17′E)	Commercial harbour
Villefranche (3.152) (43°42′N, 7°19′E) Anchorage	Commercial harbour

Corse

Place and position	*Remarks*
Ajaccio (6.116) (41°55′N, 8°44′E)	Commercial harbour
Bastia (7.13) (42°42′N, 9°27′E)	Commercial harbour

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Monaco

Place and position	*Remarks*
Port de Monaco (3.179) (43°44′N, 7°25′E)	Commercial and yacht harbour

Italy

Place and position	*Remarks*
Imperia (4.17) (43°53′N, 8°02′E)	Commercial harbour
Vado Ligure (4.74) (44°16′N, 8°26′E)	Commercial harbour
Savona (4.84) (44°18′N, 8°29′E)	Oil terminal
Genova (4.100) (44°25N, 8°55′E)	The principal port of Italy
La Spezia (4.185) (44°07′N, 9°50′E)	Large naval and commercial harbour
Livorno (5.50) (43°33′N, 10°19′E)	Commercial harbour
Portoferraio (8.60) (42°49′N, 10°20′E) Anchorage	Commercial harbour
Civitavecchia (11.21) (42°06N, 11°48′E)	Commercial harbour
Napoli (12.212) (40°51′N, 14°16′E)	Large naval and commercial harbour

Sardegna

Place and position	*Remarks*
Rada di la Maddalena (10.54) (41°13′N, 9°24′E)	Anchorage for commercial vessels and naval base for small warships
Olbia (10.88) (40°55′N, 9°30′E)	Ferry port
Porto Torres (9.24) (40°50′N, 8°24′E)	Commercial harbour
Porto Vesme (9.146) (39°12′N, 8°24′E)	Commercial harbour
Sarroch (9.204) (39°05′N, 9°02′E)	Commercial harbour
Cagliari (9.219) (39°13′N, 9°07′E)	Anchorage and commercial harbour

PORT SERVICES – SUMMARY

Docking facilities

1.74

1 **France**:

La Ciotat. Construction dock 316 m in length 54 m wide. Dry dock 145 m in length, 21·4 m wide (2.339).

Marseille. Dry dock 800 000 tons capacity (2.284).

Toulon. Dry docks, largest 278·5 m in length, 46·6 m wide (2.388).

Villefranche. Dry dock 150 tons capacity (3.158).

2 **Italy**:

Genova. Dry docks, largest 277 m in length; 40 m wide (4.100).

La Spezia. Floating dock 40 000 tons capacity (4.185).

Livorno. Dry docks both 350 000 tons capacity (5.50).

Cagliari. Floating dock 1500 tons capacity (9.219).

Napoli. Dry docks, largest 349 m in length; 40 m wide (12.212).

Other facilities

Minor repairs

1.75

1 Minor repairs and repairs to small craft can be obtained at most ports, see the port services section of the relevant port.

Oily waste disposal

1.76

1 Oily waste is divided into the following categories:

Dirty ballast water (DB).
Tank washing (TW).
Oily mixtures containing chemicals (OM).
Scale and sludge from tanker cleaning (SS).
Oily bilge water (OB).
Sludge from fuel oil purifier (SP).

2 Facilities for the disposal of oily waste are available at:

France: Port-la-Nouvelle (DB) (TW), Sète (DB) (TW) Port de Fos (DB) (TW), Port-de-Bouc (DB) (TW) Marseille (DB) (TW), Toulon (DB) (TW) Ajaccio (DB) (TW), Bastia (DB) (TW).

Italy: Imperia (DB) (TW), Savona (DB) (TW), Genova (DB) (TW), La Spezia (DB) (TW), Civitavecchia (SS) Napoli (DB), Torre Annuziata (DB) (TS).

Salvage services

1.77

1 Salvage vessels are stationed at Marseille (2.284), Genova (4.100), Livorno (5.50) and Napoli (12.212).

Compass adjustment

1.78

1 **France**: Marseille (2.284), Toulon (2.388).

Italy: Genova (4.100), La Spezia (4.185), La Maddalena, Golfo Saline (naval vessels only) (10.16), Napoli (12.212).

Deratting

1.79

1 Deratting can be obtained at the following ports:

France: Sète, Port de Bouc, Marseille, Toulon (naval vessels only).

Italy: Imperia, Genova, Livorno, Porto Torres, Oristano, Fiumicino (Roma), Napoli, Salerno.

Exemption certificates can be issued at Imperia and Civitavecchia.

Measured distances

1.80

1 **France**: Cap de Brégançon-Cap de Cavalaire (3.15).

Italy: La Spezia (4.206), Golfo di Napoli (12.148). Measured distances of various lengths, not described in this volume, are located at Varazze, Genova, Portofino, Chiavari Viareggio, Livorno and Formia.

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NATURAL CONDITIONS

MARITIME TOPOGRAPHY

Seabed

General remarks

1.81

1 The continental shelves are moderately well developed but relatively narrow with an average width of less than 25 miles. Continental slopes are generally very steep and are cut by submarine canyons leading to an abyssal plain.

A large sedimentary cone, the Rhône fan, is found off the delta of the Rivière Rhône (43°20′N, 5°45′E) and extends towards the Balearic abyssal plain.

2 Much of the seabed of the Tyrrhenian Sea is occupied by wide continental slopes, strongly lineated in the N by valleys and ridges trending N to S, leading to a small abyssal plain at a depth of about 3 500 m. There are numerous seamounts in this basin, one of which rises 2850 m above the sea floor to within 743 m of the surface. Distinct ash horizons have been cored from the abyssal plain amd have been correlated with historic volcanic eruptions on the Italian mainland.

3 The Italian peninsula has narrow continental shelves which continue along the French coast and in places there is no shelf at all.

Between the Marseille and the Franco-Italian border four sediment zones extend seaward, consisting of terrigenous sand and gravel along the shore; Poseidonia beds in depths between 6 and 45 m, wherever terrigenous sediments are scarce; shelly sands in depths between 28 and 55 m and mud covering most of the sea floor except along canyon floors where there is sand and gravel.

4 To the W of Marseille the shelf widens to 45 miles off the delta of Rivière Rhône.

The continental slopes around the Italian peninsula are mostly quite low but steeper in the Gulf of Genoa and off the coast of France as far W as longitude 6° E; here they are cut by numerous submarine canyons and troughs. These slopes are mostly mud covered. The slopes in the Gulf of Lions are gentler.

Seismic Activity

1.82

1 The Italian coast between Genova and Sicilia, together with the adjacent sea area extending to mid-way between the coast and Corse, is amongst the principal seismic regions of the world; the remainder of the sea area covered by this volume is subject to occasional seismic activity.

2 **Vesuvius**, at the head of Rada di Napoli, is famous for its 79 AD eruption, which destroyed the cities of Pompeii and Stabiae under ash, and Lapilli and Herculaneum under a mud-flow. In 5960 BC and 3580 BC Vesuvius had two eruptions that rate among the largest in Europe. Vesuvius was last in eruption between 1913–1944, which is thought to be the end of an eruptive cycle that began in 1631.

MAGNETIC VARIATION AND LOCAL ANOMALIES

Local magnetic anomalies

1.83

1 Local magnetic anomalies have been observed off the E coasts of Corse and Sardegna and in the vicinity of Isola d'Elba.

CURRENTS, TIDAL STREAMS AND FLOW

Currents

General remarks

1.84

1 The Mediterranean receives, from the rivers that flow into it, about one third of the water amount that it loses by evaporation. Still greater loses of water result from a sub-surface outflow through the the Strait of Gibraltar which removes from the Mediterranean Sea to the Atlantic Ocean the highly saline and dense water resulting from evaporation. These losses are compensated by a strong surface inflow from the Atlantic to the Mediterranean. A similar, though much less pronounced, pattern prevails between the Mediterranean and Black Seas; water flows out of the Mediterranean through Canakkale Bogazi (40°01′N, 26°10′E) at depth and into it at the surface.

2 With few exceptions the main winds over the Mediterranean support the general circulation shown in diagrams 1.85.1 and 1.85.2. However, wind directions do vary, particularly in winter and can result in changes to the set of the current and its average rate depending on the strength of the wind, its direction and persistence.

Currents diagrams

1.85

1 In the current diagrams 1.85.1 to 1.85.2, arrows indicating the Predominant Direction, Average rate and Constancy are shown, which are identified as follows:

Predominant Direction. The mean direction within a continuous 90° sector containing the highest proportion of observations from all sectors.

Average rate is indicated by the figures in the diagrams. It is emphasised that rates above and below those shown may be experienced.

Constancy, indicated by the thickness of the arrows, is a measure of its persistence e.g low constancy implies marked variability in rate and particularly the direction of the current.

South coast of France

1.86

1 The coastal current sets WSW and SW along the S coast of France, from the Gulf of Genoa, forming the NW part of a large anticlockwise gyre covering most of the Ligurian Sea and centred near (43°N, 8°E). The average rate along this part of the coast is ¾ kn but can be increased to as much as 2 kn by persistent N winds. Near to the 7°E meridian a branch from the left flank of the SW-going current sets S.

2 In the vicinity of Îles d'Hyères (43°N, 6°E) the current further divides with one branch setting S or SW, the other continuing W along the coast of France towards the Gulf of Lions with an average rate of ½ kn. In winter persistent strong, NW winds frequently enhance the S setting current and increase the rate to about 2 kn.

From the Gulf of Lions the current sets S with an average rate of ½ to ¾ kn; the strongest flow is along the W side of the Gulf.

Corse and Sardegna

1.87

1 The anticlockwise gyre in the Ligurian Sea produces a NE setting current along the NW coast of Corse (42°N, 9°E). In the summer this is augmented by a branch of the main E-going Mediterranean current which turns NE near

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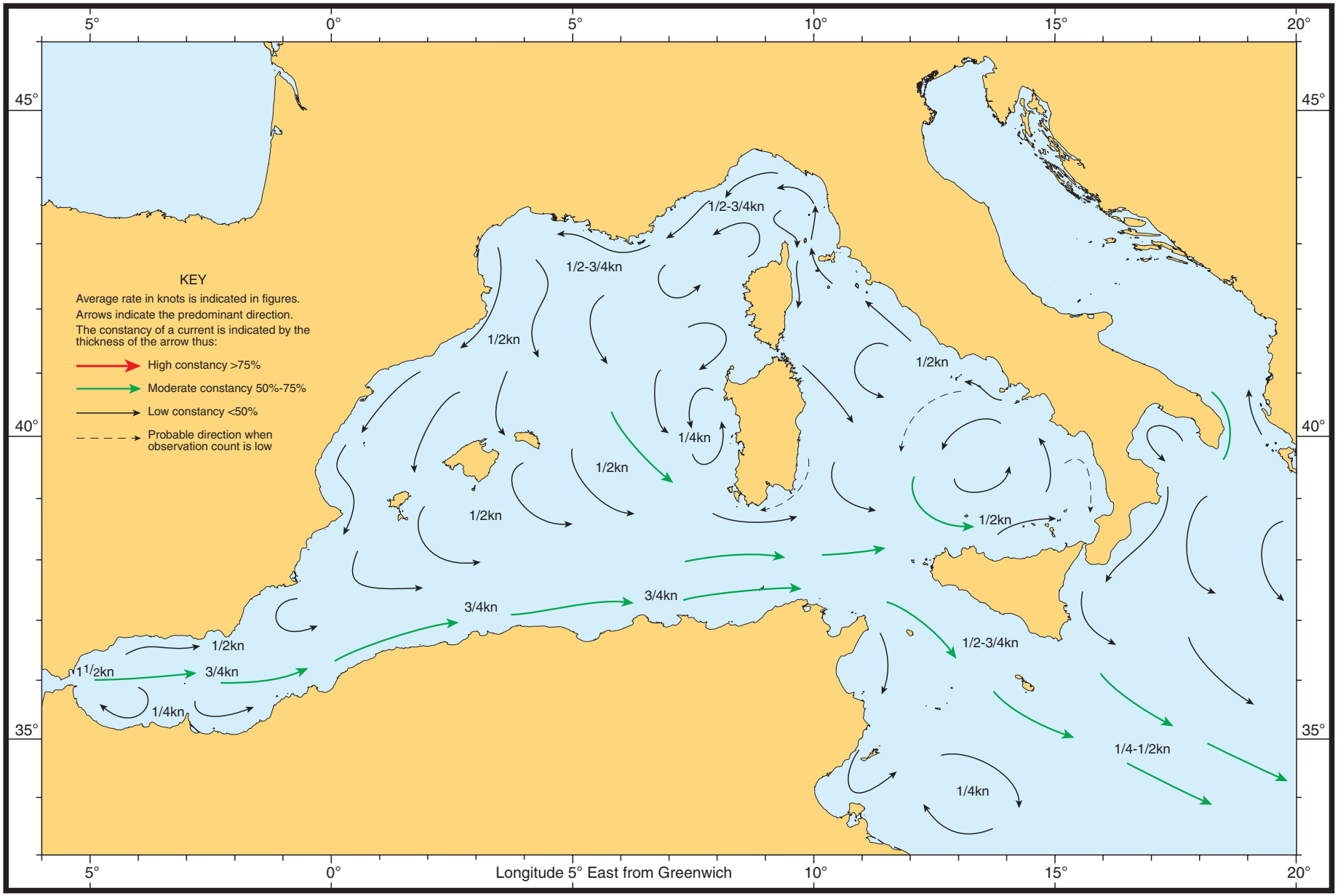

Predominant surface currents JANUARY (1.85.1)

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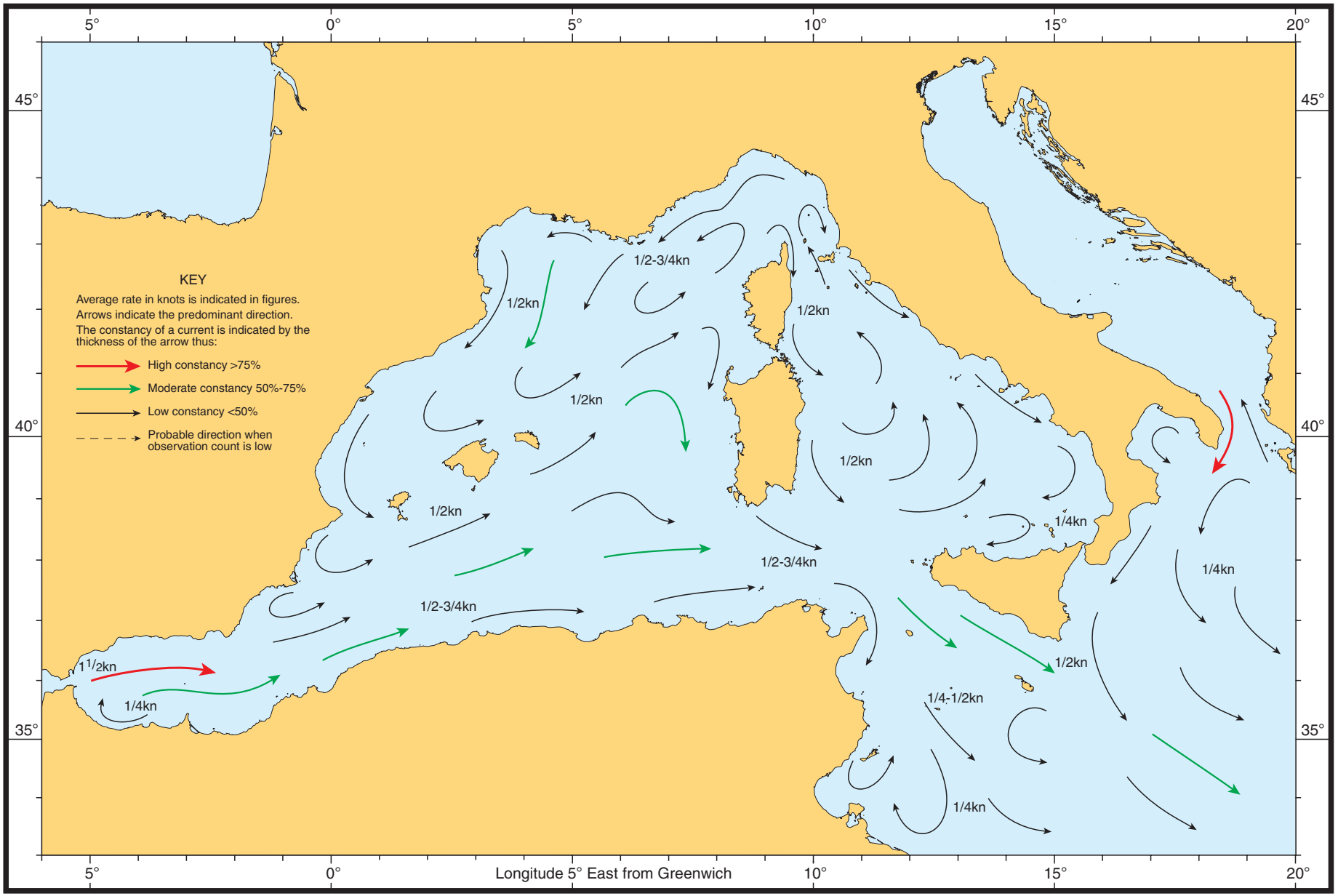

Predominant surface currents JULY (1.85.2)

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the 1°W meridian; the mean winter rate of ¼ to ½ kn is thus increased to ¾ kn.

2 On rounding the N extremity of Corse the current sets S along the E coast within 8 miles of the shore. In winter a rate of about ½ kn should be expected whereas in summer this can increase to a steadier ¾ and 1 kn. Anticlockwise movement is induced at the boundary between the S-going current and the current which flows N from the Tyrrhenian to Ligurian Sea.

3 Along the E coast of Sardegna (40°N, 9°E) the S-going current weakens as water is lost from it into the Tyrrhenian Sea.

Currents off the W coast of Corse and between Corse and Sardegna are thought to be weak and variable.

In summer part of the stream setting NE towards Corse recurves S along the W coast of Sardegna with rates of ¼ to ½ kn. In winter, when water flows SSE between Sardegna and Islas Baleares (40°N, 4°E), a weak N-going counter-current can be experienced on the W coast of Sardegna.

West coast of Italy

1.88

1 A branch of the E-going current, along the African coast, sets E into the Tyrrhenian Sea, N of Sicilia (38°N, 14°E) and forms part of the anticlockwise circulation in the W basin. This branch recurves NW to parallel the W coast of Italy with an average rate of about ½ kn. The current is strongest between Isola d'Elba (42°45′N, 10°15′E) and NE Corse with an average rate ¼ to ½ kn in summer and ¾ kn in winter. On entering the Ligurian Sea, N of Corse, the current sets N towards La Spezia (44°N, 10°E) then sets WNW and finally SW to follow the coast of the Gulf of Genoa with an average rate of ¾ kn in the region of the strogest flow close inshore.

2 A part of the main N-going current may recurve in the vicinity of La Spezia to form a SE-going counter-current with an average rate of ¼ kn along the W coast of Italy as far S as 39°N. This counter-current is more frequently encountered in summer than winter; the average rate may reach ½ kn in the channel between Isola d'Elba and the Italian mainland.

3 The general circulation of the currents around Arcipelago Toscano, of which Isola d'Elba is the largest island, are complex. Clockwise gyres frequently form between and around these islands so the set and strength of the current is variable and therefore constancy of the current is low.

Tidal streams

General remarks

1.89

1 Tidal stream are weak and negligible compared to drift currents caused by the wind.

SEA LEVEL AND TIDES

Sea level

Seasonal sea levels

1.90

1 During February, March and April the mean sea level in the central Mediterranean may fall as much as 0·5 m below normal due to meteorological conditions which normally prevail in these months.

Tides

Tides

1.91

1 Tides in the area of the Mediterranean covered by this volume are of little importance to navigation; tidal ranges rarely exceed 0·3 m within the area.

SEA AND SWELL

General

1.92

1 For definitions of sea and swell, and the terminology used to describe their characteristics see *The Mariner's Handbook*.

Sea conditions

1.93

1 Sea waves are generated locally by the wind and can be very variable in direction. Strong to gale force E to NE winds over the Gulf of Lions result in rough seas on the W shore; gale force winds between S and SE can cause coastal damage. When a strong Mistrale is blowing very rough seas are raised at some distance from the S coast of France.

2 Gales from between NW and NE result in rough seas along the exposed coasts of Corse and Sardegna. Rough seas also develop with strong SW (Libeccio) winds which can also effect most of the Tyrrhenian Sea. In the Bonifacio Strait very rough seas are possible when strong winds are funnelled through the strait by the mountains on either side. There are however long periods, even in winter, when the sea is slight.

Swell conditions

1.94

1 Swell roses for January and July are given in diagrams 1.94.1 and 1.94.2. Swell is predominantly from between W and N in central and E areas but more variable in the W of the area. Moderate NW swell is most frequent in winter and rare in summer.

2 Swell often spreads N ahead of a strong Scirocco to affect the bays and gulfs of S France and W Italy exposed to the S with an increase in water levels in these areas.

SEA WATER CHARACTERISTICS

Sea surface temperature

1.95

1 Diagrams 1.95.1 and 1.95.2 show the mean sea surface temperature for February and August. The sea surface temperature usually falls to a minimum in February with a mean temperature over the N part of the W basin of the Mediterranean of around 12° to 13° in the N and 15° in the S. Temperatures rise rapidly in April and May usually reaching a maximum of about 20° to 21° in August in the SW and NW and 26° in the SE. Temperatures decrease between October and December with the greatest fall in the N.

2 The sea surface temperature is generally 1° to 2° warmer than the overlying air and can be much greater in the N when the Mistrale is blowing; in September and October an increase in temperature of 4° to 5° may occur.

With Scirocco winds the air temperature may be several degrees warmer than the sea surface temperature.

Appreciable differences from the mean sea surface temperatures occur after prolonged periods of abnormally cold or warm winds.

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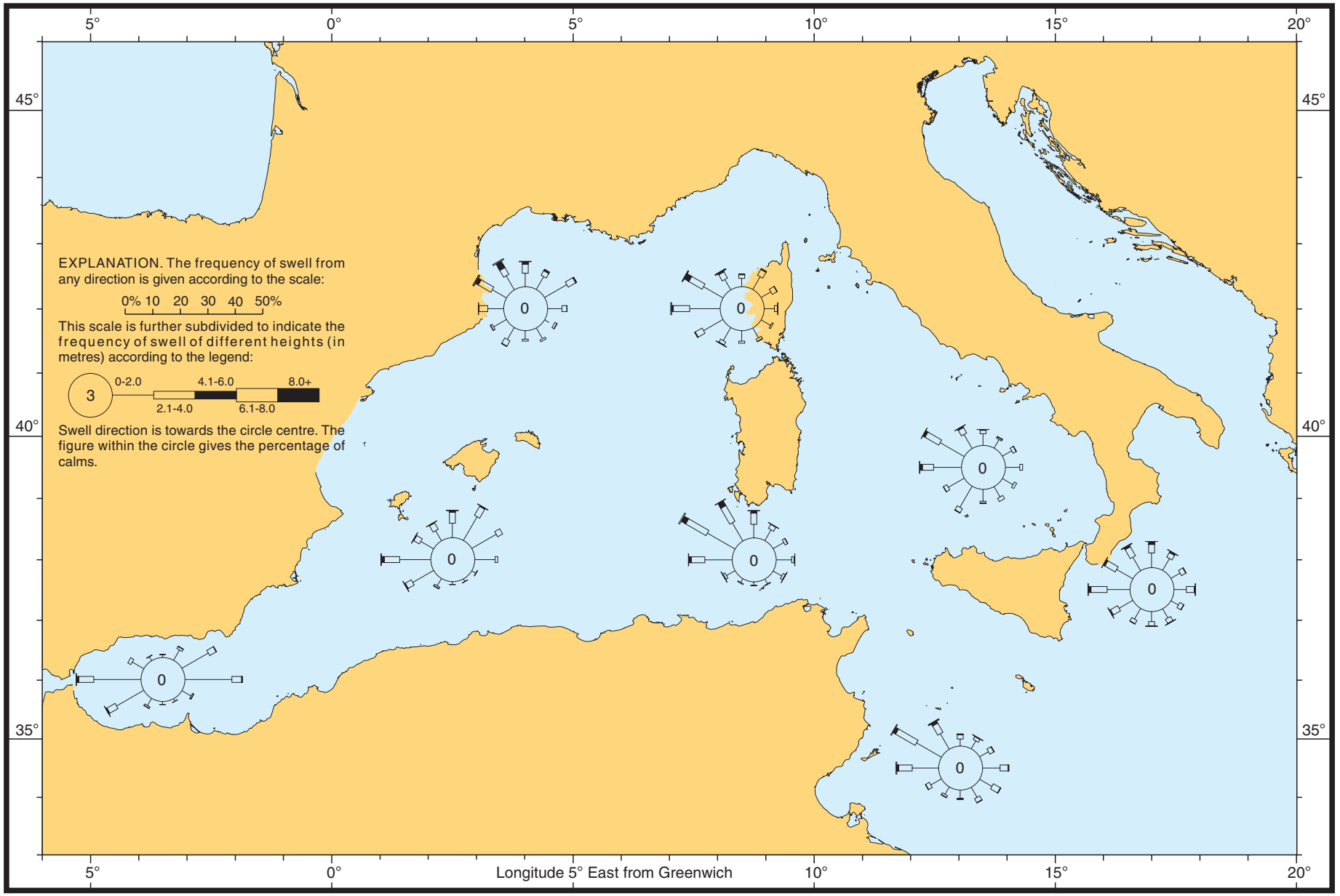

Swell distribution JANUARY (1.94.1)

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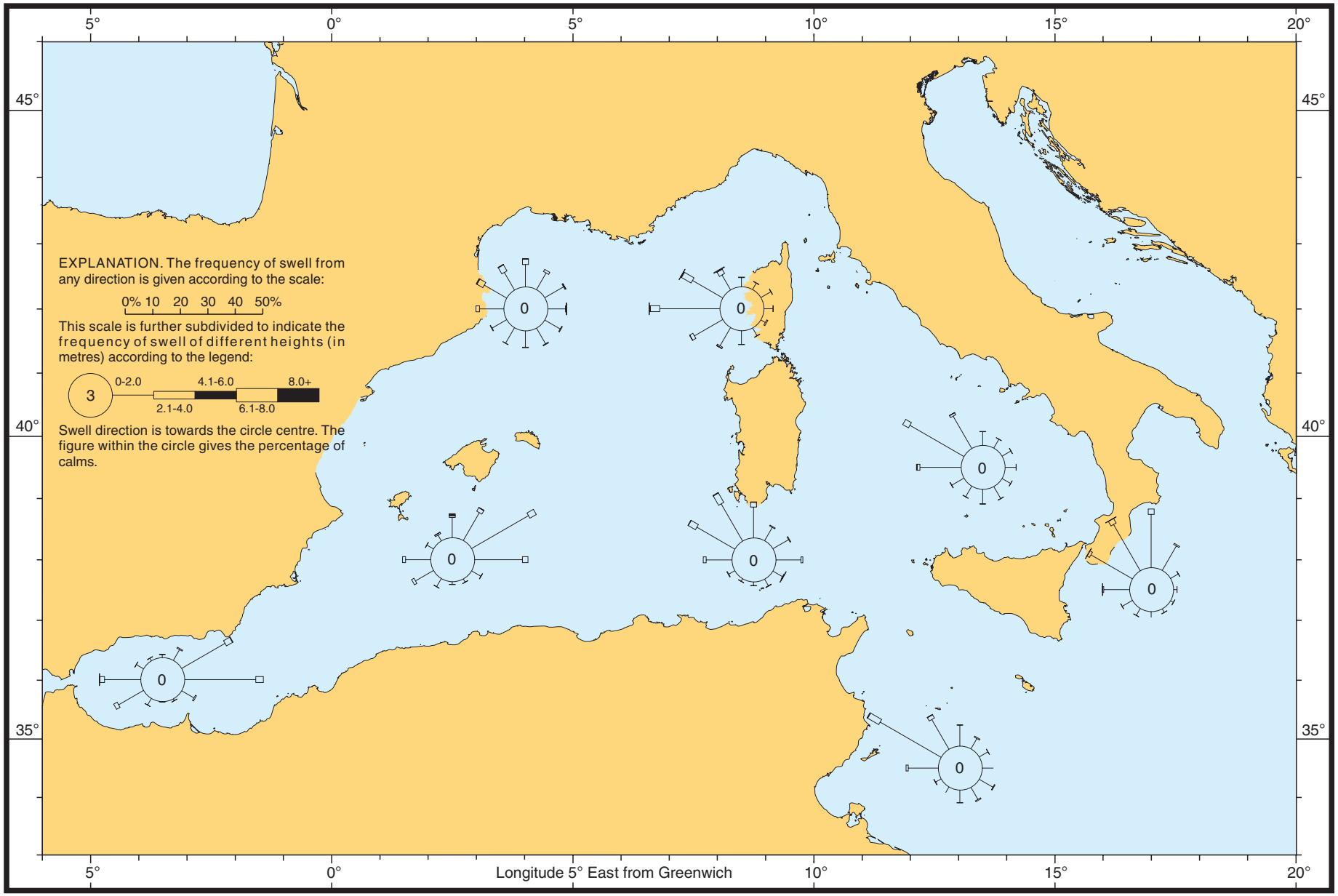

Swell distribution JULY (1.94.2)

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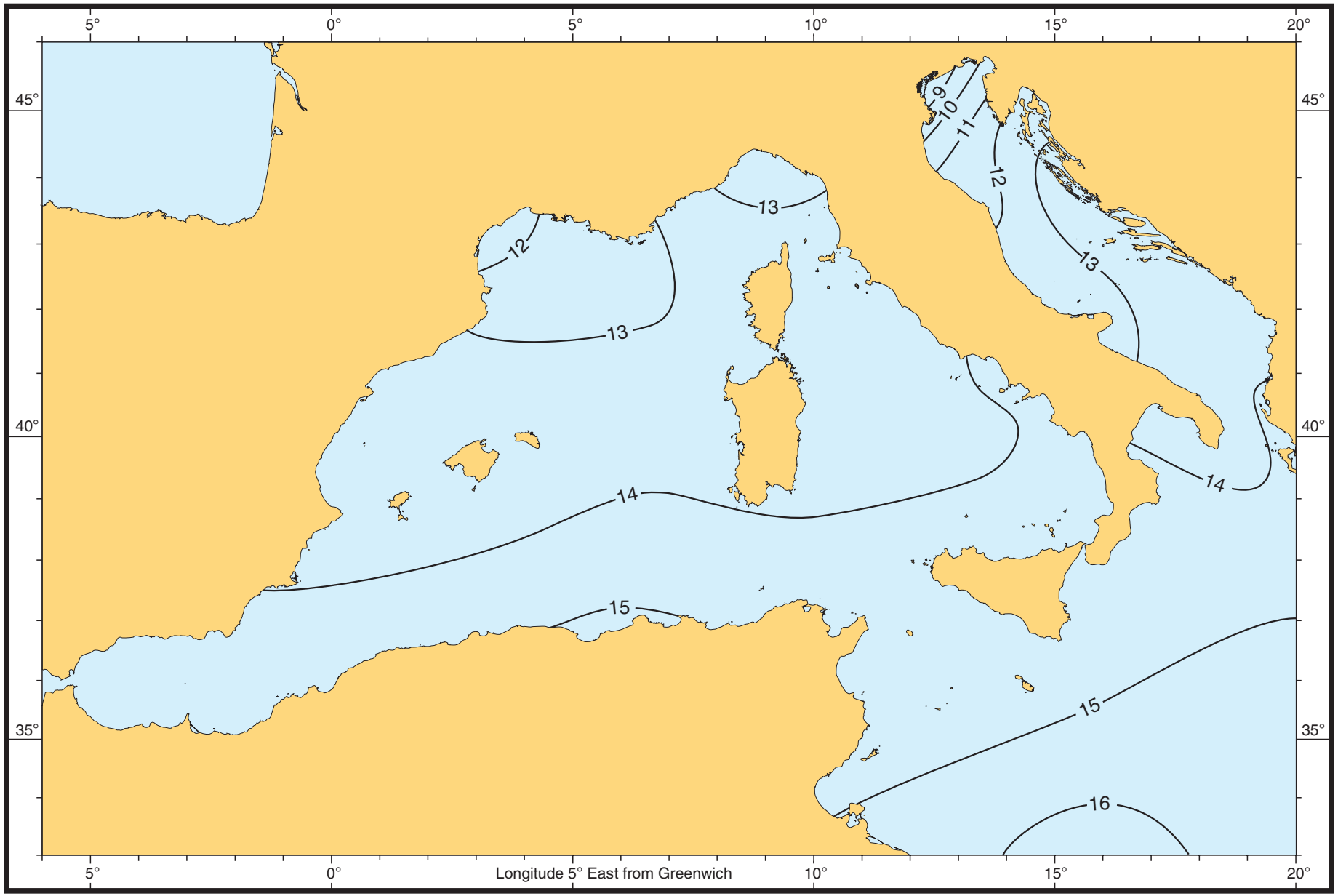

Mean sea surface temperature (C) FEBRUARY (1.95.1)

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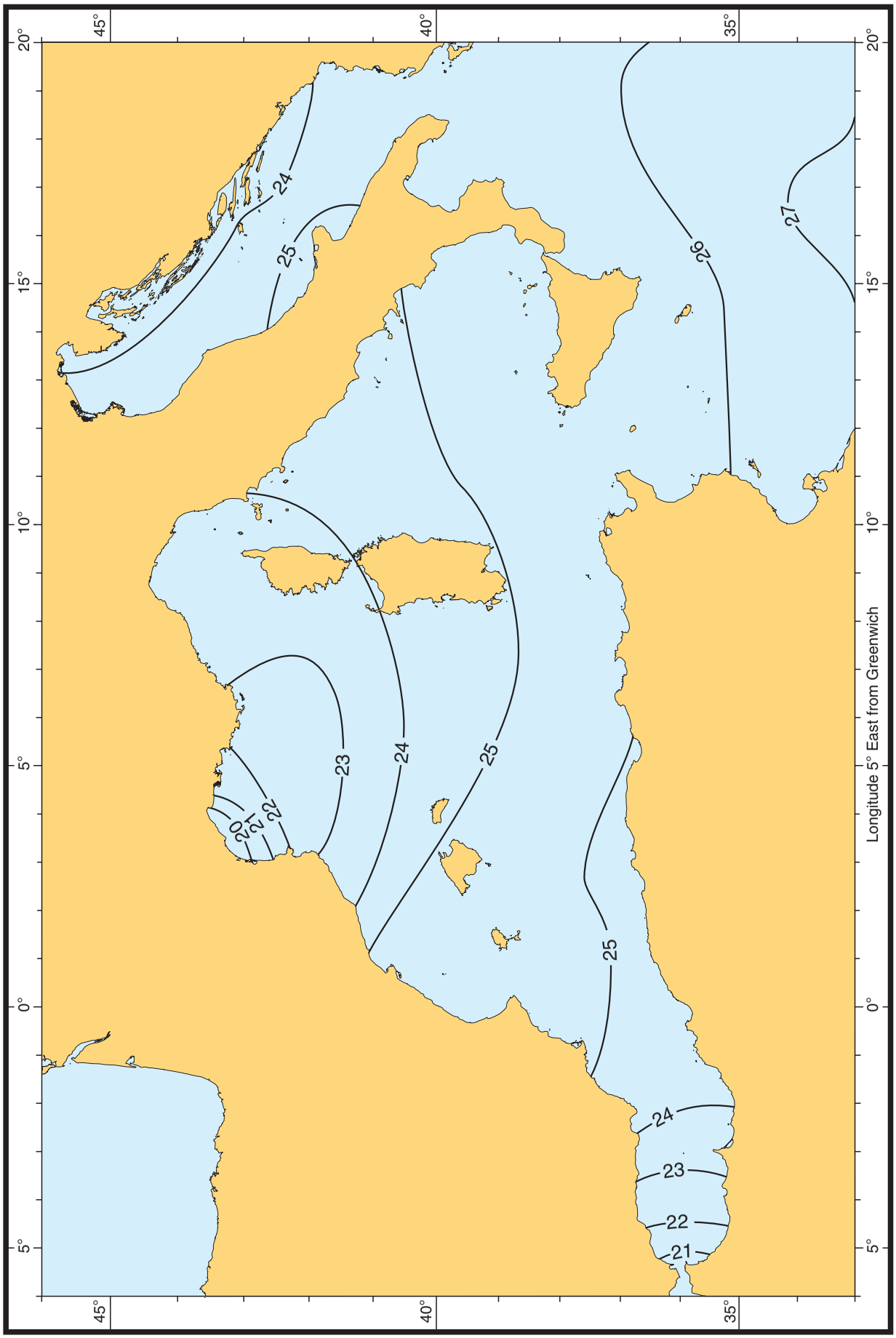

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CLIMATE AND WEATHER

General information

General information

1.96

1 The following information should be read in conjunction with *The Mariner's Handbook* which explains in more detail many aspects of meteorology and climatology of importance to the mariner.

Weather reports and forecasts covering this area are regularly broadcast in the languages of the region and in English; for details see the relevant volume of *Admiralty List of Radio Signals*.

General conditions

1.97

1 Summer in the W basin of the Mediterranean Sea is frequently hot, particularly in the S, with long periods of fine settled weather. Winters are mild with most of the rainfall occurring in the late autumn and winter. The rain is mainly in the form of heavy showers which usually clear quickly, consequently overcast skies are infrequent and there are good spells of sunshine, particularly in the S of the area. Winds of force 7 and over are rare in summer over most of the W basin except the Gulf of Lions, where they may occur on 5 to 6 percent of occasions, and around Corse with a frequency of 4 to 6 per cent. The frequency of gales steadily increases during October and with a maximum frequency over the Gulf of Lions in late autumn and winter.

Pressure

Average distribution

1.98

1 The average pressure distribution at mean sea level in January and July is shown on diagrams 1.98.1 and 1.98.2 which illustrate the typical mean pressure fields for the cool and warm seasons.

2 Pressure is usually lower over the Mediterranean Sea, compared with the surrounding land masses, between November and March. The W extension of the Asian anticyclone has usually collapsed by July and is replaced by a ridge of high pressure extending E from the Azores anticyclone (1.100) across Spain to the W basin of the Mediterranean Sea.

Variability

1.99

1 It is emphasised that diagrams 1.98.1 and 1.98.2 depict average pressure distributions of very variable pressure patterns which may change markedly from day to day. This is particularly so in the cool season when mobile depressions, troughs and ridges of high pressure cross the region.

2 There is a small diurnal variation of pressure of about 1 hPa (mb). Maxima occur at about 1000 and 2200 local time and minima at about 0400 and 1600. Mobile depressions or ridges of high pressure often obscure diurnal variation.

Anticyclones

1.100

1 **The Azores anticyclone**, the sub-tropical high-pressure belt centred over the Atlantic, has a major controlling influence on the climate of the Mediterranean. In the cool season, when the anticyclone is centred at its most S latitiude, a ridge often extends E to Spain or N Africa. Atlantic depressions moving E along the N flank of the anticyclone often move into the Mediterranean from the NW to bring disturbed weather to the region.

2 In late spring and summer the Azores anticyclone usually intensifies and frequently has a ridge extending ENE towards the Alps. This ridge effectively forces the Atlantic depression further N away from the Mediterranean and normally results in settled summer conditions.

3 In winter it is common for a W extension of the Asian anticyclone to reach central Europe and this is the source of very cold air which occasionally affects the N part of the W basin of the Mediterranean Sea. When a ridge of high pressure extends to the Balkans or central Europe it can induce strong N to NE winds over the N part of the W basin.

Depressions

1.101

1 Mobile depressions frequently affect the area in the cool season and are usually small in area, when compared with the major depressions of the N Atlantic, but may nevertheless be vigorous features that rapidly intensify to give more stormy conditions. Depressions are normally less common in summer and are usually much less intense than those of the winter months.

2 The principal tracks and development areas of depressions are shown in diagram 1.101 which also gives the average annual number of depressions for each source area. The most common development areas in and around the W Mediterranean are the Gulf of Lions, Ligurian Sea and S of the Atlas Mountains. Atlantic Ocean depressions may cross France, Spain or the Strait of Gibraltar to affect the W Mediterranean although their frequency is usually significantly lower than those originating within the Mediterranean itelf. Depressions originating in the Gulf of Genoa generally move SE across the Tyrrhenian Sea towards Sicilia, whereas depressions forming around Islas Baleares usually move between E and NE. Depressions entering the W Mediterranean Sea through the Strait of Gibraltar, or forming S of the Atlas Mountains (particularly in spring), frequently move E to affect Tunisia, Sicilia and Malta.

3 Depressions often move at about 10 to 15 kn but secondary depressions may move more rapidly at between 20 and 30 kn. The movement of some depressions can be difficult to predict when they become slow moving or stationary before quickly transferring elsewhere.

Fronts

1.102

1 Most depressions have associated frontal systems but in general warm fronts are weak features particularly in the S of the area, see *The Mariner's Handbook* for a full description of warm fronts, cold fronts and occlusions. Cold fronts are often very active and can give rise to violent conditions with severe squalls and thunderstorms. In winter the passage of a cold front may herald the arrival of a vigorous outburst of cold air accompanied by a sharp wind veer. Prolonged rain on a cold front is rare but can be intense. Secondary cold fronts or troughs of low pressure may follow the main cold front as further outbreaks of cold air arrive; they are most marked in the N of the area. Although warm fronts are generally weak and difficult to detect hot air moving N off the African coast soon becomes moist and often gives rise to mist and low cloud to the N.

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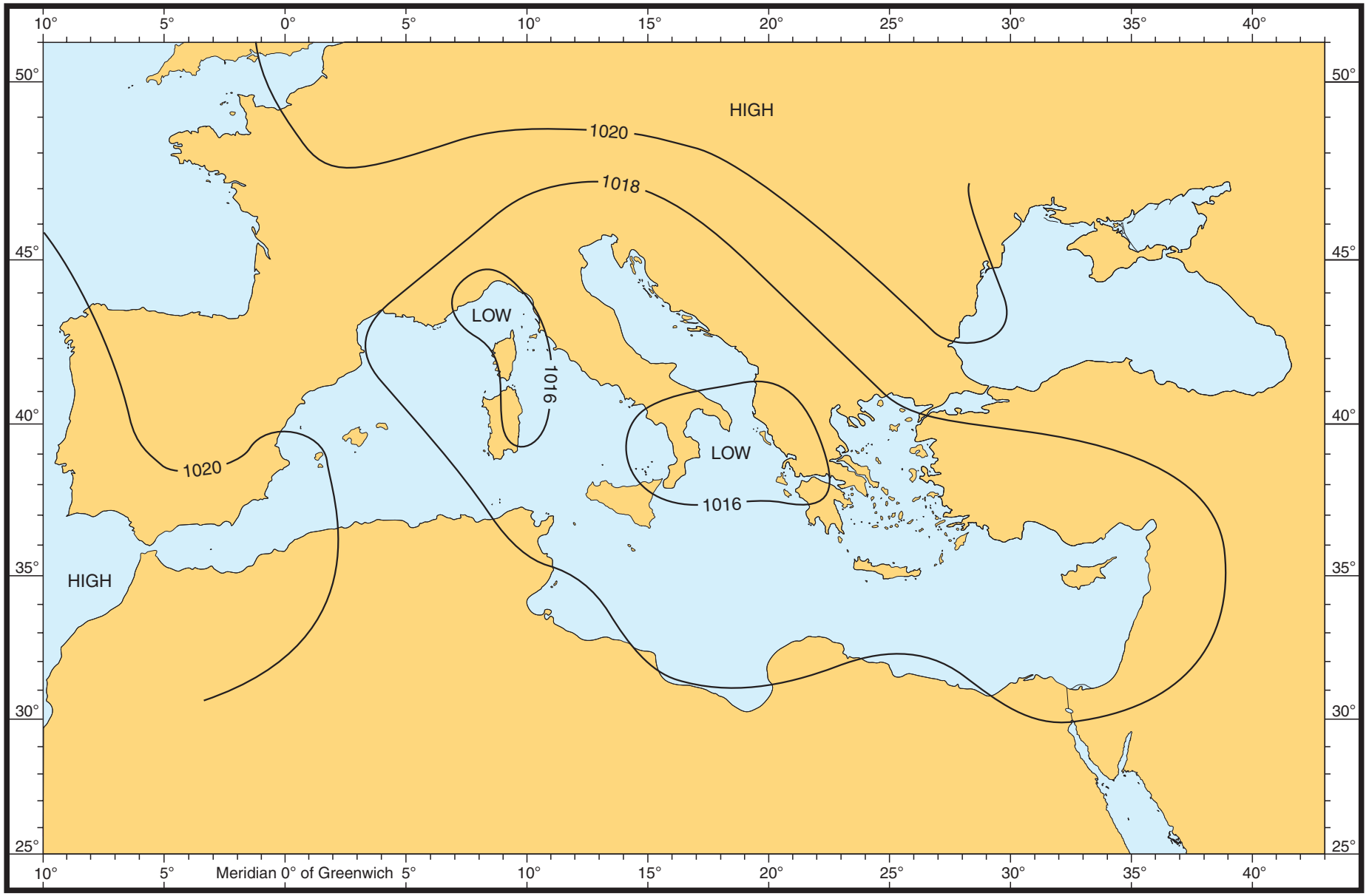

Mean barometric pressure (hPa) JANUARY (1.98.1)

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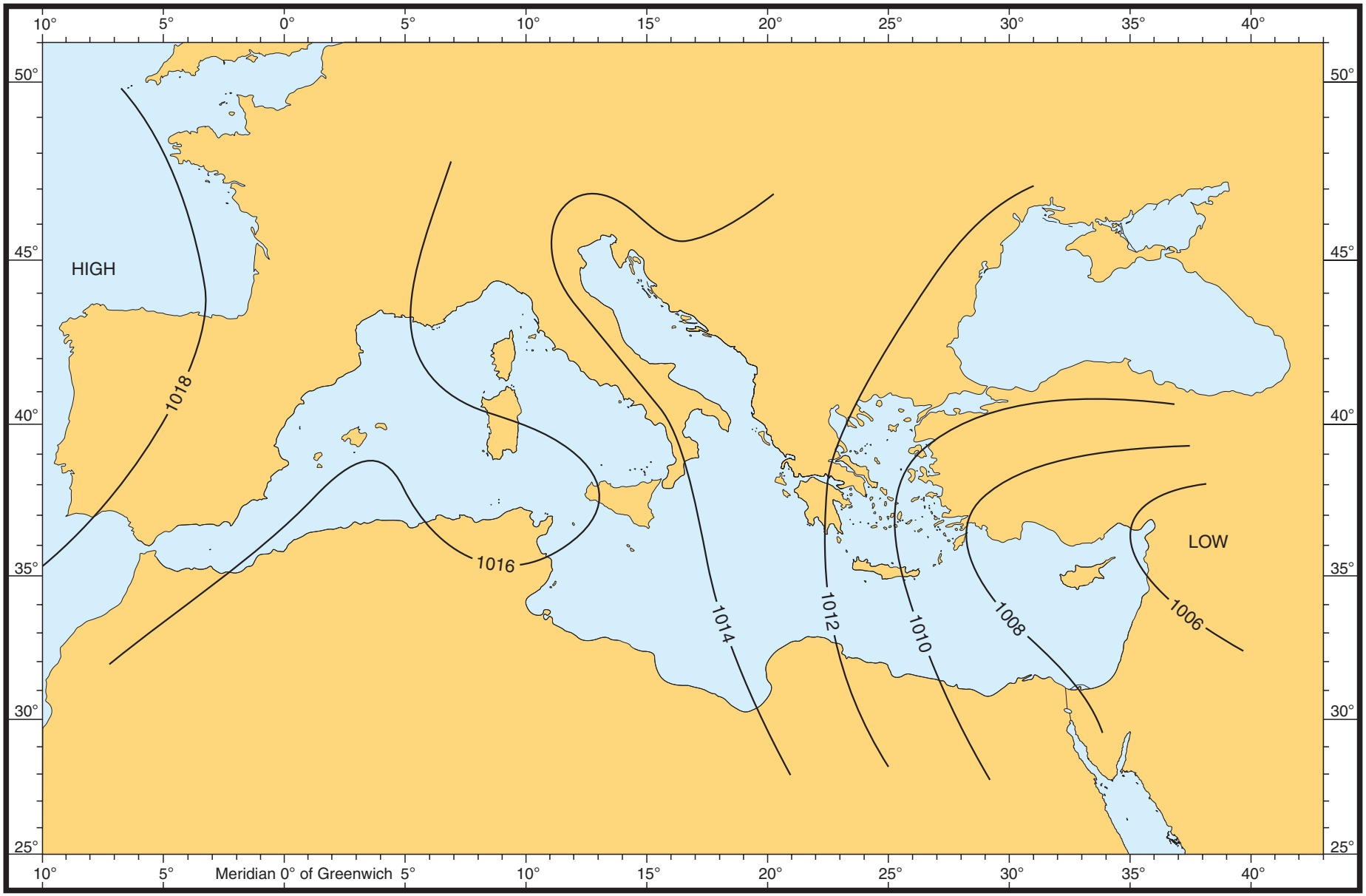

Mean barometric pressure (hPa) JULY (1.98.2)

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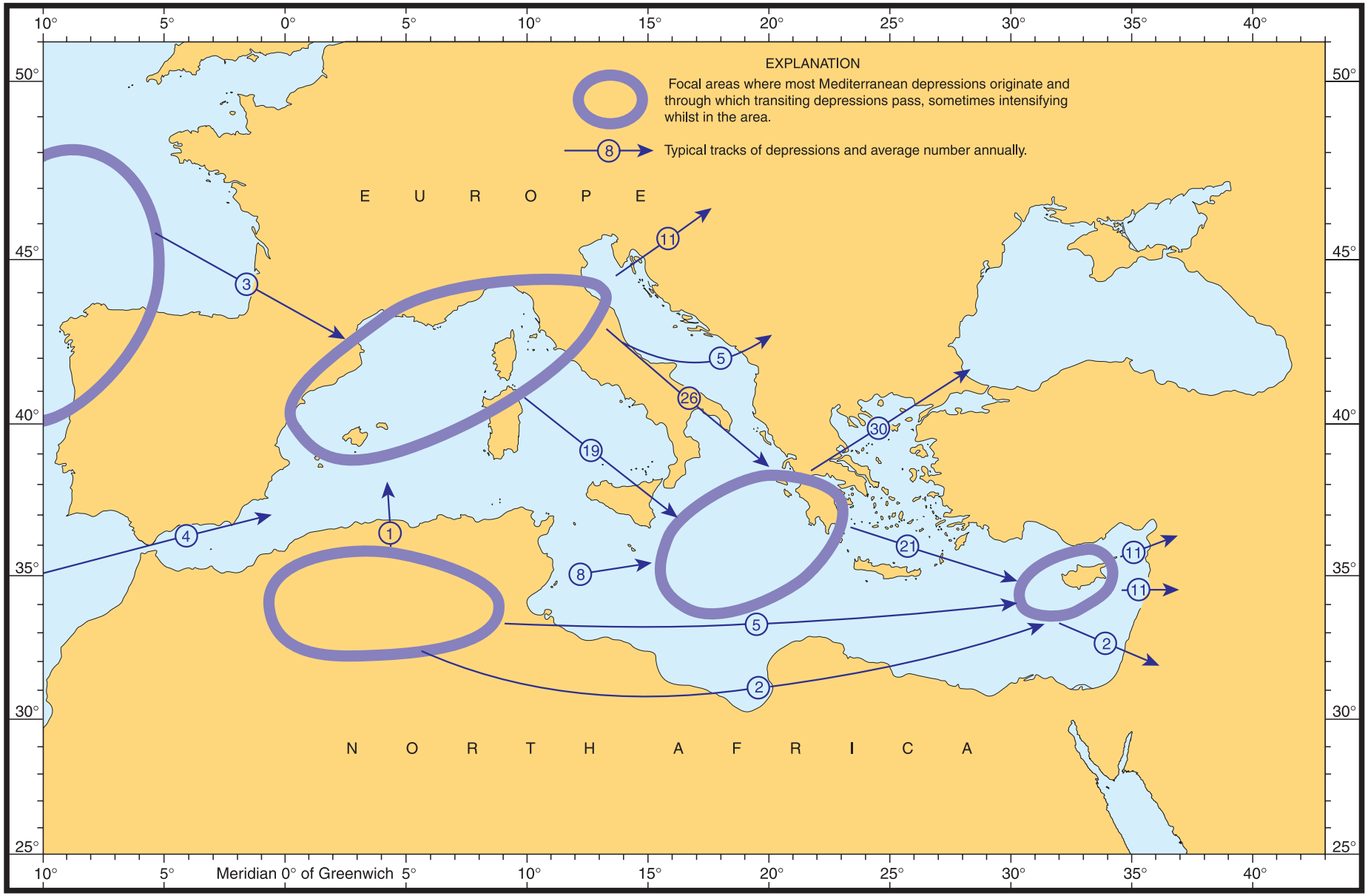

Mediterranean Sea - Typical tracks of depressions (1.101)

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Winds

Average distribution

1.103

1 Wind roses showing the frequency of wind distribution for several areas in the W half of the Mediterranean Sea in January, May, July and October are given in diagrams 1.103.1 to 1.103.4.

Main regional winds

1.104

1 Diagram 1.104 shows the names of the main regional winds of the Mediterranean which are described below:

Vendavales are the strong SW winds which blow between the Spanish coast and the N coast of Morocco. They chiefly occur in the cold season and particularly in late autumn and early spring; they are associated with depressions moving E into the Mediterranenan Sea across Spain of S France. *Vendevales* sometimes reach gale force but seldom remain at this strength for long. The onset of this wind is often associated with violent squalls, thunderstorms and occaisionally waterspouts. They tend to blow with greater strength in the Strait of Gibraltar than in The Alboran Channel and significantly less near the N African coast. The wind may be fresh SW between Gibraltar and Malaga but becomes moderate W to NW further E. The frequency of *Vendavales* reduces progressively towards NE Spain and S France.

2 **Levante** are winds that have a long fetch from the NE near the Spanish coast. The term *Lavantade* is used for strong to gale force winds of the same kind. These winds are often associated with a depression centred to the S of Islas Baleares and high pressure to the N. The *Levante* is most likely to reach gale force in the spring and autumn but from June to September is seldom strong and usually short lived. There are usually eight or nine *Levante* gales a year between Valencia and Cabo Creus and one or two further S.

3 **Levanter** is the name given to E winds in the Strait of Gibraltar and The Alboran Channel. However as winds in the the Strait are either E or W a wider variety of pressure distributions favour an E *Levanter* compared with those giving rise to the *Levante*.

Mistral. Frequently, between mid-autumn and mid-spring, when a depression is centred over the Gulf of Genoa, a strong, cold, dry N to NW wind is funnelled down the Rhône valley, across the Gulf of Lions to the Islas Baleares, Corse and Sardegna. The average strength of the *Mistral* in winter is Force 5 and in summer Force 3 to 4.

4 **Tramontane**. A branch of the N to NW *Mistral* may cross the mountains near the Spanish/French border and enter Catalonia as a NNW wind which is then known as *Tramontane*.

Mestral is another branch of the *Mistral* airflow which may flow down the Rio Ebro in NE Spain and enter the Mediterranean as a NW wind. All of these N to NW winds may increase in strength offshore; an increase in strength is often accompanied by an increase in cloud.

5 **Scirocco or Sirocco** is a S to SE wind from N Africa. Although generally very hot and dry along the N African coast the airflow is steadily cooled and becomes humid as it moves N. This may result in warm, cloudy and misty conditions over Islas Balearas, Sardegna, Malta, Sicilia and S Italy. In Malta and Sicilia the visibility may be markedly reduced due to dust and sand carried by the wind. A *Scirocco* may blow at any time of year but is most frequent off the African coast during spring. The onset is usually gradual and may be preceded by a SE swell and a rise in sea level. Winds are sometimes strong and may give rise to rough seas and a moderate swell in the N.

6 The wind is known as *Chihli* (Morocco, Algeria and Tunisa), *Chibli* (Libya) or *Leveche* (SE Spain). The more violent dust storms are called *Simoon* or *Samun* in Arabic.

Gregale is a cool, strong NE wind affecting the central Mediterranean including the Ionian Sea. It is most frequent in the cool season with high pressure over the Balkans and low pressure over S central Mediterranean. The weather is similar to that associated with the Bora.

Libeccio is the Italian name for winds between W and SW that affect the area between Sardegna and Italy. The *libeccio* tends to blow strongly when a depression lies over N Italy, particularly in winter. Deep depressions may result in rough seas and poor visibility on W coasts.

Tramontana is the Italian name for N winds along the W coast of Italy.

Marin is the French name for SE winds between the Pyrenees and Marseille. The *Tramontana* and *Marin* are usually the result of slow moving depressions that produce persistent winds from particular directions.

Open sea

1.105

1 The winds over the area covered by this volume are extremely variable but with a slightly higher frequency of winds from WSW to NNW, except in the autumn, over the Tyrrhenian Sea and around Corse. Winds of Force 7 and above are mainly associated with winds from between W and NNW over the whole area and, less frequently, with winds from ESE to ENE in the N of the area and between E and SE over the Tyrrhenian Sea.

2 The percentage frequency of winds of Force 7 or more is;

	Autumn/winter	*Spring or autumn*	*Summer*
Gulf of Lions	17–20	10	5–6
Corse	14	8–9	4–5
Tyrrhenian Sea	11	4–6	1–2

Coastal wind

1.106

1 Winds in coastal areas are largely controlled by the general pressure distribution of the area but within about 20 miles of the coast the topography and land and sea breezes often produce significant local modification of both wind strength and direction, see *The Mariner's Handbook*. Straits, headlands and steep sided valleys may cause local increases in wind strength due to funnelling.

2 Particular local effects are:

The W coasts of Corse and Sardegna are exposed to the *Mistral* and *Libeccio* which can reach gale force at times. On the E coasts strong winds are less frequent but katabatic winds at night and fõhn winds by day occasionally give rise to sudden heavy squalls. See *The Mariner's Handbook* for a description of these winds.

Winds from the E or W funnelled through the Bonifacio Strait are generally stronger in the narrowest part of the Strait.

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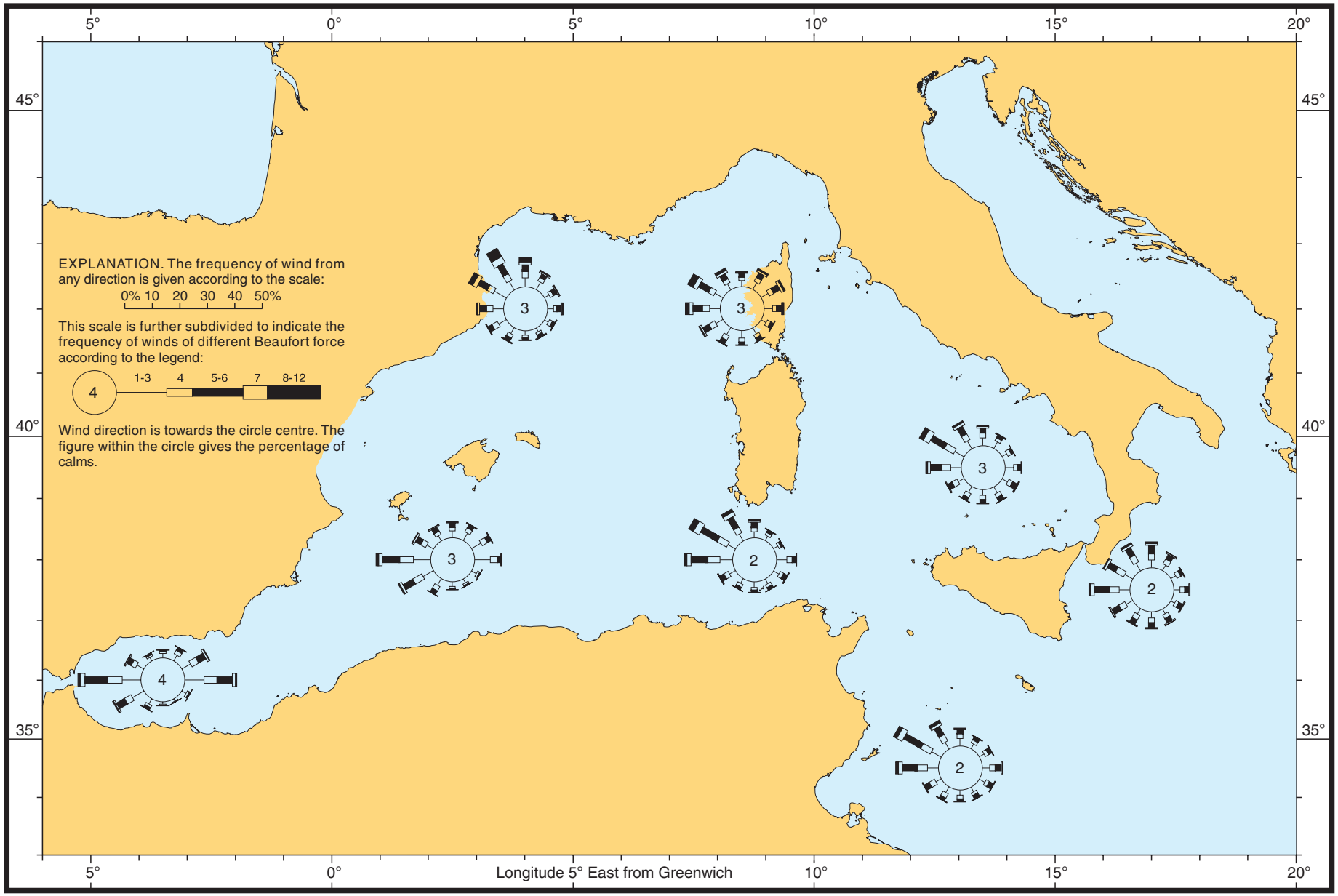

Wind distribution JANUARY (1.103.1)

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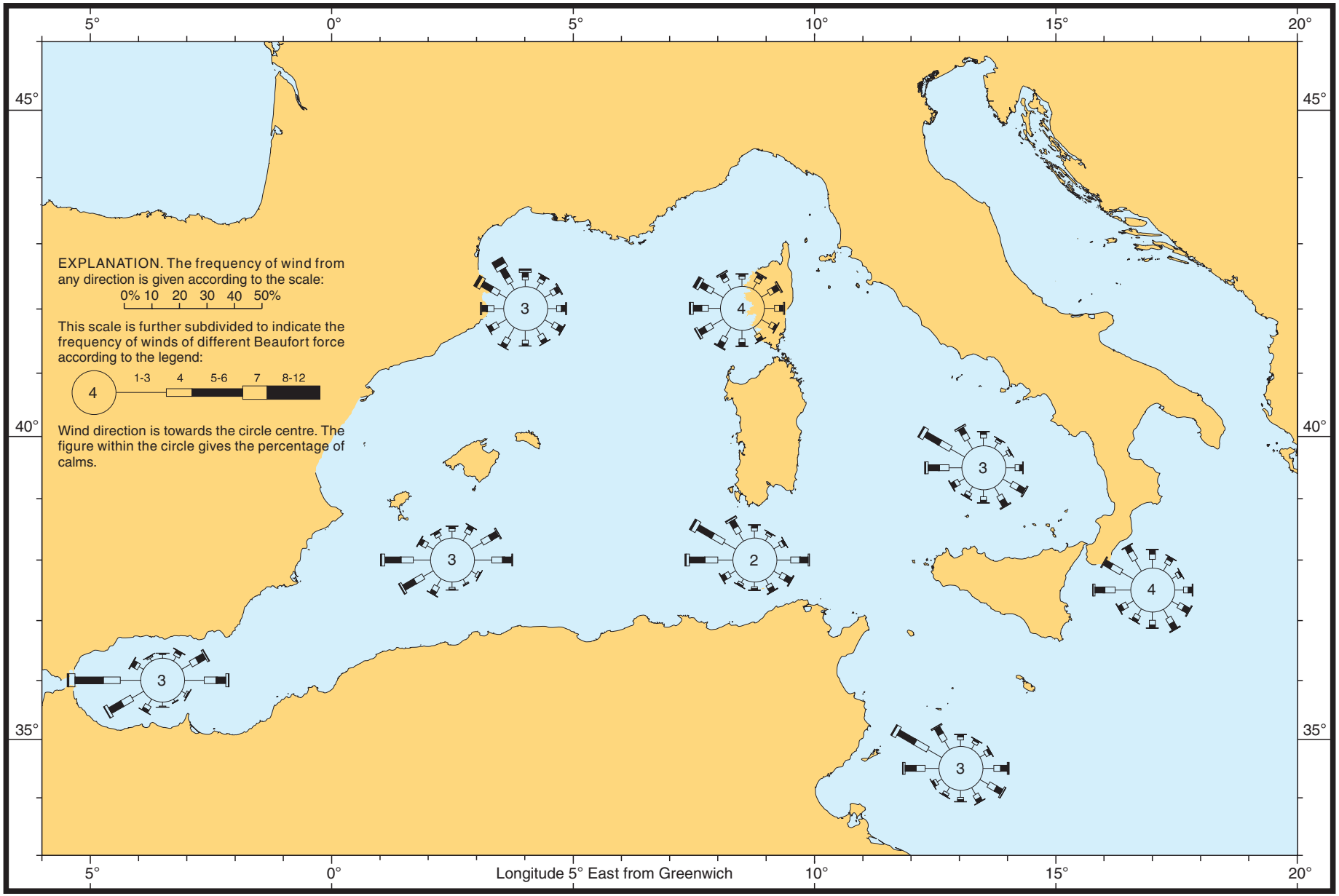

Wind distribution APRIL (1.103.2)

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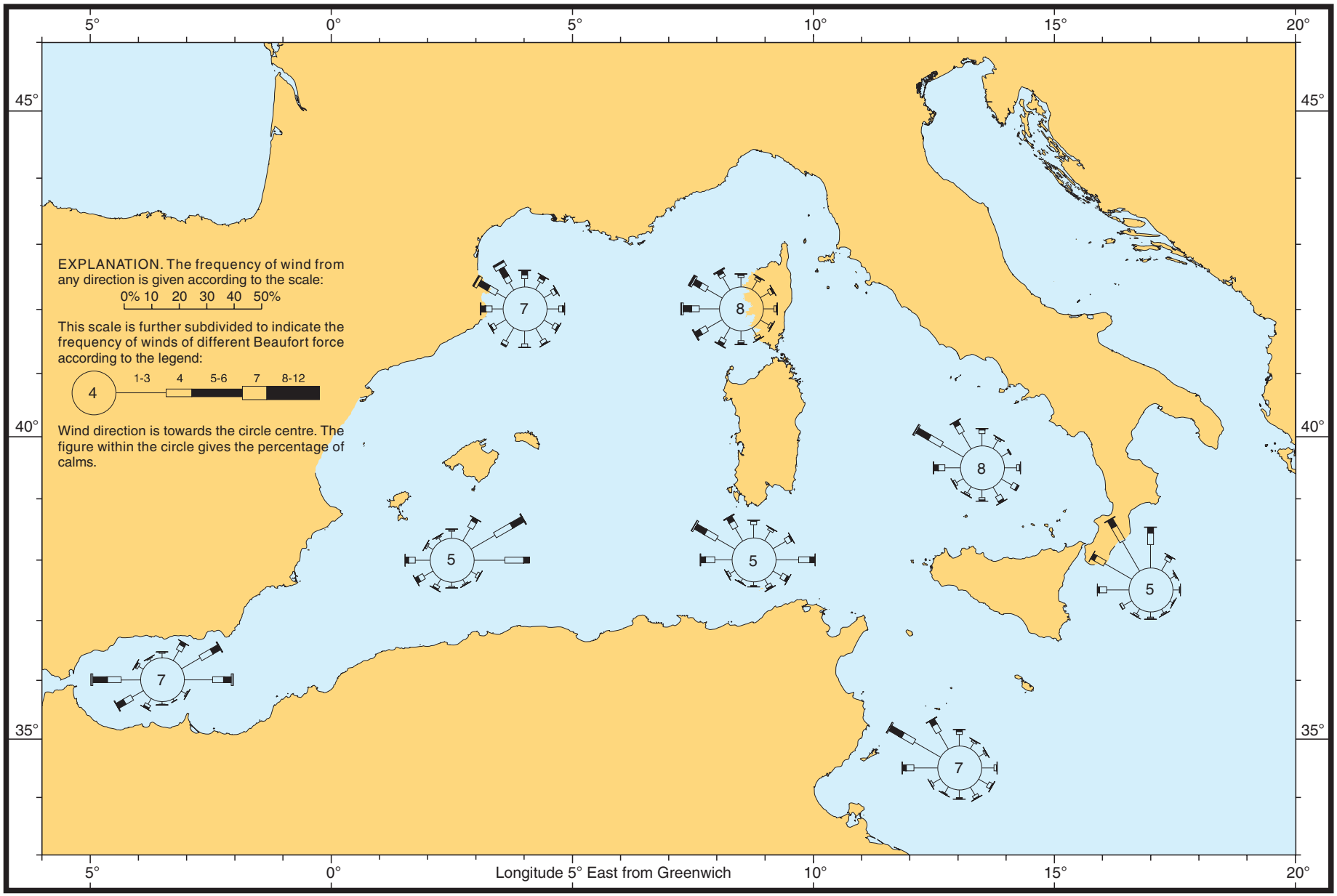

Wind distribution JULY (1.103.3)

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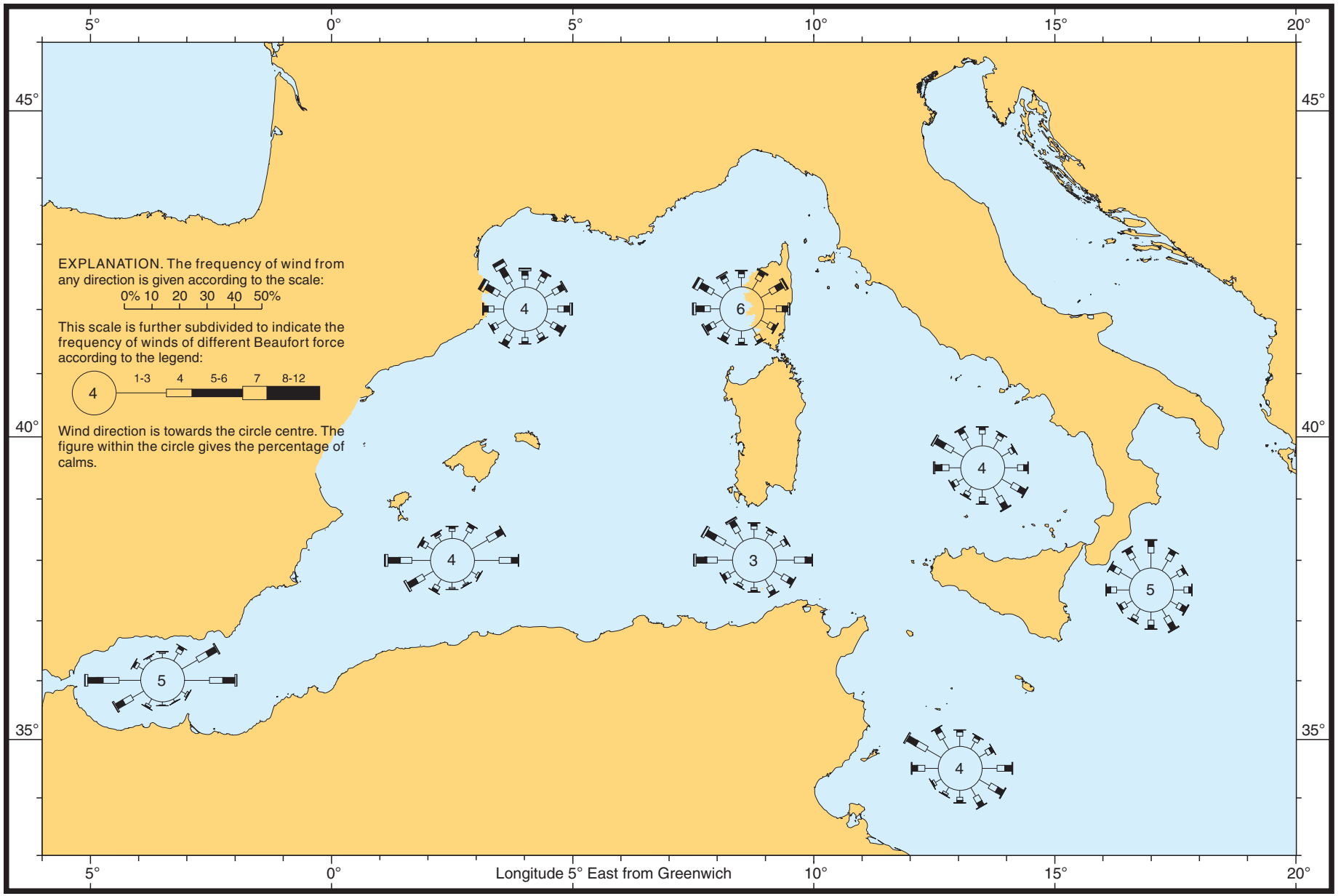

Wind distribution OCTOBER (1.103.4)

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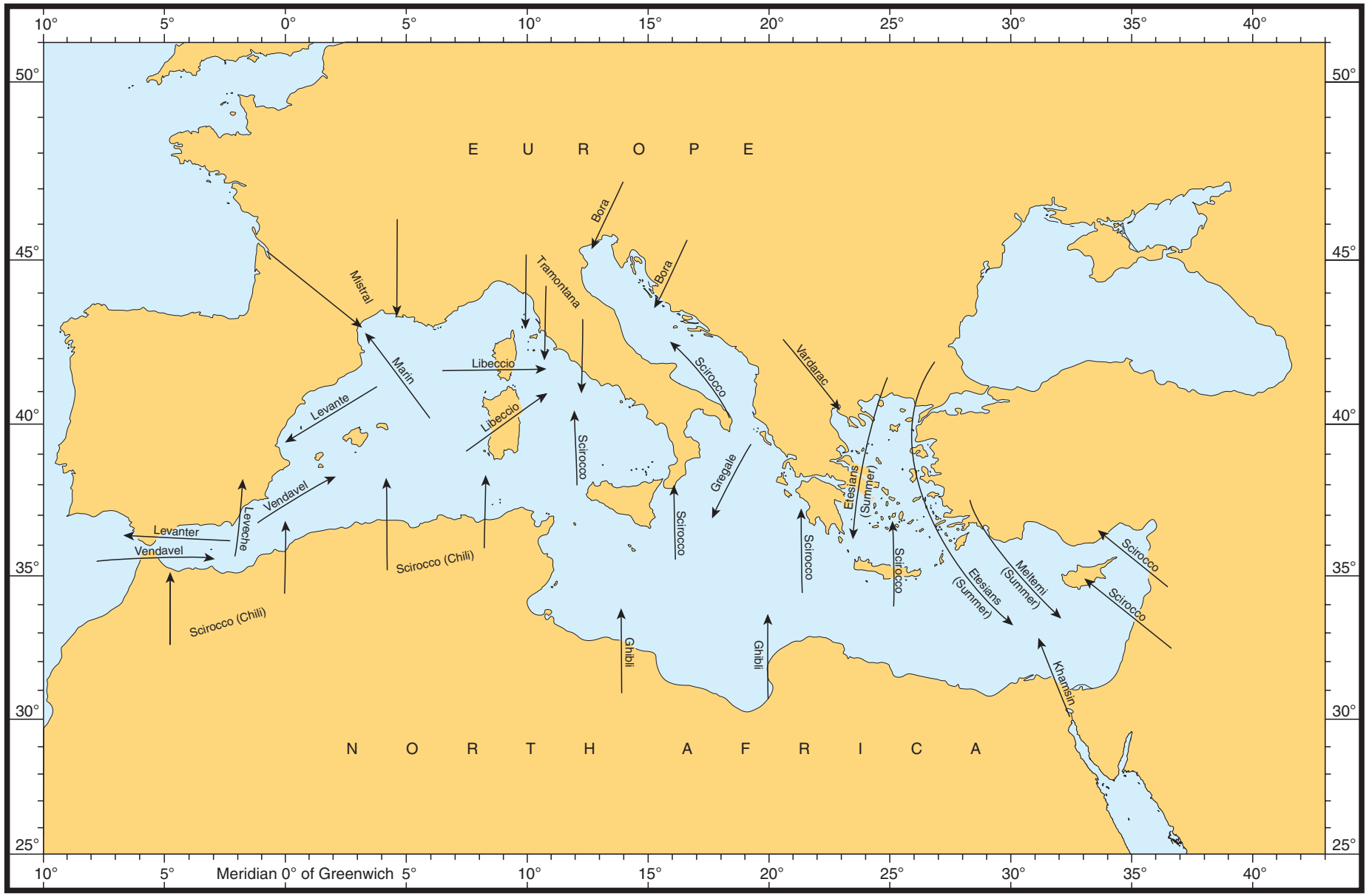

Mediterranean Sea - Main regional winds (1.104)

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3 The Climatic Tables at 1.115 to 1.134 provide mean wind speeds and directions for a number of reporting stations within the area.

Land and sea breezes

1.107

1 Land and sea breezes are very pronounced in all parts of the area in the warm season and even in the cool season may be apparent in fine, settled weather, particularly in the S. In summer the sea breeze usually commences in the mid-forenoon and gradually freshens until mid-afternoon when typically it reaches Force 3 to 4. Thereafter it reduces and eventually ceases shortly after sunset. the direction is usually onshore during the morning but will often veer slowly during the day to blow almost parallel to the coast. The land breeze often begins to set-in in the late evening and reaches maximum strength in the early hours of the morning and fades around sunrise. It is normally lighter than the sea breeze but it may occasionally be reinforced by katabatic winds in the cool season when cold air drains from high ground inland. At other times the sea and land breezes may strengthen or weaken the prevailing wind.

Cloud

1.108

1 The summer is well known for fine weather between June and September when on average 1 to 3 oktas of cloud can be expected; there is slightly more cloud in the N and NW of the area in this period. When thunderstorms affect the area the skies often become cloudy to overcast for relatively short periods. Generally there is slightly more cloud on the coast than over the open sea. See the Climatic Tables for mean cloud values.

2 In the winter months between November and February 4 to 5 oktas of cloud should be expected over the sea area. However in December and January 3 to 4 oktas over the the Gulf of Lions and Gulf of Genoa is normal. Cloudy to overcast skies are usually associated with mobile depressions but generally these conditions do not last long.

3 Winds from a N sector are usually associated with cumulus type cloud and broken skies. *Scirocco* winds, with a S component, may bring low cloud and fog to windward coasts and, particularly in winter, low cloud may persist for several days. The *Libeccio* is also associated with cloudy conditions on W or SW facing coasts.

Precipitation

1.109

1 Rainfall in this area is very seasonal with relatively dry summers and a wetter autumn and winter although there is considerable variation across the area, see the Climatic Tables 1.115. Much of the rainfall occurs in heavy downpours of short duration and prolonged rainfall is infrequent. Generally October and November are the wettest months and July and August the driest.

2 The French coast between Cap Béar and Sète has an average rainfall of 570 to 610 mm which decreases towards Marseille. To the E of Marseille amounts increase: Nice 770 mm, Genova and La Spezia 1100 to 1300 mm. The W coast of Italy averages between 720 and 1000 mm.

3 Rainfall over Corse and Sardegna varies considerably in coastal areas between 250 and 750 mm.

Snow has occasionally been reported in N coastal areas in winter.

Thunderstorms and waterspouts

1.110

1 Thunderstorms occur throughout the region, sometimes accompanied by hail, and are most frequent in late summer and autumn. The areas most susceptible to thunderstorms are between Genoa and Napoli, which has the highest frequency of between 36 and 41 thunderstorms annually, the W coast of Corse and the W and S coasts of Sardegna.

2 Waterspouts develop when the airflow is very unstable and although relatively infrequent are most likely to occur in the N part of the area, in the vicinity of prominent headlands, in autumn.

Fog and visibility

1.111

1 Across the area the frequency of fog over open sea areas is less than 2 per cent throughout the year. The number of days with coastal fog are shown in the Climatic Tables for a number of reporting stations. Visibility in excess of 5 miles can be expected between 92 and 94 per cent of the time over most open sea areas except the Gulf of Lions where the percentage falls to about 88 per cent.

2 The *Scirocco* usually becomes moist as it extends N over the Tyrrhenian Sea and tends to form mist and cloud on windward coasts. Land and radiation fog occur in coastal areas during clear winter nights but generally clear soon after sunrise. In the Bonifacio Strait early morning fog is relatively frequent in spring and summer and mist patches sometimes persist all day.

3 Haze may reduce visibility to less than 5 miles at times in summer, particularly with a strong *Marin, Libeccio* or *Scirocco* wind. Haze occurs with greatest frequency in the Gulf of Genoa and is worst towards dusk.

Air temperature

1.112

1 The mean air temperature over the open sea in February is between 9° and 10° C in the extreme NW of the area and increases to about 13° C in the far SE. In August, normally the warmest month of the year, the mean air temperature increases to 21° to 22° C and 25° to 26° respectively. In coastal areas the seasonal and diurnal variations of temperature are greater, although sea breezes have an important moderating effect inhibiting excessive afternoon temperatures in summer. See the Climatic Tables for mean and extreme temoperatures for a number of coastal stations in the area.

2 Wind direction is an important influence on temperature. The lowest temperatures are associated with winds between NW and NE whereas S winds usually elevate temperatures. The hottest and most unpleasant conditions are usually associated with the *Scirocco*.

3 Frost occurs in coastal areas in the N in winter but are rare in the SE.

Humidity

1.113

1 Humidity is inversely related to air temperature; thus high humidity is usually associated with low temperatures and vice versa. Maximum humidity normally occurs around dawn and minimum in the early afternoon.

Over the open sea the mean value of humidity falls to a minimum of about 71 per cent, across the whole area, in December. Maximum values occur in June with a mean value of 77 per cent in the NW and 78 per cent in the SE. In coastal areas the humidity tends to be highest in the morning in winter and lowest on summer afternoons.

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2 There is no significant variation in humidity across the the region but the wind direction is often an important factor. Low humidity tends to be associated with N winds, particularly in the N of the region. In contrast S winds, such as the *Scirocco*, may follow a long sea track and be both warm and humid resulting in unpleastantly opresssive conditions. Mist frequently forms in the N of the region where the moist warm air passes over the relatively cool sea. In calm conditions with clear skies fog is possible in the early morning, particularly in autumn.

CLIMATIC TABLES

1.114

1 The location of climatic stations is shown in diagram (1.114).

The tables (1.115 to 1.134), which follow, give data for several coastal stations that regularly undertake weather observations. Some of these stations have been re-sited consequently the position given is the latest available.

It is emphasised that these data are average conditions and refer to the specific location of the observing station and therefore may not be totally representative of conditions over the open sea or approaches to ports in their vicinity.

2 The following comments indicate some of the differences between open sea and reporting station that should be expected, see *The Mariner's Handbook* for additional information:

Wind speed tends to be higher at sea than on land however funnelling in narrow inlets frequently raises wind speed.

Precipitation along hilly, lee coasts can be considerably higher than at sea to windward. Conversely precipitation on the leeward side of high ground tends to be less.

3 Air temperature over the sea is less variable than over land.

Topography has a marked effect on local conditions.

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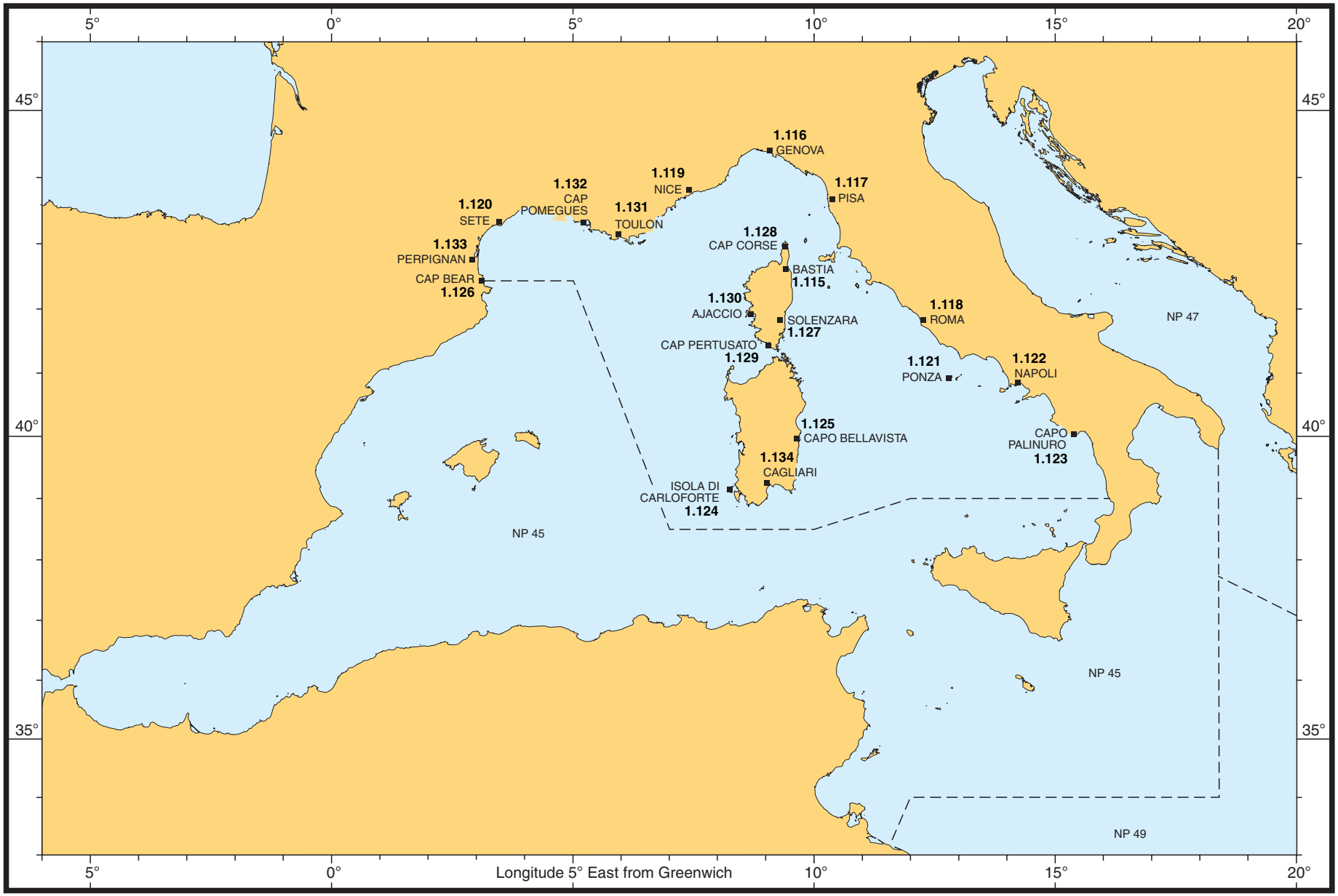

Location of climatic stations (1.114.)

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1.115

WMO No 07790

BASTIA (42° 33′ N, 09° 29′ W) Height above MSL – 12 m

Climatic Table compiled from 8 to 17 years observations, 1983 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																	Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with mm or more	0700									1300												
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0700	1300	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1019	14	5	19	1	77	63	4	4			3	4	1	3	4	62	15	8	⊕	20	13	11	23	8	6	7	8	5	7	7	⊕	⊕	2
February	1017	14	5	18	0	78	60	4	4			5	4	1	2	4	58	15	9	2	14	16	20	30	3	2	6	7	2	7	8	⊕	⊕	2
March	1016	16	7	20	3	80	62	4	4			5	4	1	3	5	59	14	7	2	13	20	15	38	4	2	3	6	⊕	6	9	⊕	⊕	2
April	1013	17	9	21	4	81	66	4	5			5	2	1	4	6	56	16	7	3	13	15	17	38	6	2	3	5	⊕	5	9	⊕	⊕	3
May	1014	22	12	25	8	81	65	4	4			4	1	1	1	7	58	12	7	9	10	16	26	39	4	1	1	2	⊕	4	8	⊕	⊕	3
June	1015	25	16	26	12	77	63	3	4			6	2	1	2	11	54	11	3	9	9	11	22	49	4	⊕	2	4	⊕	4	8	⊕	⊕	4
July	1015	29	19	32	16	74	61	2	2			2	⊕	1	1	7	71	9	3	5	8	18	29	41	2	⊕	⊕	1	⊕	4	8	⊕	⊕	2
August	1015	29	20	33	16	73	60	2	3			1	1	1	⊕	4	80	7	4	3	7	20	28	39	2	⊕	1	2	⊕	5	8	⊕	⊕	4
September	1016	26	17	29	13	80	64	3	4			3	2	1	1	3	75	11	3	1	10	16	24	40	5	1	1	3	⊕	5	8	⊕	⊕	5
October	1017	22	13	26	9	83	67	4	4			4	3	1	2	3	66	16	4	1	11	14	17	41	6	3	2	4	2	6	7	⊕	⊕	4
November	1016	17	9	22	5	81	66	4	5			3	3	⊕	2	6	56	20	8	2	16	15	13	28	7	6	5	9	2	6	7	⊕	1	3
December	1018	15	7	20	1	77	63	4	4			5	6	2	3	3	56	16	7	2	16	16	11	22	11	9	6	6	5	7	7	⊕	⊕	1
Means	1016	21	12	33*	−1§	79	63	3	4	–	–	4	3	1	2	5	63	13	6	3	12	16	19	36	5	3	3	5	1	5	8	–	–	–
Totals	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	⊕	1	35
Extreme values	–	–	–	38†	−3‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	17	17				17		17				17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.116

WMO No 16120

GENOVA/SESTRI (44° 25′ N, 08° 51′ W) Height above MSL – 3 m
Climatic Table compiled from 17 to 30 years observations, 1960 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
												0700									1300												
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or mor	N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0700	1300	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1019	12	7	17	1	66	61	4	4	106	7	10	59	6	7	5	2	⊕	1	11	12	44	5	15	8	4	2	1	9	11	11	⊕	⊕	1
February	1017	12	6	17	2	66	61	4	4	95	7	15	56	7	6	3	2	⊕	1	11	10	40	6	19	10	5	3	1	6	10	10	⊕	⊕	1
March	1016	15	9	19	4	67	63	4	4	106	8	13	44	10	11	4	1	⊕	2	15	11	24	3	24	8	9	3	3	4	8	9	⊕	⊕	1
April	1013	17	11	22	7	73	70	5	5	85	8	16	32	8	14	4	2	1	4	20	9	12	4	30	22	12	4	2	5	7	9	⊕	⊕	3
May	1014	21	15	27	11	74	71	4	5	76	7	11	30	10	15	5	1	1	3	24	6	12	4	27	25	17	5	1	3	6	8	⊕	⊕	4
June	1015	24	18	29	14	75	72	4	4	53	5	16	28	8	11	5	1	⊕	1	28	5	6	3	28	33	20	3	1	2	5	7	0	⊕	5
July	1015	28	22	32	18	71	70	2	3	27	3	13	40	7	8	2	2	⊕	2	27	4	9	1	29	32	19	4	⊕	3	7	7	⊕	⊕	4
August	1014	28	22	32	18	72	68	3	3	81	6	10	50	8	7	2	1	⊕	1	21	4	11	2	25	36	17	3	⊕	2	6	7	⊕	⊕	6
September	1015	25	19	29	15	72	65	3	4	99	6	13	47	6	5	4	3	⊕	2	20	6	19	4	24	23	16	3	1	3	5	8	⊕	1	6
October	1017	20	15	25	10	73	65	4	4	153	8	8	60	8	6	5	1	⊕	⊕	11	10	35	6	18	15	6	3	2	6	10	9	⊕	⊕	4
November	1016	15	10	21	4	69	62	4	4	111	8	16	59	6	3	5	2	⊕	1	9	10	50	3	14	8	6	2	2	6	11	11	⊕	⊕	2
December	1018	12	7	17	1	66	60	3	4	81	6	9	63	5	6	3	1	⊕	1	11	9	48	5	14	6	2	1	2	12	11	10	⊕	⊕	1
Means	1016	19	13	33*	−1§	70	66	4	4	_	_	12	47	7	8	4	2	1	2	17	8	26	4	22	20	11	3	1	5	8	9	_	_	_
Totals	_	_	_	_	_	_	_	_	_	1073	79	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	⊕	2	38
Extreme values	_	_	_	35†	−5‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	17	17				17		17		30		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.117

WMO No 16158

PISA/S.GIUSTO (43° 41′ N, 10° 23′ E) Height above MSL – 6 m
Climatic Table compiled from 17 to 30 years observations, 1960 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																Mean wind speed		Number of days with		
												0700									1300											
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or mor	N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0700	1300	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1020	11	3	16	–4	87	70	4	5	74	9	2	4	38	25	2	4	4	1	21	2	6	37	23	2	5	5	3	16	5	7	⊕	5	1
February	1018	12	3	18	–4	85	63	4	5	70	9	1	4	38	28	2	4	3	1	19	2	4	36	25	5	7	7	4	11	5	7	⊕	5	2
March	1017	15	5	20	–2	84	56	5	5	77	9	1	5	38	24	1	5	2	2	22	3	5	21	19	6	11	23	5	9	5	7	⊕	5	2
April	1013	18	8	23	2	88	61	5	5	80	8	1	6	33	23	3	6	5	1	22	2	5	17	11	9	15	29	5	7	4	8	⊕	3	4
May	1015	22	11	28	7	90	60	5	5	61	7	1	3	35	25	2	5	2	1	26	2	2	12	8	5	15	46	6	4	3	7	⊕	3	3
June	1015	26	14	31	10	90	60	4	4	43	5	1	2	35	25	3	5	4	1	25	3	3	8	4	5	21	45	8	2	3	8	⊕	2	4
July	1015	30	17	34	13	90	51	3	3	24	3	1	2	38	24	3	2	3	1	24	5	4	8	5	3	13	48	12	3	3	8	0	2	3
August	1015	30	18	35	13	89	52	3	3	57	4	⊕	3	41	24	1	2	2	1	24	5	3	7	5	4	18	44	10	4	3	8	⊕	1	4
September	1016	26	15	30	10	88	57	4	4	88	6	1	3	39	22	2	5	2	1	25	4	6	20	10	5	16	25	7	7	4	7	⊕	2	6
October	1018	21	12	26	5	89	64	4	5	120	8	1	3	37	28	3	3	3	1	21	2	4	33	22	6	9	10	4	11	4	7	⊕	4	5
November	1016	15	7	21	0	87	69	5	5	122	10	2	7	35	28	3	3	4	1	17	2	4	43	27	4	5	4	2	8	5	7	⊕	2	5
December	1019	12	4	16	–3	85	70	4	5	85	9	1	5	37	27	2	3	3	1	18	1	5	40	25	2	7	4	3	13	6	7	⊕	5	2
Means	1016	20	10	35*	–5§	88	61	4	5	_	_	1	4	37	26	2	4	3	1	22	3	4	23	15	5	12	24	6	8	4	7	_	_	_
Totals	_	_	_	_	_	_	_	_	_	901	87	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	⊕	39	41
Extreme values	_	_	_	38†	–8‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	17	17				17		17		30		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.118

WMO No 16242

ROMA FIUMICINO (41° 48′ N, 12° 14′ E) Height above MSL – 3 m
Climatic Table compiled from 17 to 30 years observations, 1960 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or mor	0700									1300											
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0700	1300	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1019	14	4	17	–2	84	65	3	4	81	9	11	37	25	10	3	3	3	3	6	12	26	18	13	9	6	5	5	6	7	8	⊕	4	2
February	1017	14	4	18	–2	84	62	4	4	75	8	12	39	23	8	3	4	3	3	6	15	12	9	14	14	15	11	5	6	7	9	⊕	5	3
March	1016	16	6	20	1	85	63	4	4	65	8	14	37	19	9	3	4	1	3	9	11	7	5	9	19	21	23	3	2	6	10	⊕	4	2
April	1013	18	8	23	3	86	66	4	5	55	7	11	30	24	12	3	5	4	2	9	6	3	3	11	23	30	21	3	1	6	11	⊕	3	4
May	1014	23	12	28	8	86	67	4	4	32	4	7	39	22	12	3	4	2	2	10	2	2	1	9	23	33	29	2	1	5	11	0	3	2
June	1015	26	15	30	11	83	66	3	3	16	2	9	31	24	10	3	4	3	2	14	2	1	1	6	20	41	26	2	1	5	11	⊕	2	4
July	1015	29	18	34	15	82	65	2	2	15	2	15	44	15	9	1	2	1	2	12	1	1	1	5	15	47	29	1	⊕	4	11	⊕	2	2
August	1014	30	19	33	14	84	64	2	2	33	3	12	42	22	6	2	2	1	2	12	1	1	1	5	19	42	29	1	1	4	11	⊕	2	3
September	1015	26	16	30	12	87	64	3	3	68	5	7	41	22	10	3	4	1	1	11	3	3	2	12	22	36	20	1	1	5	10	⊕	3	5
October	1017	23	13	26	7	88	65	4	4	93	7	8	45	22	8	3	5	1	1	7	9	6	5	16	22	18	16	3	4	6	9	⊕	3	5
November	1016	17	9	22	2	86	67	4	5	111	10	10	43	20	9	3	6	3	2	4	13	22	12	16	7	9	10	3	7	7	8	⊕	3	5
December	1018	14	5	19	–1	84	66	3	4	90	9	14	38	24	8	3	5	1	2	5	16	30	15	13	5	7	5	4	3	8	9	⊕	3	3
Means	1016	21	11	35*	–3§	85	65	3	4	_	_	11	39	21	9	3	4	2	2	9	7	10	6	11	16	25	19	3	3	6	10	_	_	_
Totals	_	_	_	_	_	_	_	_	_	734	74	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	⊕	37	40
Extreme values	_	_	_	39†	–8‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	17	17				17		17		30		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.119

WMO No 07690

NICE (43° 39′ N, 07° 12′ E) Height above MSL – 28 m

Climatic Table compiled from 17 to 30 years observations, 1960 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or mor	0700									1300												
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0700	1300	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1019	13	6	18	1	67	57	3	4	83	7	49	2	2	⊕	⊕	1	3	44	0	23	4	17	5	11	12	5	23	1	10	7	0	⊕	1
February	1017	13	6	18	1	68	58	4	4	76	6	45	3	3	1	⊕	2	3	44	⊕	6	4	26	17	22	14	5	7	0	10	8	0	⊕	2
March	1016	15	8	20	4	70	62	4	4	71	7	48	3	3	1	⊕	1	4	41	⊕	4	2	26	30	24	11	2	2	0	9	9	⊕	⊕	1
April	1013	17	10	21	6	75	68	4	5	62	7	43	6	6	⊕	1	2	3	39	⊕	3	5	31	25	25	8	3	1	0	8	10	⊕	⊕	2
May	1014	20	14	25	10	76	70	4	4	49	6	45	6	6	1	⊕	2	4	36	1	1	3	26	39	25	5	1	1	0	7	9	0	⊕	2
June	1015	24	17	28	13	75	70	4	4	37	5	40	7	6	2	⊕	2	3	39	1	1	1	27	40	24	6	1	1	0	6	9	⊕	⊕	3
July	1015	27	20	32	17	71	68	2	2	16	3	50	5	2	⊕	0	1	3	39	⊕	1	1	22	42	28	5	1	⊕	0	6	8	⊕	⊕	2
August	1015	28	20	31	17	72	68	2	2	31	4	49	1	2	⊕	0	1	1	46	0	1	1	19	44	29	5	1	1	0	8	9	0	0	4
September	1015	25	17	29	14	76	66	3	3	54	5	55	2	1	0	⊕	1	3	38	0	1	3	21	37	26	9	3	1	0	8	9	0	⊕	3
October	1017	21	14	25	10	77	66	4	4	108	7	51	3	2	1	⊕	1	2	40	⊕	5	6	27	20	23	13	2	4	1	9	8	0	⊕	4
November	1016	16	9	21	5	73	62	4	4	104	6	50	2	2	0	⊕	1	2	42	1	11	4	20	10	15	18	6	15	2	10	7	0	0	2
December	1018	14	6	18	2	69	58	3	4	78	6	52	3	2	⊕	⊕	1	3	39	⊕	22	5	13	3	5	11	5	34	2	10	7	⊕	0	1
Means	1016	19	12	32*	0§	72	64	3	4	–	–	48	3	3	1	⊕	1	3	41	⊕	6	3	23	26	21	10	3	8	⊕	8	18	–	–	–
Totals	–	–	–	–	–	–	–	–	–	769	69	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	⊕	⊕	27
Extreme values	–	–	–	36†	−7‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	17	17				17		17		30		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.120

WMO No 07641

SETE (43° 24′ N, 03° 41′ E) Height above MSL – 85 m

Climatic Table compiled from 9 to 30 years observations, 1941 to 1991

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 0.1 mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1022	10	5	16	–1	77	68	3	4	60	7	19	25	6	3	2	4	11	28	2	16	18	10	3	3	11	8	31	1	14	13	2	1	⊕
February	1018	11	5	17	–1	77	67	4	5	29	5	16	27	10	4	4	2	8	27	1	15	14	21	8	4	6	9	24	1	15	14	3	1	⊕
March	1018	14	7	21	2	74	63	4	4	57	7	17	22	10	5	⊕	⊕	5	39	1	13	9	15	12	6	6	4	34	⊕	14	15	2	2	⊕
April	1014	16	9	22	4	77	66	5	5	38	5	16	19	15	7	4	3	9	27	⊕	15	5	11	19	13	8	6	23	⊕	14	15	2	1	⊕
May	1015	20	13	26	8	78	64	5	4	55	6	20	20	15	5	4	2	5	29	1	10	2	10	22	19	7	7	22	⊕	12	13	1	1	1
June	1016	24	16	29	11	76	63	4	4	31	5	17	17	13	3	2	2	9	36	2	11	1	9	18	19	11	6	24	1	12	13	1	2	2
July	1017	28	20	34	16	74	61	3	3	19	3	23	19	12	4	2	2	5	33	⊕	8	3	12	19	21	13	7	17	0	12	12	1	2	2
August	1016	27	19	33	14	75	62	3	3	39	5	19	17	15	5	2	1	4	38	0	9	3	11	21	19	10	3	23	0	12	13	1	2	5
September	1018	24	17	30	12	77	64	4	4	68	7	17	25	11	8	2	2	7	27	1	11	5	12	20	12	13	9	16	0	12	12	1	2	2
October	1019	20	14	25	8	79	69	5	5	85	8	13	29	12	9	4	⊕	6	26	1	12	12	19	16	14	3	7	17	1	14	15	3	1	2
November	1017	14	9	19	2	79	70	4	5	59	6	14	28	13	6	4	2	8	25	1	11	18	17	10	3	4	7	29	1	15	16	3	1	⊕
December	1021	11	6	17	0	78	70	3	4	71	7	22	31	5	3	3	1	8	26	1	18	25	12	4	4	3	8	25	1	15	15	3	1	⊕
Means	1018	18	12	34*	–3§	77	66	4	4	_	_	18	23	11	5	3	2	7	30	1	12	10	13	14	11	8	7	24	1	13	14	_	_	_
Totals	_	_	_	_	_	_	_	_	_	611	71	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	23	17	14
Extreme values	_	_	_	36†	–9‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	9	9				9		9		30		9									9									9		9	9	9

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.121

WMO No 16280

PONZA (40° 55′ N, 12° 57′ E) Height above MSL – 185 m

Climatic Table compiled from 17 to 30 years observations, 1960 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1018	12	9	16	5	79	74	3	4	78	9	10	15	19	13	7	7	12	13	5	10	10	19	11	7	6	17	12	7	11	10	1	⊕	3
February	1017	12	9	16	5	78	70	4	4	64	8	8	11	19	15	7	7	13	14	7	7	9	20	13	7	9	20	11	5	11	10	1	1	2
March	1015	14	10	17	6	80	72	4	4	53	7	11	12	15	15	9	6	14	12	6	7	7	22	12	6	9	19	12	6	10	9	⊕	⊕	2
April	1013	16	11	20	7	83	74	4	4	38	6	6	8	17	16	8	7	16	15	7	8	3	18	17	8	7	24	11	5	9	10	1	1	2
May	1014	21	15	25	11	84	73	3	3	21	3	9	9	18	16	6	4	13	14	12	7	3	15	15	6	13	25	12	4	8	8	⊕	1	1
June	1015	25	18	29	15	83	70	2	3	13	2	9	6	13	16	7	5	14	19	10	4	4	13	13	6	8	34	14	5	7	7	⊕	⊕	1
July	1014	28	22	31	18	84	68	2	1	10	1	12	6	18	14	3	3	12	19	14	4	6	16	8	3	7	38	14	5	6	6	⊕	⊕	1
August	1014	28	22	31	19	85	68	2	2	25	2	11	6	16	16	6	3	13	18	11	6	5	16	11	4	7	28	14	7	7	6	⊕	⊕	2
September	1015	25	20	28	16	84	71	3	3	54	5	7	10	20	13	6	5	10	15	13	6	5	25	11	4	6	23	13	7	8	8	⊕	⊕	3
October	1017	21	17	24	13	81	72	3	4	107	8	7	11	23	19	7	4	12	9	10	6	7	31	15	7	6	14	6	7	9	9	⊕	1	5
November	1015	16	13	21	8	77	72	4	4	106	9	7	13	20	15	8	8	11	12	4	5	9	24	17	9	7	15	9	5	11	10	1	⊕	5
December	1017	13	10	17	6	77	71	4	4	89	10	10	16	20	11	9	6	11	10	8	10	12	21	12	7	9	14	11	5	11	11	1	⊕	2
Means	1015	19	15	32*	3§	81	71	3	3	–	–	9	10	18	15	7	5	13	14	9	6	6	20	13	6	8	23	12	6	9	9	–	–	–
Totals	–	–	–	–	–	–	–	–	–	658	70	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	4	29
Extreme values	–	–	–	37†	0‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	17	17				17		17		30		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.122

WMO No 16289

NAPOLI/CAPODICHINO (40° 51′ N, 14° 18′ E) Height above MSL – 72 m

Climatic Table compiled from 17 to 30 years observations, 1960 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1020	13	5	17	–1	85	66	4	5	104	10	19	15	3	1	4	7	5	16	30	17	18	7	2	9	11	6	8	23	4	6	⊕	3	2
February	1018	14	5	18	0	83	61	4	4	98	10	18	18	5	1	4	5	5	15	28	11	23	8	2	15	19	7	6	10	4	7	⊕	2	3
March	1016	16	7	21	2	85	60	4	5	86	10	16	16	3	1	4	5	5	10	39	6	20	7	1	22	21	9	7	6	4	8	⊕	2	2
April	1014	18	9	25	4	87	59	4	5	76	9	14	11	3	3	5	7	5	9	45	5	11	4	3	27	34	9	4	3	3	8	⊕	1	3
May	1015	24	13	30	9	87	57	4	4	50	6	17	17	3	1	5	5	3	7	42	5	11	3	2	36	31	7	2	4	2	9	⊕	2	2
June	1015	27	17	33	13	85	57	3	3	34	4	15	16	5	2	5	6	4	4	44	2	6	4	2	39	33	10	3	1	2	8	⊕	1	3
July	1015	31	20	36	17	84	55	1	2	24	2	17	17	3	1	2	3	1	5	51	3	9	4	2	41	30	5	3	2	2	8	⊕	1	3
August	1015	31	20	35	16	86	55	2	2	42	4	19	11	3	⊕	2	1	2	9	52	4	9	4	1	42	29	7	3	2	2	8	⊕	1	3
September	1016	27	17	32	12	90	58	3	3	80	6	15	12	2	1	3	3	4	11	48	3	8	6	4	32	29	9	5	4	2	7	⊕	2	3
October	1018	23	13	28	8	88	61	4	4	130	8	18	9	4	2	4	4	2	14	43	8	19	6	2	17	21	9	6	12	3	6	⊕	2	5
November	1017	18	9	23	4	88	66	4	5	162	11	20	12	3	1	4	8	7	17	29	16	21	5	2	11	14	7	8	16	4	6	⊕	2	5
December	1018	14	6	19	0	85	67	4	4	121	11	20	15	2	1	6	7	4	15	29	17	24	5	3	7	12	5	7	20	4	6	1	3	2
Means	–	–	–	–	37*	–2§	–	–	–	–	_	_	18	14	3	1	4	5	4	11	40	8	15	5	2	25	24	7	5	9	–	–	_	_	_
Totals	_	_	_	_	_	_	_	_	_	1007	91	_	_	_	–	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	2	22	36
Extreme values	_	_	_	_	39†	–5‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	17	17				17		17		30		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.123

WMO No 16310

CAPO PALINURO (40° 01′ N, 15° 17′ E) Height above MSL – 185 m
Climatic Table compiled from 17 to 30 years observations, 1960 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1018	14	8	17	2	75	69	4	4	95	11	24	23	8	15	3	2	5	7	12	17	11	3	19	14	5	7	15	8	8	8	1	⊕	1
February	1016	13	7	17	3	74	68	4	4	85	10	21	22	9	20	4	3	4	8	9	17	9	3	23	17	8	4	15	4	8	9	1	⊕	2
March	1015	15	9	20	5	74	67	4	4	73	9	22	20	9	21	4	3	3	9	10	19	7	4	20	20	8	6	14	3	8	8	1	⊕	1
April	1012	17	11	23	7	74	68	4	5	57	8	19	13	8	23	6	4	4	9	14	20	5	4	22	23	7	6	10	4	7	9	1	⊕	2
May	1013	22	14	28	11	76	68	3	4	40	5	21	9	7	30	5	2	4	6	16	22	5	3	18	21	8	8	12	3	5	7	⊕	⊕	1
June	1014	25	18	30	13	75	67	2	3	22	3	23	10	6	25	6	3	2	8	19	22	4	4	18	25	7	6	11	4	5	7	⊕	1	1
July	1013	29	21	33	18	76	67	1	2	14	2	18	11	6	26	4	3	1	5	25	17	4	3	11	33	9	5	12	6	4	6	⊕	⊕	2
August	1013	29	22	33	18	78	67	1	2	22	3	19	16	9	22	4	2	2	5	22	19	6	2	14	32	9	6	10	3	4	7	⊕	⊕	3
September	1014	26	19	29	14	77	66	2	3	60	5	23	16	7	24	3	1	1	5	19	16	5	1	18	32	9	6	11	2	6	8	⊕	⊕	3
October	1016	23	16	27	11	74	64	3	4	102	8	23	20	10	19	2	2	3	6	16	12	5	4	22	26	6	6	13	4	7	8	⊕	1	3
November	1014	18	12	23	7	74	65	4	4	113	11	23	23	8	20	5	2	4	6	8	13	7	4	26	17	7	5	16	6	9	8	1	⊕	3
December	1016	15	9	18	4	71	65	4	4	107	11	23	23	10	15	4	3	5	8	9	18	9	5	20	12	4	5	16	10	9	8	1	⊕	2
Means	1014	21	14	34*	1§	75	67	3	4	–	–	22	17	8	22	4	2	3	7	15	18	6	3	19	23	7	6	13	5	7	8	–	–	–
Totals	–	–	–	–	–	–	–	–	–	790	86	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6	2	24
Extreme values	–	–	–	39†	–4‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	17	17				17		17		30		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.124

WMO No 16549

ISOLA DI CARLOFORTE (39° 08′ N, 08° 19′ E) Height above MSL – 15 m

Climatic Table compiled from 10 to 25 years observations, 1941 to 1998

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1022	13	9							56	10	15	13	14	6	2	3	8	23	16	17	10	11	13	4	6	12	19	7	7	8	⊕		
February	1021	13	8							46	9	3	13	13	6	1	2	10	26	25	13	9	8	9	9	4	10	24	14	6	8	0		
March	1019	16	11							48	8	10	11	12	4	1	1	8	32	22	13	6	8	10	8	5	6	30	15	6	8	⊕		
April	1013	18	12							33	5	11	12	11	7	3	4	10	31	11	10	3	6	11	14	6	10	36	4	8	11	⊕		
May	1015	21	14							23	3	15	22	12	4	3	4	6	21	13	12	7	5	13	18	9	9	24	5	5	9	0		
June	1014	26	20							8	2	24	16	8	6	1	6	7	24	8	19	7	6	11	11	9	7	29	1	6	9	0		
July	1015	28	21							5	1	34	13	11	3	1	1	3	26	9	14	8	5	6	19	7	3	37	⊕	5	9	0		
August	1015	28	21							8	2	25	17	8	5	1	1	4	22	19	21	8	5	5	20	6	4	30	2	4	8	0		
September	1016	27	20							33	3	14	15	16	8	1	2	6	25	13	13	8	7	11	17	6	5	28	5	5	8	0		
October	1015	23	17							46	6	4	17	17	7	2	8	12	23	10	12	5	8	15	13	8	14	20	5	6	9	⊕		
November	1015	18	13							97	13	8	12	12	6	3	5	12	29	13	11	9	5	11	10	9	11	27	6	7	8	0		
December	1016	15	11							58	11	9	18	10	7	1	3	11	29	12	11	11	11	9	5	7	12	25	8	8	9	⊕		
Means		21	15	*	§					–	–	14	15	12	6	2	3	8	26	14	14	8	7	10	12	7	9	27	6	6	9	–	–	–
Totals	–	–	–	–	–	–	–	–	–	461	73	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	⊕	–	–
Extreme values	–	–	–	†	‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	10	14								25		10									10									10		17		

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.125

WMO No 16550

CAPO BELLAVISTA (39° 56′ N, 09° 43′ E) Height above MSL – 150 m
Climatic Table compiled from 17 to 30 years observations, 1960 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1019	13	8	19	3	69	64	3	4	32	5	11	6	3	2	2	7	31	31	7	5	15	15	10	11	7	7	11	20	10	9	2	⊕	1
February	1017	14	8	19	4	69	63	3	4	42	6	10	7	3	2	6	9	28	27	9	5	16	18	14	9	7	9	8	12	10	10	1	1	1
March	1015	15	9	21	5	69	62	4	4	41	5	10	8	5	3	4	10	27	22	12	2	19	27	17	9	4	5	8	9	9	11	2	1	⊕
April	1013	18	11	22	7	70	63	4	4	32	5	8	6	4	4	6	10	22	23	18	2	13	24	21	12	4	8	6	10	8	10	1	2	1
May	1014	22	14	27	10	70	65	3	4	23	3	7	12	4	1	6	10	18	16	26	1	12	31	29	10	3	4	1	10	5	8	⊕	2	1
June	1015	26	18	30	14	67	62	2	3	11	2	7	9	5	2	6	5	15	14	37	⊕	7	33	34	15	1	2	1	7	4	8	⊕	1	2
July	1015	29	21	33	17	66	62	1	1	4	1	6	14	4	2	7	5	14	14	34	⊕	6	41	36	8	⊕	1	1	6	4	8	⊕	1	2
August	1014	30	22	34	19	68	60	2	2	13	2	6	7	2	1	6	7	20	24	27	⊕	6	45	34	8	⊕	1	2	2	5	8	⊕	1	3
September	1015	27	19	30	14	69	61	3	3	43	4	7	6	4	1	3	9	32	26	13	2	8	41	27	9	2	4	4	4	7	9	⊕	⊕	4
October	1016	22	16	27	12	71	64	4	4	71	6	5	6	2	3	5	9	34	27	9	2	13	30	22	13	4	7	3	8	9	9	1	⊕	3
November	1015	18	12	23	8	69	64	4	5	58	5	8	6	3	3	4	10	35	25	6	5	13	18	13	14	7	8	8	15	10	9	1	1	2
December	1017	15	9	19	5	67	64	3	4	73	6	9	6	4	1	3	10	30	28	9	7	17	12	8	12	7	8	7	22	11	10	2	⊕	1
Means	1015	21	14	35*	2§	69	63	3	4	–	–	8	8	4	2	5	8	25	23	17	3	12	28	22	11	4	5	5	10	8	9	–	–	–
Totals	–	–	–	–	–	–	–	–	–	443	50	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	10	21
Extreme values	–	–	–	40†	−1‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	17	17				17		17		30		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.126

WMO No 07749

CAPE BEAR (42° 31′ N, 03° 08′ E) Height above MSL – 86 m
Climatic Table compiled from 17 years observations, 1983 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1021	12	7	18	1	75	68	4	4			28	2	1	1	13	5	1	44	3	38	3	3	5	15	5	⊕	28	3	18	18	9	1	⊕
February	1019	13	7	18	2	75	68	4	4			25	2	1	1	11	6	2	47	5	36	7	4	6	15	3	⊕	28	1	18	20	9	1	⊕
March	1018	15	9	21	5	73	66	4	4			28	1	1	3	8	6	1	50	2	34	11	4	7	16	2	1	25	⊕	19	22	11	1	⊕
April	1013	16	10	22	6	74	67	5	5			30	2	1	1	14	5	1	43	3	29	12	5	11	22	2	⊕	18	1	18	21	10	1	1
May	1014	20	14	26	9	75	70	5	5			24	2	1	2	14	4	2	47	4	21	12	7	16	27	2	1	13	1	15	17	6	2	2
June	1016	23	17	28	12	72	67	4	4			27	1	⊕	2	5	4	1	56	4	27	14	8	11	24	1	⊕	13	2	16	16	5	2	2
July	1016	27	20	32	16	71	65	3	3			31	1	⊕	1	6	2	1	54	4	27	16	7	11	26	2	0	10	1	15	15	5	2	2
August	1016	27	21	31	16	73	67	4	3			27	2	⊕	2	6	3	2	53	5	31	16	10	11	20	1	⊕	10	1	14	14	4	2	3
September	1016	24	18	29	14	74	68	4	4			25	1	1	1	9	4	1	54	4	30	20	7	12	16	2	1	12	1	15	15	5	2	2
October	1017	20	15	25	11	78	70	5	5			21	1	2	3	13	5	1	49	4	35	11	5	9	17	4	⊕	18	1	16	16	6	2	2
November	1017	15	11	21	5	76	68	4	5			22	1	⊕	4	14	6	1	49	2	36	4	3	8	18	3	1	27	1	18	19	9	1	1
December	1019	13	8	19	3	74	68	4	5			21	3	1	1	12	5	2	51	4	31	4	1	5	14	3	2	37	3	18	19	10	1	⊕
Means	1017	19	13	32*	0§	74	68	4	4	–	–	26	2	1	2	10	4	1	50	4	31	11	5	9	19	2	1	20	2	17	18	–	–	–
Totals	–	–	–	–	–	–	–	–	–			–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	89	18	15
Extreme values	–	–	–	35†	−8‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	17	17				17		17				17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.127

WMO No 07765

SOLENZARA (41° 55′ N, 09° 24′ E) Height above MSL – 22 m
Climatic Table compiled from 7 to 17 years observations, 1940 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																Mean wind speed		Number of days with		
												0700									1300											
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or more	N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0700	1300	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1019	14	6	18	1	76	64	4	4	74	8	10	1	1	1	2	6	65	13	1	18	20	21	16	8	4	7	4	2	7	7	⊕	⊕	⊕
February	1018	13	6	19	1	75	61	4	4	66	7	11	1	0	1	3	5	65	13	1	10	23	21	22	7	5	7	4	2	7	8	⊕	⊕	⊕
March	1016	16	7	19	3	77	62	4	4	63	6	11	1	1	0	2	7	59	18	1	9	19	22	26	11	4	5	3	1	6	8	⊕	⊕	⊕
April	1013	18	9	22	4	77	64	5	5	65	7	17	2	2	1	3	8	51	13	3	8	18	24	22	13	5	8	2	⊕	5	8	0	⊕	1
May	1014	22	13	26	9	76	63	4	4	51	6	20	3	2	2	3	9	39	15	7	4	15	28	29	13	4	6	1	⊕	4	8	0	⊕	1
June	1015	26	16	30	12	71	61	3	3	19	2	20	7	3	2	5	6	33	12	13	3	14	29	36	10	1	6	1	0	3	8	0	⊕	2
July	1015	29	19	33	16	67	60	2	2	9	1	17	4	1	1	3	6	48	12	8	1	12	32	42	8	2	2	1	⊕	4	8	⊕	⊕	2
August	1014	30	20	33	16	68	60	2	3	26	3	7	2	0	⊕	1	8	70	11	2	1	11	31	39	11	2	4	1	⊕	5	8	0	⊕	3
September	1015	26	17	30	14	74	61	3	4	67	7	8	⊕	1	⊕	3	6	68	13	1	4	14	21	36	12	2	7	3	0	6	9	0	⊕	2
October	1016	22	14	26	9	79	66	4	4	103	9	7	1	1	⊕	1	6	69	14	1	8	17	20	29	12	4	8	3	1	6	8	0	⊕	2
November	1016	17	10	22	5	79	67	4	5	94	8	8	1	⊕	2	2	5	64	16	1	13	20	17	20	9	5	7	6	3	6	7	0	⊕	1
December	1017	14	7	19	2	78	68	4	5	93	9	11	1	2	1	2	8	58	15	1	17	16	17	20	8	3	9	7	3	7	7	⊕	⊕	⊕
Means	1016	21	12	34*	0§	75	63	4	4	–	–	12	2	1	1	3	7	57	14	3	8	17	24	28	10	3	6	3	1	5	8	–	–	–
Totals	–	–	–	–	–	–	–	–	–	730	73	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	⊕	1	14
Extreme values	–	–	–	37†	−4‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	17	17				17		17		7		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.128

WMO No 07785

CAP CORSE (43° 00′ N, 09° 22′ E) Height above MSL – 111 m
Climatic Table compiled from 17 to 30 years observations, 1941 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
												0700									1300												
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or more	N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0700	1300	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1019	12	9	16	4	78	73	4	5	22	5	3	6	15	18	3	21	19	7	9	4	7	16	15	3	13	28	10	4	15	15	6	1	1
February	1017	12	8	16	5	76	71	4	5	30	6	3	10	19	14	4	15	20	7	8	4	13	16	8	1	10	28	15	5	15	15	6	1	1
March	1016	14	10	18	6	76	69	4	4	20	4	3	8	21	15	4	20	17	5	8	3	14	21	12	1	10	24	10	5	14	14	5	⊕	1
April	1013	16	11	21	7	78	75	4	5	16	4	2	5	13	18	4	21	22	5	12	3	11	16	15	2	9	29	11	5	13	14	5	1	1
May	1014	21	15	26	11	77	73	4	4	14	5	1	6	17	14	3	18	19	4	18	3	12	19	11	2	8	26	13	6	10	12	3	⊕	1
June	1015	24	18	29	14	76	70	3	4	7	1	1	5	11	13	2	17	28	8	16	3	9	15	11	1	11	26	19	5	11	13	3	⊕	2
July	1015	28	22	33	18	73	68	2	2	10	2	3	3	13	10	2	18	26	7	19	6	11	17	7	2	6	25	22	5	8	10	2	1	⊕
August	1015	28	22	33	19	77	70	2	3	13	2	1	3	13	11	4	17	26	8	18	3	11	14	8	1	6	28	23	6	10	11	3	⊕	2
September	1015	24	20	28	16	77	70	3	4	42	3	2	3	17	11	5	19	25	4	14	3	11	20	8	2	7	29	17	3	12	14	5	⊕	3
October	1017	20	17	25	12	78	73	4	4	28	5	2	4	17	22	4	16	16	7	11	3	8	24	14	2	8	24	11	5	14	14	5	⊕	3
November	1015	16	13	21	8	77	73	5	5	34	6	3	5	20	14	5	15	24	7	7	3	9	19	12	3	11	27	12	5	15	15	6	⊕	2
December	1018	13	10	17	5	76	73	4	5	28	6	2	7	21	13	3	17	22	6	7	3	10	19	12	3	12	25	10	7	15	15	6	⊕	1
Means	1016	19	15	34*	3§	77	71	4	4	–	–	2	5	17	14	4	18	22	6	12	3	11	18	11	2	9	27	14	5	13	14	–	–	–
Totals	–	–	–	–	–	–	–	–	–	264	49	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	55	4	18
Extreme values	–	–	–	38†	−1‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	17	17				17		17		7		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.129

WMO No 07770

CAP PERTUSATO (41° 22′ N, 09° 10′ E) Height above MSL – 110 m
Climatic Table compiled from 17 to 26 years observations, 1931 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 0.1 mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1020	13	9	16	3	81	75	4	5	44	8	10	22	10	2	2	4	23	24	4	6	21	13	3	3	8	26	19	2	15	17	6	1	1
February	1018	12	8	16	3	81	73	4	5	49	8	9	17	16	2	1	9	24	15	6	2	16	18	4	3	12	29	12	4	15	17	7	1	1
March	1016	14	9	17	5	84	74	5	5	37	6	8	17	18	2	3	8	24	15	5	2	15	19	5	2	12	28	16	1	15	18	6	1	1
April	1013	16	11	20	6	85	75	5	5	27	5	4	17	16	1	1	12	29	14	6	2	13	19	2	2	10	34	16	2	15	18	6	2	1
May	1015	19	14	24	10	89	76	5	5	43	6	2	20	16	2	3	14	26	12	6	1	18	20	4	3	17	26	9	2	13	16	3	3	1
June	1016	23	17	28	14	87	74	4	4	29	2	3	12	14	⊕	⊕	12	41	13	4	2	11	17	1	1	13	39	14	1	14	18	3	2	1
July	1016	26	21	32	18	85	72	3	2	25	2	3	12	13	1	1	13	35	12	10	1	10	14	5	2	17	41	10	1	12	15	3	2	1
August	1015	27	21	32	19	86	69	3	3	8	1	3	16	12	⊕	1	8	34	13	11	2	14	17	3	3	14	40	6	1	11	15	3	1	2
September	1016	24	19	28	15	84	70	4	4	17	4	6	22	15	2	1	7	24	18	5	1	16	18	4	2	13	35	9	2	12	15	4	1	3
October	1017	21	16	25	11	85	74	5	5	58	7	8	24	19	2	1	6	25	9	6	2	20	20	4	3	10	31	7	3	13	15	4	1	3
November	1016	16	12	21	7	81	74	5	5	63	8	8	21	15	2	2	9	20	18	5	3	17	17	2	2	13	26	17	3	14	16	5	⊕	3
December	1018	14	10	17	4	80	75	4	5	64	10	8	25	14	3	2	9	20	14	5	3	23	15	3	3	13	21	14	3	14	16	5	1	1
Means	1016	19	14	33*	2§	84	73	4	4	–	–	6	19	15	2	1	9	27	15	6	2	16	17	3	3	13	31	13	2	14	16	–	–	–
Totals	–	–	–	–	–	–	–	–	–	464	67	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	55	16	19
Extreme values	–	–	–	38†	−3‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	17	17				17		17		7		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.130

WMO No 07761

AJACCIO (41° 55′ N, 08° 48′ E) Height above MSL – 9 m
Climatic Table compiled from 17 to 30 years observations, 1960 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1019	14	5	17	–1	85	66	4	5	74	9	4	80	7	2	⊕	1	3	3	⊕	4	12	5	3	11	39	16	7	3	7	6	⊕	⊕	2
February	1018	14	4	17	–1	84	66	4	5	70	9	4	78	6	1	2	2	4	2	1	2	5	3	2	6	55	20	6	1	7	8	⊕	⊕	3
March	1016	15	5	19	–1	86	67	4	4	58	8	3	78	8	2	2	2	2	2	⊕	1	4	2	⊕	8	64	13	8	1	7	9	⊕	⊕	3
April	1013	17	8	24	3	85	69	4	5	52	7	4	75	8	2	2	4	4	2	1	1	3	2	2	11	61	15	6	⊕	6	10	⊕	⊕	3
May	1014	21	11	27	7	83	70	4	4	40	6	5	77	9	2	1	2	2	1	1	1	1	⊕	1	15	69	11	2	1	5	10	0	⊕	4
June	1015	25	14	31	10	78	67	3	3	19	3	3	78	7	2	1	2	3	2	1	⊕	1	1	1	12	75	7	3	0	5	11	⊕	⊕	3
July	1015	28	17	35	13	74	68	1	2	11	1	3	86	6	1	⊕	1	1	1	⊕	1	1	0	⊕	14	77	6	1	0	5	11	⊕	0	3
August	1015	29	18	34	14	76	66	2	2	20	2	1	90	6	1	0	1	1	1	0	⊕	1	⊕	⊕	10	79	7	3	0	6	12	⊕	⊕	4
September	1016	26	15	30	11	83	64	3	3	44	4	3	86	6	1	1	1	1	1	0	1	1	2	⊕	7	70	14	4	0	7	11	⊕	1	5
October	1017	22	12	27	7	86	66	4	4	87	7	4	85	5	1	2	1	1	1	1	2	4	3	2	7	62	15	5	1	7	8	0	⊕	5
November	1016	18	8	23	3	86	66	4	5	96	9	5	81	7	1	1	⊕	3	3	⊕	4	9	4	2	9	47	17	6	1	7	6	⊕	⊕	4
December	1018	15	6	19	–1	84	65	4	5	76	9	4	79	8	⊕	3	1	3	3	0	3	13	6	2	11	42	12	9	3	7	5	⊕	⊕	2
Means	1016	20	10	36*	–3§	82	67	3	4	_	_	4	81	7	1	1	1	2	2	1	2	4	2	1	10	62	13	5	1	6	9	–	_	_
Totals	_	_	_	_	_	_	_	_	_	647	74	_	_	_	–	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	⊕	1	41
Extreme values	_	_	_	_	40†	–8‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	17	17				17		17		30		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.131

WMO No 07660

TOULON (43° 06′ N, 05° 56′ E) Height above MSL – 25 m

Climatic Table compiled from 9 to 30 years observations, 1960 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 0.1 mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1019	13	6	16	0	78	66	3	4	61	8	8	14	19	6	1	2	13	33	6	3	3	17	21	8	3	19	25	2	8	10	⊕	⊕	1
February	1016	13	6	18	0	78	66	4	4	69	8	7	13	27	2	1	⊕	12	27	10	1	2	18	21	13	4	17	23	2	9	12	⊕	⊕	2
March	1016	16	8	21	4	77	64	4	4	60	8	6	11	21	4	2	1	11	30	16	1	2	10	28	16	4	18	21	0	8	13	⊕	⊕	1
April	1013	18	10	23	5	80	65	4	4	49	7	3	6	28	5	2	2	8	33	13	⊕	1	8	28	14	8	15	24	⊕	8	14	0	1	1
May	1014	22	13	27	9	81	67	4	4	41	6	3	4	28	7	2	1	8	27	20	1	0	5	29	18	11	19	18	⊕	6	12	⊕	⊕	2
June	1015	26	16	30	11	78	63	3	3	27	4	2	3	17	11	4	2	13	28	20	1	⊕	4	28	17	9	18	22	⊕	6	12	⊕	⊕	2
July	1015	31	20	35	17	75	59	2	2	6	1	3	4	25	9	5	2	9	22	20	0	⊕	3	29	22	14	17	16	0	5	11	0	1	2
August	1015	30	19	34	16	78	60	2	2	28	4	9	5	18	5	2	⊕	7	24	29	1	1	2	26	22	12	19	16	⊕	4	11	0	⊕	3
September	1017	27	17	31	13	82	63	3	3	53	4	11	11	21	4	2	1	10	25	16	1	⊕	3	28	22	9	16	20	⊕	6	12	0	⊕	3
October	1018	22	14	27	9	84	70	4	4	85	9	8	15	34	4	1	1	7	17	13	1	1	19	33	15	6	12	13	2	7	12	⊕	⊕	5
November	1016	16	10	21	4	80	67	4	4	88	10	7	13	26	3	2	1	9	29	12	⊕	3	21	24	5	3	19	20	4	8	11	⊕	1	2
December	1020	14	7	18	2	79	67	3	4	82	9	12	13	23	5	4	1	8	23	12	3	3	23	20	7	2	19	19	4	7	9	⊕	⊕	2
Means	1016	21	12	36*	−2§	79	65	3	4	_	_	7	9	24	5	2	1	10	26	16	1	1	11	27	15	7	17	20	1	7	12	–	_	_
Totals	_	_	_	_	_	_	_	_	_	649	78	_	_	_	–	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	⊕	3	26
Extreme values	_	_	_	38†	−7‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	9	9				9		17		30		9									9									9		9	9	9

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.132

WMO No 07652

CAP POMEGUES (43° 16′ N, 05° 18′ E) Height above MSL – 70 m
Climatic Table compiled from 9 to 30 years observations, 1960 to 1991

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1020	11	6	15	0	79	71	3	4	47	7	34	7	16	13	5	⊕	1	18	5	31	3	5	14	8	4	2	28	5	14	14	5	⊕	⊕
February	1017	11	6	15	0	80	69	3	5	54	6	32	10	20	14	1	0	⊕	20	3	26	1	8	12	17	1	2	30	3	14	15	5	1	⊕
March	1016	14	8	19	2	78	67	4	4	44	6	36	9	13	15	3	1	1	19	4	28	2	3	13	17	3	3	30	2	15	17	8	1	⊕
April	1013	16	10	21	5	78	70	4	4	48	5	25	6	12	22	8	⊕	3	19	4	18	⊕	3	15	24	5	7	28	1	15	18	7	⊕	⊕
May	1014	19	13	25	9	78	70	4	4	42	5	29	7	15	17	9	⊕	1	13	9	15	1	1	14	31	8	8	22	⊕	10	15	3	1	1
June	1015	23	16	28	12	78	69	4	4	28	4	25	7	9	12	6	2	2	28	10	13	1	⊕	6	32	7	9	30	1	11	16	4	1	1
July	1015	27	20	32	16	75	66	2	2	14	2	29	8	6	15	7	2	1	17	14	13	0	⊕	6	37	10	9	25	⊕	8	14	3	1	1
August	1015	26	20	30	15	78	69	2	2	29	3	37	8	12	11	7	2	1	15	8	14	0	1	8	28	9	12	28	1	9	14	3	1	2
September	1017	24	18	28	13	81	70	3	3	47	4	26	8	15	15	2	0	3	24	7	13	0	2	10	24	7	8	34	3	10	14	3	2	1
October	1018	20	15	25	10	82	72	4	4	78	6	23	11	25	19	4	0	2	13	3	15	1	7	19	21	2	7	25	3	12	14	4	1	1
November	1016	15	10	19	4	78	70	4	4	58	5	28	6	20	21	4	1	1	13	6	26	2	8	20	14	⊕	4	22	5	14	15	6	1	⊕
December	1020	13	8	17	0	81	72	3	4	56	6	30	8	18	18	4	0	⊕	17	5	33	1	4	15	13	⊕	2	22	8	13	14	5	⊕	⊕
Means	1016	18	12	32*	−3§	79	70	3	4	_	_	30	8	15	16	5	1	1	18	6	20	1	3	13	22	5	6	27	3	12	15	–	_	_
Totals	_	_	_	_	_	_	_	_	_	545	59	_	_	_	–	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	56	10	7
Extreme values	_	_	_	35†	−10‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	9	9				9		9		30		9									9									9		9	9	9

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.133

WMO No 07747

PERPIGAN (42° 44′ N, 02° 52′ E) Height above MSL – 47 m
Climatic Table compiled from 17 to 30 years observations, 1960 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1022	12	5	19	–2	77	62	4	4	51	5	10	4	2	4	2	13	27	35	3	13	12	11	8	5	4	5	38	3	9	10	1	1	1
February	1020	13	5	19	0	76	59	4	4	45	5	10	3	2	3	1	12	22	42	4	10	12	16	12	3	2	3	40	1	9	12	1	1	⊕
March	1019	16	8	23	2	72	54	4	4	44	5	10	4	3	3	2	9	16	49	4	11	8	16	14	2	1	2	46	1	9	14	1	1	0
April	1015	18	9	25	4	75	56	5	5	56	6	10	5	5	4	2	10	14	45	4	11	9	19	16	5	⊕	2	39	0	8	14	⊕	1	1
May	1015	21	13	28	7	77	57	5	5	50	6	12	7	3	4	3	10	18	37	5	10	11	28	20	2	1	2	26	⊕	7	12	⊕	⊕	3
June	1017	25	16	31	12	72	51	4	4	28	4	12	6	3	1	2	8	17	46	5	11	6	24	16	3	2	3	34	0	7	11	⊕	⊕	4
July	1017	29	19	35	15	70	48	3	3	17	3	9	5	1	2	2	14	21	43	4	11	9	27	18	⊕	1	1	33	⊕	7	12	⊕	1	4
August	1016	29	19	34	14	74	51	4	3	32	4	9	4	2	2	1	13	26	38	6	12	11	29	17	1	1	1	27	⊕	6	11	0	1	5
September	1017	25	16	31	10	77	52	4	4	47	4	7	3	2	2	4	18	25	36	4	10	10	25	17	4	2	1	31	⊕	6	11	0	1	3
October	1018	21	13	27	6	81	60	5	5	90	5	6	3	3	5	4	20	25	30	3	8	16	21	16	5	1	2	30	1	7	11	⊕	1	2
November	1018	16	8	22	1	78	62	5	5	59	5	9	4	2	7	5	10	23	37	4	10	12	13	16	6	2	2	37	2	8	11	⊕	⊕	1
December	1020	13	6	20	–2	76	62	4	5	54	5	7	2	2	5	4	15	22	39	5	8	15	10	10	5	5	5	39	4	9	10	⊕	1	1
Means	1018	20	11	35*	–4§	75	56	4	4	–	–	9	4	3	3	3	13	21	40	4	10	11	20	15	4	2	2	35	1	8	12	–	–	–
Totals	–	–	–	–	–	–	–	–	–	573	57	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	9	25
Extreme values	–	–	–	39†	–7‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	17	17				17		17		30		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.134

WMO No 16560

CAGLIARI/ELMAS (39° 15′ N, 09° 04′ E) Height above MSL – 5 m
Climatic Table compiled from 17 to 30 years observations, 1960 to 1999

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0700	1300	0700	1300	Average fall	No. of days with 1 mm or more	0700									1300									0700	1300	Gale	Fog	Thunder
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm					
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1020	14	6	18	0	92	75	4	5	46	8	9	1	6	4	⊕	⊕	6	51	22	5	2	4	11	6	4	16	41	12	6	9	1	2	2
February	1018	15	6	19	0	92	69	4	5	57	8	12	3	3	5	1	1	6	45	23	6	2	3	14	9	6	15	37	9	5	10	1	2	2
March	1017	17	7	22	2	90	63	4	4	44	7	14	2	4	6	1	1	6	45	20	6	1	4	18	14	5	10	37	5	6	11	⊕	2	2
April	1014	19	9	24	3	90	62	4	5	37	6	12	4	5	8	2	1	8	39	21	6	2	3	27	20	3	12	26	2	6	12	⊕	1	4
May	1015	23	13	29	8	90	58	4	4	24	4	11	3	4	7	4	1	6	43	22	5	1	2	26	33	3	10	20	1	5	11	⊕	2	3
June	1017	28	16	34	12	87	52	3	3	9	2	13	1	2	5	5	1	4	54	16	3	⊕	1	28	31	2	6	27	1	6	12	⊕	⊕	3
July	1017	31	19	37	15	86	50	1	2	3	1	15	1	1	3	4	⊕	2	56	19	3	⊕	⊕	38	31	1	3	24	0	6	12	⊕	1	2
August	1015	32	20	37	16	88	51	2	2	9	1	12	2	2	3	2	⊕	2	57	19	5	⊕	⊕	32	34	2	5	21	⊕	5	12	⊕	⊕	3
September	1016	28	18	32	13	89	57	3	4	31	4	12	5	3	8	2	⊕	3	43	24	5	1	2	26	28	3	6	26	3	4	10	⊕	1	6
October	1017	24	15	28	9	92	64	4	4	56	6	12	3	5	7	2	1	4	42	24	3	⊕	4	25	18	6	11	26	7	4	9	⊕	1	5
November	1016	19	10	24	4	92	71	4	5	56	8	13	3	6	4	2	⊕	6	41	27	5	1	5	18	7	5	15	33	11	5	9	⊕	2	4
December	1018	15	7	20	1	92	75	4	5	55	8	14	3	4	3	1	1	8	46	19	7	1	5	11	4	4	18	38	10	6	8	⊕	3	3
Means	1016	22	12	38*	−2§	90	62	3	4	–	–	12	3	4	5	2	1	5	47	21	5	1	3	23	19	3	11	30	5	5	10	–	–	–
Totals	–	–	–	–	–	–	–	–	–	427	63	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	17	39
Extreme values	–	–	–	44†	−5‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	17	17				17		17		30		17									17									17		17	17	17

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.135

METEOROLOGICAL CONVERSION TABLE AND SCALES

Fahrenheit to Celsius

°Fahrenheit

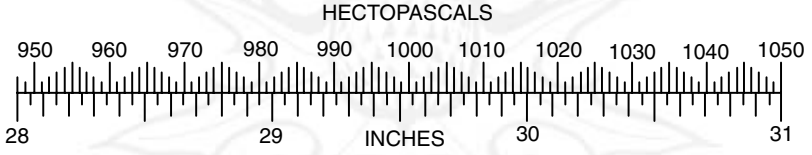
	0	1	2	3	4	5	6	7	8	9
°F				Degrees Celsius						
−100	−73·3	−73·9	−74·4	−75·0	−75·6	−76·1	−76·7	−77·2	−77·8	−78·3
−90	−67·8	−68·3	−68·9	−69·4	−70·0	−70·6	−71·1	−71·7	−72·2	−72·8
−80	−62·2	−62·8	−63·3	−63·9	−64·4	−65·0	−65·6	−66·1	−66·7	−67·2
−70	−56·7	−57·2	−57·8	−58·3	−58·9	−59·4	−60·0	−60·6	−61·1	−61·7
−60	−51·1	−51·7	−52·2	−52·8	−53·3	−53·9	−54·4	−55·0	−55·6	−56·1
−50	−45·6	−46·1	−46·7	−47·2	−47·8	−48·3	−48·9	−49·4	−50·0	−50·6
−40	−40·0	−40·6	−41·1	−41·7	−42·2	−42·8	−43·3	−43·9	−44·4	−45·0
−30	−34·4	−35·0	−35·6	−36·1	−36·7	−37·2	−37·8	−38·3	−38·9	−39·4
−20	−28·9	−29·4	−30·0	−30·6	−31·1	−31·7	−32·2	−32·8	−33·3	−33·9
−10	−23·3	−23·9	−24·4	−25·0	−25·6	−26·1	−26·7	−27·2	−27·8	−28·3
−0	−17·8	−18·3	−18·9	−19·4	−20·0	−20·6	−21·1	−21·7	−22·2	−22·8
+0	−17·8	−17·2	−16·7	−16·1	−15·6	−15·0	−14·4	−13·9	−13·3	−12·8
10	−12·2	−11·7	−11·1	−10·6	−10·0	−9·4	−8·9	−8·3	−7·8	−7·2
20	−6·7	−6·1	−5·6	−5·0	−4·4	−3·9	−3·3	−2·8	−2·2	−1·7
30	−1·1	−0·6	0	+0·6	+1·1	+1·7	+2·2	+2·8	+3·3	+3·9
40	+4·4	+5·0	+5·6	6·1	6·7	7·2	7·8	8·3	8·9	9·4
50	10·0	10·6	11·1	11·7	12·2	12·8	13·3	13·9	14·4	15·0
60	15·6	16·1	16·7	17·2	17·8	18·3	18·9	19·4	20·0	20·6
70	21·1	21·7	22·2	22·8	23·3	23·9	24·4	25·0	25·6	26·1
80	26·7	27·2	27·8	28·3	28·9	29·4	30·0	30·6	31·1	31·7
90	32·2	32·8	33·3	33·9	34·4	35·0	35·6	36·1	36·7	37·2
100	37·8	38·3	38·9	39·4	40·0	40·6	41·1	41·7	42·2	42·8
110	43·3	43·9	44·4	45·0	45·6	46·1	46·7	47·2	47·8	48·3
120	48·9	49·4	50·0	50·6	51·1	51·7	52·2	52·8	53·3	53·9

Celsius to Fahrenheit

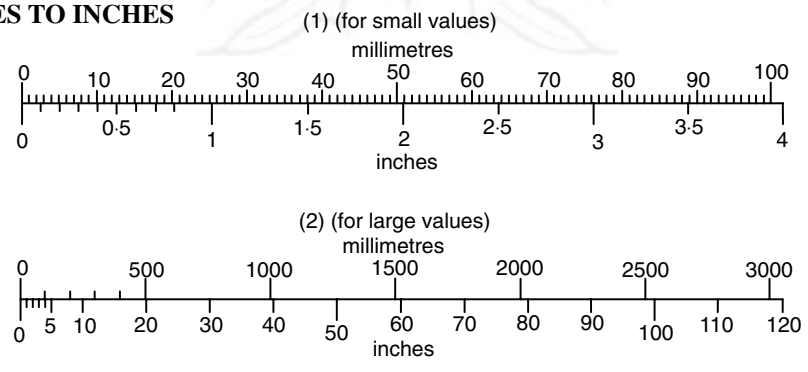
°Celsius

	0	1	2	3	4	5	6	7	8	9
°C				Degrees Fahrenheit						
−70	−94·0	−95·8	−97·6	−99·4	−101·2	−103·0	−104·8	−106·6	−108·4	−110·2
−60	−76·0	−77·8	−79·6	−81·4	−83·2	−85·0	−86·8	−88·6	−90·4	−92·2
−50	−58·0	−59·8	−61·6	−63·4	−65·2	−67·0	−68·8	−70·6	−72·4	−74·2
−40	−40·0	−41·8	−43·6	−45·4	−47·2	−49·0	−50·8	−52·6	−54·4	−56·2
−30	−22·0	−23·8	−25·6	−27·4	−29·2	−31·0	−32·8	−34·6	−36·4	−38·2
−20	−4·0	−5·8	−7·6	−9·4	−11·2	−13·0	−14·8	−16·6	18·4	−20·2
−10	+14·0	+12·2	+10·4	+8·6	+6·8	+5·0	+3·2	+1·4	−0·4	−2·2
−0	32·0	30·2	28·4	26·6	24·8	23·0	21·2	19·4	+17·6	+15·8
+0	32·0	33·8	35·6	37·4	39·2	41·0	42·8	44·6	46·4	48·2
10	50·0	51·8	53·6	55·4	57·2	59·0	60·8	62·6	64·4	66·2
20	68·0	69·8	71·6	73·4	75·2	77·0	78·8	80·6	82·4	84·2
30	86·0	87·8	89·6	91·4	93·2	95·0	96·8	98·6	100·4	102·2
40	104·0	105·8	107·6	109·4	111·2	113·0	114·8	116·6	118·4	120·2
50	122·0	123·8	125·6	127·4	129·2	131·0	132·8	134·6	136·4	138·2

HECTOPASCALS TO INCHES



MILLIMETRES TO INCHES



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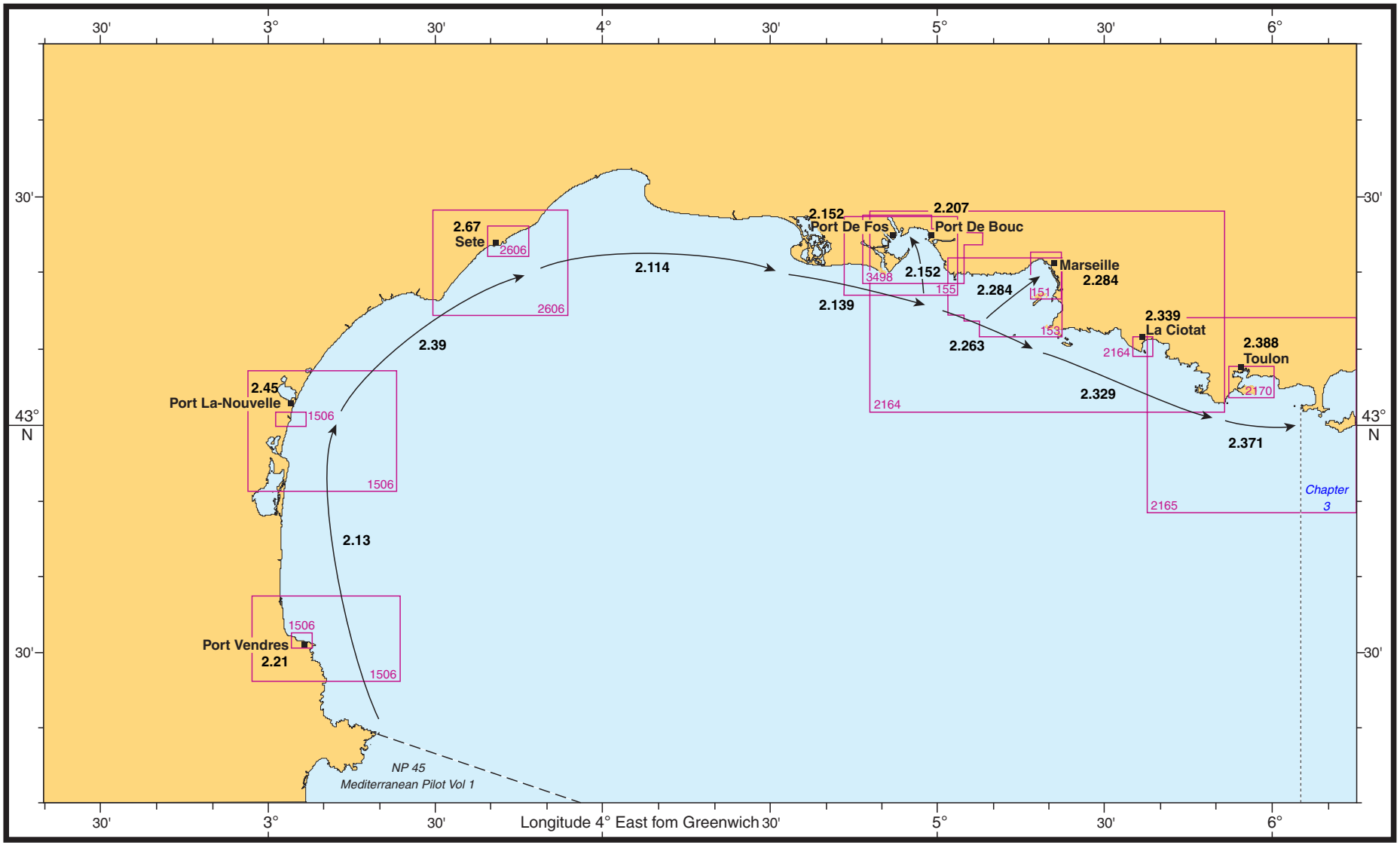
Chapter 2 - Gulf of Lions



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CHAPTER 2

SOUTH COAST OF FRANCE – GULF OF LIONS

GENERAL INFORMATION

Chart 1780

Scope of the chapter

2.1

1 This chapter describes the Gulf of Lions between Cap Cerbère (42°26′·4N, 3°11′·0E) and the W extremity of Îles d'Hyères, 133 miles ENE.

The major port complex of Marseille-Fos, which stretches between the mouth of the river Rhône (43°20′N, 4°50′E) and Marseille, 23 miles E, and Toulon (43°06′N, 5°55′E) are included.

2 The navigable parts of the lagoons Étang de Thau (43°24′N, 3°35′E) and Étang de Berre (43°30′N, 5°05′E) are also described. The sections are arranged as follows:

Cap Cerbère to Sète (2.9).
Sète to Marseille (2.111).
Marseille to Presqu'île de Giens (2.326).

Through routes

2.2

1 Ocean routes from the W Mediterranean, Bonifacio Strait (41°20′N, 9°00′E) and S of Sardegna to the Marseille-Fos complex enter the NE part of the Gulf of Lions. The routes remain in deep water, free from dangers, to the beginning of the approach channels to the complex. Directions for the approaches are given at (2.174).

2 To the SE of the Gulf of Lions lie ocean routes between Genova (44°25′N, 8°55′E) and the W Mediterranean, which pass NW and SE of Islas Baleares (39°30′N, 3°00′E). They cross the routes approaching Marseille-Fos approximately 50 miles S of Îles d'Hyères (43°00′N, 7°00′E) then close the coast of France and Italy on the W side of the Ligurian Sea.

Topography

2.3

1 Cabo Creus (42°19′N, 3°20′E) is the E extremity of a rugged promontory, described in detail in *Mediterranean Pilot Vol. I,* and marks the SW side of the gulf. The coast between between Cabo Creus and Cap Béar, 15 miles NNE, is generally high, rugged and indented by numerous bays and coves; it is relatively steep-to and free from isolated dangers. Several mountain ranges, including the E part of the Pyrénées, rise a short distance from the SW coast of the gulf. Cap Cerbère, 9 miles NW of Cabo Creus, marks the frontier between Spain and France. Châine des Albères, a rugged and prominent mountain range, extends W and NW from Cap Cerbère.

2 NW of Cap Béar the coast quickly becomes low-lying and sandy with large lagoons close behind the shore. Except for a range of hills, Montagne de la Clape, which rise close behind the coast N of Gruissan (43°07′N, 3°07′E), these features characterise the head of the Gulf of Lions, where the coast extends N, then NE, before running ESE from Golfe d'Aigues-Mortes (43°30′N, 4°00′E) to Îles d'Hyères. Generally the seabed shelves more gently off the low-lying parts of the coast with the 30 m depth contour lying between 2 and 7 miles offshore.

3 The shore of the NE side of the gulf becomes increasingly rugged ESE of Golfe de Fos (43°22′N, 5°00′E) and once again features high, steep headlands separated by numerous bays and coves. The major ports of Marseille and Toulon are located on the NE coast of the gulf. Mountain ranges again rise steeply behind the coast but stand further inland than those in the vicinity of Cabo Creus. The coast between Golfe de Fos and Îles d'Hyères is generally steep-to, however there are a number of charted dangers within the 100 m depth contour, which lies between 2 and 10 miles offshore, along this part of the gulf.

Naval exercise areas

2.4

1 French naval units and aircraft conduct exercises in areas between the French coast and 41°40′N and 5°E and a line between Monaco (7°25′E) and Cap Corse (43°00′N, 9°25′E). Although most of this activity is concentrated within 30 miles of the naval base at Toulon mariners may encounter ships, submarines and aircraft anywhere within the area described. Exercises include missile firings, gunnery and torpedo firings and at night warships and aircraft may be darkened and without navigation lights. Notices to mariners warning of intended firing practices are published in the local press and broadcast by coast radio stations.

Regulations

2.5

1 Vessels carrying hydrocarbons or other dangerous cargoes must remain at least 7 miles offshore except if entering Port-la-Nouvelle (2.45), Sète oil terminal (2.67), Port de Fos (2.152), Marseille (2.284) or Toulon (2.388) when the designated approach channels, shown on the charts, are to be used.

Rescue

2.6

1 The CROSS (1.45) centre at Cap d'Agde (2.40) controls 14 rescue craft stationed between the Spanish border and Port-Camargue (43°30′N, 4°07′E).

Natural conditions

2.7

1 **Weather**. Navigation in the Gulf of Lions during the summer is usually straightforward however winter gales and strong winds from the E create a high sea state within the gulf. Small low-powered vessels should not attempt to cross the gulf during strong E winds. In the SW part of the gulf Bahia de Rosas and Puerto de la Selva, respectively 7 miles SW and 5 miles WNW of Cabo Creus (42°19′N, 3°20′E) offer shelter from nearly all directions and are described in detail in *Mediterranean Pilot Vol. I*. Elsewhere small vessels may obtain shelter in the numerous harbours and havens which have been developed throughout the gulf. However mariners should beware of closing Cap d'Agde (43°16′N, 3°30′E) in bad weather with gales from seaward as a very high sea state develops off this part of the coast. Navigation to seaward of the 30 m depth contour is advised in these conditions. Between Port Vendres (42°31′N, 3°07′E) and Port de Sète (43°24′N, 3°42′E) poor visibility often accompanies bad weather, particularly during E winds.

Current

2.8

1 Following strong E winds a significant W-going current develops.

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CAP CERBÈRE TO SÈTE

GENERAL INFORMATION

Chart 1705

Area covered

2.9

1 This section covers the W part of the Gulf of Lions and is arranged as follows:

Cap Cerbère to Cap Leucate (2.13).
Cap Leucate to Port de Sète (2.39).

Topography

2.10

1 The high, rugged nature of the SW part of the Gulf of Lions changes quickly N of Port Vendres to a sandy, low coastline with few natural features.

Depths

2.11

1 The 30 m depth contour lies approximately 3 miles offshore and generally parallel to the coast between Port Vendres (42°31′N, 3°07′E) and Port-la-Nouvelle, 30 miles N. To the NE of Port-la-Nouvelle the coast remains relatively steep-to but the 30 m depth contour is a less accurate gauge of distance offshore.

Routes

2.12

1 An offshore route leads NNW from a position E of Cap Cerbère (42°26′N, 3°10′E) to the outer end of Port-la-Nouvelle approach channel (42°58′N, 3°13′E), then ENE to the outer end of Port de Sète approach channel (43°15′N, 3°54′E).

2 Coastal routes between the ports are not described. There are a large number of small craft havens and marinas along this part of the coast. Mariners navigating in coastal or inshore waters should have little difficulty in good weather and may find reference to the information provided for the offshore route useful.

CAP CERBÈRE TO CAP LEUCATE

General information

Route

2.13

1 The offshore route leads NNW from a position E of Cap Cerbère (42°26′N, 3°10′E) to a position E of Cap Leucate (42°55′N, 3°04′E).

Topography

2.14

1 The high rugged nature of the coast between Cabo Creus (42°19′N, 3°19′E) and Port-Vendres (2.21) quickly gives way, NW of Port-Vendres, to a low lying, flat coastline which extends 23 miles N to Cap Leucate. Cabo Creus appears as a dark mass when approaching from the E and is easily identified, however the light structure which stands on it does not show well against the background of dark rocky slopes (2.19). Port Vendres stands at the foot of the E ranges of The Pyrénées which are irregular, dark in colour and dominate this part of the coast providing several useful landmarks. A number of the bays or coves along the coast provide shelter for small craft and have developed as marinas or yacht havens.

Prohibited area

2.15

1 Anchoring trawling and dredging are prohibited in an area 3 miles wide, shown on the chart, which extends from a position 6 miles ESE of Cap Béar (42°31′N, 3°08′E) to the vicinity of Canet-Plage. The area protects submarine power cables.

Nature reserve

2.16

1 A marine nature reserve extends about 7½ cables seaward between Cap de Peyrefite (42°29′N, 3°10′E) and the S headland of Baie de Banyuls. The limits of the reserve are shown on Chart 1506. Light-buoys mark the seaward corners of the area. Mariners navigating inshore should note that two light buoys within the area lie to seaward of Basse Réderis, a rock with a least depth of 1·7 m over it. Within the reserve fishing is restricted; anchoring or the dumping of any waste is prohibited. Vessels must not exceed a speed of 5 kn within 300 m of the coast, nor 8 kn elsewhere within the area.

Rescue

2.17

1 There are lifeboats stationed at Arglès-Le Racou (42°33′N, 3°03′E) (2.32), Saint-Cyprien (42°37′N, 3°02′E) (2.33), Cannet-en-Roussillon (42°42′N, 3°02′E) (2.34), Le Bacarès-Port Saint-Ange (42°48′N, 3°02′E) (2.36) and Port-Leucate (42°52′N, 3°02′E) (2.37), see 1.47.

Natural conditions

2.18

1 **Depths**. When approaching the Gulf of Lions in foggy weather or at night, when too far offshore to distinguish lights, soundings may be a useful guide to determining distance offshore. In the W part of the gulf the 50 m depth contour runs roughly parallel to the coast between 6 and 8 miles offshore. Mariners navigating small low powered vessels through inshore waters in thick weather are also advised to sound constantly.

2 **Current**. Sufficient allowance for the W-going current must be made, particularly after strong E winds.

Principal marks

2.19

1 **Landmarks:**

Cabo Creus (42°19′N, 3°19′E) (2.14).
Dedos des Cadaqués (42°18′N, 3°15′E); this twin peaked mountain, with radomes on the S peak, can be distinguished from a great distance.
Tour Madeloc (42°29′N, 3°05′E), floodlit at night.

2 Tour de la Massane (42°30′N, 3°02′E), ruined.
Le Canigou (42°30′N, 2°27′E), the peak is almost always snow covered and can be seen from a great distance (Chart 1780).
Cap Oullestrell (40°30′N, 3°08′E), rugged and prominent.
Cap Béar Lighthouse (pale red pyramidal tower, grey corners 80 m in height) (42°31′N, 3°08′E) when approaching from NE or SE.
Canet-Plage Lighthouse (white structure, 27 m in height) (42°42′N, 3°02′E).

3 **Major lights**

Cap Cerbère Light (grey pyramidal tower, red top, 15 m in height) (42°26′N, 3°10′E) (2.20).
Cap Bèar Light see above.
Canet-Plage Light see above.

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Cap Leucate Lighthouse and Radar Tower (2.20)
(Original dated 1999)
(Photograph – SHOM)

Perpignan-Rivesaltes Aero Light, (pylon, 58 m in height) (42°43′N, 2°53′E) (Chart 1780).
Cap Leucate Light (white pyramidal tower, red top, grey corners, 66 m in height) (42°54′N, 3°03′E).

Directions for the offshore route

2.20

1 From a position E of Cabo Creus (42°19′N, 3°19′E) the offshore track leads NNW for approximately 38 miles to a position E of Cap Leucate (42°55′N, 3°04′E) passing, with positions relative to Cap Béar Light (42°31′·1N, 3°08′·1E):

E of Cap Cerbère (5 miles SSE), which stands close NE of a small bay enclosed by precipitous cliffs rising from the sea. The headland, also formed by steep cliffs which rise to a plateau, is lower than those enclosing the small bay. Cap Cebère Light (2.19) stands on the plateau, thence:

2 E of Cap Béar, the E end of a rocky promontory, terminating in a black vertical cliff. Cap Bèar Lighthouse (2.19) stands 2½ cables W of the cliff and a radiobeacon transmits from a pylon (red and white) close to the light. W of Cap Bèar the land rises to a summit (206 m) on which stands Fort Béar. A coastguard signal station housed in a white building stands between the lighthouse and the fort. Thence:

3 E of Cap Leucate (24½ miles NNW), a prominent, flat-topped, pale coloured point with slopes which rise steeply from the sea. A signal station stands close W of the headland. Cap Leucate Lighthouse (2.19) and a radar tower stand 5 cables S of the headland. The radar tower is a solid structure topped with a radome. An obstruction, shown on the chart lies approximately 1¼ miles E of the headland.

(Directions for the offshore route continue at 2.44, Directions for Port-Vendres are given at 2.25)

Port-Vendres

Chart 1506

General information

2.21

1 **Position**. Port-Vendres (42°31′N, 3°07′E) lies 1½ miles W of Cap Béar.

Function. A natural harbour, protected by historic fortifications, which contains a small commercial and fishing port and a marina.

Topography. Port-Vendres lies at the foot of the Chaîne des Albères, the E range of The Pyrénées. Close N of the port the coast is low and flat.

2 **Approach and Entry**. The port is approached from the NE, through a regulated area, and entered between Môle Abri and Pointe du Fanale.

Traffic. In 2000 the port handled 131 vessels representing a total of 842 355 dwt.

Port Authority. Capitainerie du Port, Quai François Joly, Port-Vendres.

Limiting conditions

2.22

1 **Maximum size of vessel**. Length 155 m, draught 8 m.

Weather and sea state. During N winds, when the current sets SE, mariners are advised to navigate slightly W of the leading line (2.25). Quai de la Presqu'île, at the SW end of Avant Port (2.24), cannot be used safely in strong winds between N and E. Similarly the quarantine berth E of Pointe de la Presqu'île is exposed to NW winds blowing out of Vieux Port (2.24) and vessels should be moored with two anchors ahead and hawsers from the stern to posts at the foot of Redoute Bèar (42°31′·2N, 3°06′·9E).

Arrival information

2.23

1 **Port operations**. Limited to 0800–1700 local time or when a vessel is expected. See the relevant *Admiralty List of Radio Signals*.

Port radio. Initial contact is made via Marseille. The commercial port and marina operate a limited VHF watch, see the relevant *Admiralty List of Radio Signals*.

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Port–Vendres from NE (2.21)
(Original dated 1995)

(Photograph – SHOM)

Notice of ETA required. 18 hours and 1 hour.

2 **Outer anchorage**. The anchorage area lies between 3 cables and 1 mile NNE of the harbour entrance and is shown on the chart. Mariners should note the prohibited anchorages extending 5 cables NE of Môle Abri and (see 2.15) immediately to seaward of the designated anchorage area. All are shown on the chart.

3 **Pilotage and tugs**. Pilotage is available at all times and compulsory for vessels over 45 m in length. The pilot station is close within Pointe des Pilotes The pilot will board 2½ cables N of Môle Abri, on the leading line, or in bad weather up to 1 mile to seaward of the harbour entrance. There are no tugs however the pilot vessel (6 tons tractive effort) is fitted with a towing hook and will assist with manoeuvring vessels.

4 **Regulated area**. A regulated area, shown on the chart, extends 1 mile offshore from the harbour entrance. Sailing vessels and small craft up to 20 m in length are to remain clear of it unless entering the harbour or proceeding to the anchorage. Within the area these vessels must give way to warships and power driven vessels 50 m or greater in length.

5 **Quarantine berth**. E of Pointe de la Presqu'île (see 2.22).

Harbour

2.24

1 **General layout**. Port Vendres consists of three basins; Avant Port extending 3 cables SW from the entrance to Pointe des Pilotes and Pointe de la Presqu'île 1½ cables further SW. Vieux Port (Bassin de l'Obelisque) extends W from Points des Pilotes. Nouvelle Darse (Bassin de Castellane) occupies the head of the harbour.

Signals. Traffic signals are displayed from a pylon 24 m in height, painted red and white, close NW of Fort du Fanal Light (2.25).

2 **Natural conditions**. Mariners attempting to turn vessels within the harbour during strong winds, particularly from the NW, will find the manoeuvre difficult.

Principal marks

Landmarks:

Tour Madeloc (42°29′N, 3°02′E) (2.19).

Tour de la Massane (42°30′N, 3°02′E) (2.19).

3 Fort Saint-Elme (42°31′N, 3°06′E), floodlit at night.

Argelès church steeple (42°32′·8N, 3° 01′·5E).

Elne church with two towers (42°36′·0N, 2° 58′·4E).

Canet watch tower (42°42′·4N, 3° 00′·0E).

Canet church tower, 1 mile SE of Canet watch tower.

Perpignan church tower and belfries, 5 miles W of Canet.

4 Saint Laurent church steeple (42°47′·3N, 3° 02′·0E).

Bacarès Saint Laurent water tower (42°47′·4N, 3° 02′·0E), conspicuous.

Cap Béar Lighthouse (2.19) and signal station (2.20).

5 **Major light:**

Cap Béar Light (42°31′N, 3°08′E) (2.19).

Directions for entering harbour

2.25

1 From a position 3 miles N of Cap Béar Light (2.19) the alignment (197½°) of Fort Béar Leading Lights leads through the harbour entrance into Avant Port (2.24):

Front light (red lantern, white building with grey base) (42°31′N, 3°07′E).

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Port–Vendres Leading marks (2.24)
(Original dated 1995)

(Photograph – SHOM)

Rear light (white tower, red top, red and white chequered band). See view 2.24 which shows the marks open with vessel to port of track.

2 **Useful marks**:

Fort du Fanale (white square tower, dark green house) (42°31′·3N, 3° 06′·9E).

Pointe du Fanal light (masonry tower, green and white bands) (42°31′·3N, 3° 06′·9E).

Môle Abri Light (6 sided hut on white columns with red tops) (42°31′·4N, 3° 07′·1E).

3 Anse Gerbal Jetée (white framework structure, green top) (42°31′·2N, 3° 06′·9E).

Pointe des Pilotes light (white metal column, green top) (42°31′·2N, 3° 06′·8E).

Berths

2.26

1 Quai de la Presqu'île, which occupies the SW part of Avant Port, and Quai de la République on the E side of Nouvelle Darse provide six numbered berths with depths alongside of 5 to 9 m. Quai de la Presqu'île offers the largest berth (see 2.22 for limiting conditions). There is a Ro-Ro berth close E of Quai de la Presqu'île.

Port services

2.27

1 **Repairs**. Small craft only.

Other facilities. The nearest hospital is at Perpignan, 16 miles NNW.

Supplies. Fuel by road tanker, water from connections on the quays.

Rescue. A lifeboat is stationed at Port Vendres.

Small craft

2.28

1 The jetties and quays on the NW side of the harbour are used by fishing vessels. A marina, with 250 pontoon berths, occupies the S end of Nouvelle Darse (2.24). Small craft also berth on the S part of Quai de la République (2.26).

Anchorages, minor harbours and small craft facilities

Port de Cerbère

2.29

1 **General information**. The village of Cerbère lies in the NW part of Anse Cerbère (42°26′N, 3°10′E) which is entered between Cap Cerbère and Cap Canadell, 5 cables NW. The village stands on the frontier between Spain and France and has a large railway junction. The railway viaduct and station above the village are conspicuous. A haven for small craft, protected by a breakwater which extends 80 m SSE from the N side of the head of the bay, fronts part of the village.

2 **Directions**. A sectored light (red pedestal, 12 m in height) (W 202°–237°, R 237°–202°) is exhibited from the S shore of the haven. The white sector leads through the entrance. Mariners are warned that the limits of the white sector lie very close to the rocks on either side of Anse Cerbère. Also that there is no safe passage between the coast and Îles Campagies, two rocks about 1 m in height, which lie 1 cable off Cap Canadell.

3 **Anchorage**. Anchoring and fishing within Anse Cerbère is prohibited because of a sewer outfall which extends from the coast close W of the breakwater, passes S of it, then

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turns ENE into deeper water. The extent of the prohibited area is shown on the chart.

4 **Berths** are provided at pontoons in depths of 3 to 7 m.

Facilities. There are limited facilities for small craft.

Supplies: Fuel, water and provisions are available.

Communications. The rail junction provides SNCF and Spanish railways services.

Banyuls-sur-Mer

2.30

1 **General information**. Baie de Banyuls lies between Île Grosse (42°29′N, 3°08′E), a rock 7 m high, and the prominent headland Cap d'Osne, 3 cables N. The bay contains two coves, Anse de Fontaulé and Anse de la Ville, separated by Île Petite, a rock 3 m high, marked by a light and connected to the coast by a mole 1½ cables W of Île Grosse. Anse du Fontaulé contains a large marina protected by a breakwater which extends WNW from the root of the mole connecting Île Grosse to the coast. A light is exhibited from the head of the breakwater.

2 **Directions**. A sectored light (white column, green top 10 m in height) (W 193°–247°, G 247°–193°) is exhibited close NE of Île Petite. The white sector leads SW towards the entrance of the marina. A spherical light-buoy (special) and a wave recorder light-buoy are moored respectively 5½ cables NE and 1½ miles ENE of the harbour entrance. When N of the breakwater light steer to remain E of Île Petite and pass through the entrance. Chapelle de la Salette 1 mile SW of the town, Tour de la Massane (2.19) and Tour Madeloc (2.19) are useful marks.

3 **Anchorage**. Small craft may obtain anchorage in depths of 5 to 5·9 m, weed, within Anse de la Ville. Anchorage may also be obtained in the middle of Baie de Banyuls outside the prohibited area protecting a sewer outfall shown on the chart.

Berths. There are pontoon berths for 350 vessels in depths of 1·2 to 3·7 m.

4 **Facilities**. Marina facilities only. Limited VHF watch (see relevant *Admiralty List of Radio Signals*).

Port de Collioure

2.31

1 **General information**. Port de Collioure (42°32′N, 3°05′E) lies at the head of Baie de Coullioure which is contained between Pointe del Mich and Presqu'île Saint-Vincent providing a haven for small craft. The harbour is dominated by a medieval fortification, Château des Templiers, at the head of the bay. The round tower of the church, which stands on the W side of the bay is also prominent

2 **Directions**. The alignment (230°) of Tour de la Massane with the S extremity of the citadel, at the head of the bay leads into the anchorage, S of Presqu'île Saint-Vincent shown on the chart.

Berths. There are 27 small craft berths at pontoons within Port d'Amount, beneath the N wall of the citadel. Larger craft use the anchorage. Anchoring is prohibited within the swimming area and the vicinity of the sewer outfall. Winds from NE to ESE make the anchorage untenable.

3 **Facilities**. Limited small craft facilities only.

Port d'Argelès-Le Racou

2.32

1 **General information**. Port d'Argelès-Le Racou (42°33′N, 3°03′E) is a purpose built marina on the S side of the mouth of La Massane river.

Directions. The entrance, between two breakwaters from which lights are exhibited, can be difficult as it must be approached close inshore from the SE. In strong NE winds this is dangerous. Storm damage (1997) to the N breakwater reduced the width of the channel to 15 m.

2 **Anchorage**. A prohibited anchorage, shown on the chart, extends NE from the N breakwater.

Berths. There are 500 pontoon berths in depths of 2·0 to 2·5 m. The maximum length of vessel accepted is 25 m.

Facilities. Marina facilities only. Limited VHF watch (see relevant *Admiralty List of Radio Signals*).

Port de Saint Cyprien

2.33

1 **General information**. Port de Saint-Cyprien (42°37′N, 3°02′E) is a large marina complex and fishing port, which includes Port des Capellans, approached through a swing bridge at the S end of the main harbour.

Directions. The outer harbour is entered between two breakwaters from which lights are exhibited. Strong E winds make the entrance difficult.

2 **Anchorage**. Anchoring and fishing are prohibited in an area 1½ miles offshore. The area, shown on the chart, protects submarine cables see 2.15. Rocks and obstructions inshore from the prohibited area prevent safe anchorage.

Berths. The whole complex provides berths for 2200 vessels, mainly at pontoons with a depth of 2·7 m alongside.

3 **Facilities**. Comprehensive marina facilities. Limited VHF watch (see relevant *Admiralty List of Radio Signals*). There is a lifeboat stationed here.

Chart 1705

Port de Canet-en-Roussillon

2.34

1 **General information**. Port de Canet-en-Roussillon (42°42′N, 3°02′E) a large marina, occupying several basins, between the town of Canet-en-Roussillon and S bank of the mouth of the river Têt. The complex includes a small fishing harbour.

Directions. The entrance, formed by two breakwaters from which lights are exhibited, is approached from the NNE. Entry is dangerous in E to SE gales. Canet-Plage Light (2.19) stands 3 cables NNW of the entrance.

2 **Anchorage**. A prohibited anchorage area encloses the approaches to the marina see 2.15.

Berths. There are berths for 1000 small craft, mainly at pontoons in depths of 2 to 3 m.

Facilities. Comprehensive small craft facilities. A 24 hour VHF watch is maintained (see relevant *Admiralty List of Radio Signals*). There is a lifeboat stationed here.

Port de Sainte-Marie

2.35

1 **General information**. Port de Sainte-Marie (42°43′N, 3°02′E) a marina lying N of the mouth of the river Têt and S of Sainte-Marie-Plage. The largest vessel accepted is 12 m in length, 2 m draught.

Directions. The marina is entered via a channel 25 m wide, dredged to 1·4 m, which passes between two breakwaters. The entrance is exposed to the E and can be difficult; in strong E winds it is dangerous.

2 **Berths**. The harbour has 480 berths, mainly at pontoons, with depths alongside of 1·5 to 2·5 m.

Facilities. Limited marina facilities.

Le Bacarès, Port-Saint-Ange

2.36

1 **General information**. Le Bacarès, Port-Saint-Ange (42°48′N, 3°02′E) is a large marina at the S end of Ètang de Leucate (or Ètang de Salses). The outer part of the harbour consists of three basins with berths for small craft and

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fishing vessels. A low bridge and, close S of it, a smaller lifting bridge separate the outer harbour from a much larger inner basin. The largest vessel accepted is 12 m in length.

2 **Directions**. The outer harbour is entered from the NNE through a channel between two breakwaters; lights are exhibited from the head of both. The entrance channel is 35 m wide, dredged to 3·5 m and can be difficult. In strong winds between NE and SE the entrance is dangerous. Periods of bad weather can cause silting of the channel, particularly in winter. Mariners should check the condition of the channel with the Harbour Master. The *Lydia*, a stranded ship which is now an hotel, lies 1½ miles N of Port Saint-Ange. The vessel is a useful mark and floodlit at night.

3 **Berths**. The harbour provides 500 small craft berths with depths alongside of 1·7 to 2·5 m.

Facilities. Usual marina facilities. Limited VHF watch, see relevant *Admiralty List of Radio Signals*.

Rescue. There is an inshore lifeboat.

Chart 1506

Port-Leucate

2.37

1 **General information**. Port Leucate (42°52′N, 3°02′E) is a large marina occupying the the central part of the isthmus separating Étang de Leucate from the Gulf of Lions. The area is also under development as a leisure and tourist centre. A channel at the S end of the marina, spanned by a fixed road bridge (vertical clearance 16 m), provides access to the lagoon. Navigation within the lagoon requires good local knowledge.

2 **Directions**. The outer harbour is entered between two breakwaters from which lights are exhibited. In strong SE winds the entrance is dangerous and should not be attempted. Mariners should also note a dangerous wreck 6 cables ENE of the entrance. The channel between the breakwaters is dredged regularly to 4 m however silting is a problem and mariners are advised to check the available depth with the Harbour Master.

3 **Berths**. The marina consists of three main basins all with a depth of 3 m. There are over 1000 mainly pontoon berths.

Facilities. Comprehensive marina facilities. A limited VHF watch is maintained (see relevant *Admiralty List of Radio Signals*).

Other names

2.38

1 Abeille, Cap l' (42°28′·7N, 3° 09′·2E).
Bacarès de Saint Laurent (42°47′N, 3°02′E).
Carotj (Carrotig), Tour (42°26′·4N, 3° 07′·3E).
Carré, Fort (42°31′·9N, 3° 04′·8E).
Castel Bayou (42°29′·6N, 3° 08′·1E).
Castell, Cap (42°29′·5N, 3° 08′·0E).
Dosne, Cap (42°29′·2N, 3° 08′·0E).
Gros, Cap (42°31′·5N, 3° 06′·5E).
Lioze, Roche la (42°30′·4N, 3° 08′·0E).
Miradoux, Fort (42°31′·8N, 5° 05′·1E).
Paulilles, Anse de (42°30′·2N, 3° 07′·8E).
Peyrefite, Anse (42°27′·7N, 3° 09′·8E).
Réderis, Cap (42°27′·9N, 3° 09′·8E).
Roda, San Pedro de (42°19′N3°19′E).
Terrambou, Anse de (42°27′·5N, 3° 10′·0E).

CAP LEUCATE TO PORT DE SÈTE

General information

Chart 1705

Routes

2.39

1 An offshore route continues NNW from E of Cap Leucate (42°55′N, 3°04′E) to the outer end of the approach channel to Port-la-Nouvelle (2.45). The route then leads NE, passing SE of Cap d'Agde (43°15N, 3°30′E), to the outer end of the approach channel to Port de Sète (43°25′N, 3°42′E) (2.67).

Coastal routes are generally straightforward and not described except for the designated approach to Port-la-Nouvelle.

2 There are a number of marinas and small craft havens along this part of the coast and navigating inshore waters between them should present little difficulty in good weather. However mariners should beware of a number of areas of obstructions and prohibited areas (2.41) shown on the chart.

Mariners navigating in coastal and inshore waters may find directions and references for the offshore route useful.

Topography

2.40

1 The coast between Cap Leucate (42°55′N, 3°04′E) and Gruissan (43°06N, 3°08′E) is low lying, consisting of sandy beaches backed by sand dunes, salt marshes and large lagoons. Ranges of low hills rise a short distance inland; some provide useful landmarks. NE of Gruissan the coast is not as low lying but continues as generally sandy beach backed by hills. Cap d'Agde (43°15′N, 3°30′E) appears as a low rocky point and the coast here is fringed by rocks. From Cap d'Agde to Cap de Sète, 11 miles NE, the coast consists of a low narrow beach separating Étang de Thau from the sea. The lagoon is backed by a range of hills at the foot of which stand Marseillan (43°21′N, 3°32′E) and Mèze (43°26′N, 3°36E).

Prohibited areas

2.41

1 Entry to the fishery research areas 1 mile SSE and 6 miles NE of the outer harbour entrance of Port de Gruissan (43°06′N, 3°05′E) (2.58) is prohibited. The areas are shown on the chart and marked by light-buoys.

2 Prohibited areas lie 1½ miles E of Cap d'Agde 43°15′N, 3°30′E) and extend, parallel to the coast, 6 miles NE. The areas are shown on the chart and their extremities marked by light-buoys (cardinal). Navigation between the two S areas is possible, the passage is marked by light-buoys (lateral).

Rescue

2.42

1 There are lifeboats stationed at Port-la-Nouvelle (43°01′N, 3°04′E) (2.45), Gruissan (43°06′N, 3°06′E) (2.58), Valras-Plage (43°15′N, 3°18′E) (2.61), Grau d'Adge (43°17′N, 3°27′E) (2.62), Mèze (43°25′N, 3°36′E) (2.103) and Sète (43°24′N, 3°42′E) (2.67), see 1.47.

Principal marks

2.43

1 **Landmarks**
Tour de Gruissan (43°06′N, 3°05′E).
Pech Redon (43°10′N, 3°06′E), a peak 214 m in height at the SW end of Montagne de la Clape.
Two radar towers (43°10′N, 3°07′E) standing on Plan de Roques.
Le Canigou (2.19).

2 Montagne du Gros Frère (29 miles N of Cap d'Agde) a peak 848 m in height.

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Valras-Plage, a tall building (43°14′N, 3°17′E) 42 m in height.
Valras-Plage casino, close NE of the tall building.
Valras-Plage water tower close NE of casino.
Mont Saint-Loup (Mont d'Agde) (43°18′N, 3°30′E) an isolated conical hill 115 m in height on which stand two radio masts.

3 **Offshore marks**

Light-buoys (special) are moored 21 and 24 miles SSE of Cap d'Agde (43°15′N, 3°30′E).

Major lights

Port-la-Nouvelle Rear Leading Light (tower) (43°01′N, 3°02′E).
Port de Narbonne-Plage, Bassins des Exals Light (grey metal tower, 10 m in height) (43°10′N, 3°11′E).

Directions for the offshore route

(continued from 2.20)

2.44

1 From a position E of Cap Leucate (42°55′N, 3°04′E) the offshore track continues NNW to the outer end of the approach channel for Port-la-Nouvelle (43°01′N, 3°04′E).

From the outer end of Port-la-Nouvelle approach channel (42°58′N,3°13′E) the track then leads NE passing, with positions relative to Cap d'Adge (43°15′N, 3°30′E):

2 SSE Pech Redon (19 miles SW) (2.43), thence:
SE of Plan de Roques radar towers (18 miles SW) (2.43), thence:
SE of the tall building at Valras-Plage (10 miles WSW) (2.43), thence:
NW of the offshore marks ESE of Cap d'Agde (2.40), thence:

3 SE of Cap d'Agde, thence:
SE of Marseillan-Plage (3 miles NE), thence:
SE of Mont Saint-Clair (Mont de Sète) (11 miles NW) to the vicinity of a light-buoy (43°15′N, 3°54′E) marking the outer end of Port de Sète approach channel.

(Directions for the offshore route continue at 2.120, Directions for Port-la-Nouvelle are given at 2.53 and for Port de Sète at 2.67)

Port-la-Nouvelle

Chart 1506

General information

2.45

1 **Position**. Port-la-Nouvelle (43°01′N, 3°04′E) lies 6 miles N of Cap Leucate.

Function. A small commercial and fishing port with small craft facilities. The port handles general cargo, grain and petroleum products.

2 **Topography**. Port-la-Nouvelle occupies the banks of a canal connecting Étang de Sigean with the sea. The coast here is low lying and sandy.

Approach and entry. Port-la-Nouvelle is approached from the ESE. Vessels greater than 1600 GRT carrying

Port–la–Nouvelle from ESE (2.45)

(Original dated 1999)

(Photograph – SHOM)

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hydrocarbons or other dangerous cargo must use the designated approach channel shown on the chart see (2.47).

3 **Traffic**. In 2000 the port handled 436 vessels representing a total of 2 768 980 dwt.

Port Authority. 229 Avenue de la Mer, Port-la-Nouvelle.

Limiting conditions

2.46

1 **Controlling depth**. The entrance channel is dredged periodically to 8·7 m but silting quickly resumes and consequently the maximum draught accepted is 8 m.

Deepest and longest berth. The E end of Quai Est, 400 m in length with a depth 8·7 m alongside.

2 **Abnormal water levels**. A prolonged SE wind can raise the sea level in the harbour. The greatest increase recorded is 1·5 m. Prolonged onshore winds cause increased silting and following such weather mariners are advised to confirm channel depth with the Port Authority.

Maximum size of vessel handled. Length 140 m, draught 8 m. See 2.55.

3 **Local weather and sea state**. During strong E and SE winds the sea breaks 1½ to 2 cables off the entrance making entry impossible.

Arrival information

2.47

1 **Port operations**. When a vessel is expected.

Port radio. Initial contact via Marseille. VHF when a vessel is expected see relevant *Admiralty List of Radio Signals*.

Notice of ETA. see relevant *Admiralty List of Radio Signals*.

2 **Outer anchorage**. The waiting anchorage, shown on the chart, is 7 cables SE of the entrance in a depth of 20 m. In E winds mariners are advised to anchor further offshore. Mariners should beware of the area 2½ cables S of the anchorage, also shown on the chart, containing obstructions which may have a depth of only 8 m over them. A dangerous wreck lies at the NE corner of the area.

2.48

1 **Pilotage and tugs**. Pilotage will be available when a vessel is expected and is compulsory for vessels over 45 m in length. The pilot will board at the inner end of the approach channel, between 1 and 2 miles offshore, the precise location will depend upon type of vessel and sea state, see relevant *Admiralty List of Radio Signals*. There is one tug and several launches available to assist with berthing.

2.49

1 **Regulated area**. Sailing vessels and small craft under 20 m in length are to remain clear of the regulated area, shown on the chart, which encloses the harbour entrance and the tanker mooring, 1 mile ENE of the entrance (2.55), unless entering Port-la-Nouvelle. These vessels must also give way to warships and power driven vessels 50 m, or greater, in length.

Harbour

2.50

1 **General layout**. The port is entered through a dredged channel which passes between two breakwaters. The channel leads WNW into a series of three basins; Darse Pétrolière, Darse de Commerce and Darse de Pêche which occupy the N shore of a canal leading into Étang de Sigean.

2.51

1 **Traffic signals**. International traffic signals are used to control entry and departure and exhibited from the Harbour Office 1 cable E of the root of the S breakwater. Mariners should note that movements within the harbour are controlled by the Harbour Master using VHF.

2.52

1 **Principal marks**.

Landmarks:

Fort Saint Charles (43°01′·1N, 3° 03′·5E), also the pilot station.

Sanatorium (43°01′·2N, 3° 03′·7E).

Conspicuous chimney (120 m in height) (43°01′·6N, 3° 01′·9E). A factory stands close SE of it.

2 Grain silo (25 m in height) (43°01′·5N, 3° 02′·9E).

Grain silo (70 m in height) (43°01′·3N, 3° 03′·4E).

Storage tanks 7 cables NW of the harbour entrance.

Storage tanks 1½ mile WNW of harbour entrance.

Port-la-Nouvelle Front Leading Light (tower, red and white bands, 23 m in height) (43°01′N, 3°04′E).

Directions for entering harbour

2.53

1 From a position 8 miles ENE Cap Leucate (42°55′N, 3°04′E) the approach channel leads WNW towards the entrance. The inward approach lane lies to the NE of the alignment (292½°) of Port-la-Nouvelle Leading Lights:

Front light (white tower red top, 18 m in height) (43°01′N, 3°04′E), exhibited from Jetée Sud.

Rear light (tower) (2 miles from front light) the track passes:

NNE of a dangerous wreck 1¼ miles SE of the harbour entrance thence:

2 SSW of of the E cardinal light-buoy marking the tanker mooring.

From this position alter course to pass between the breakwaters. Mariners should note that the navigable part of the entrance channel is only 60 m wide at the surface, reducing to 40 m wide at the seabed. Shoals of mud and sand extend from the banks of the channel.

2.54

1 **Useful marks**:

Jetée Nord Light (white round tower, green top) (43°01′N, 3°04′E).

Basins and berths

2.55

1 **Prohibited anchorage**. Anchoring within the harbour is prohibited.

Tanker mooring. The mooring lies 1 mile ENE of the harbour entrance and will accept vessels up to 40 000 tonnes, length 200 m, draught 12 m.

2 **Alongside berths**. Darse Pétrolière provides four berths at dolphins, dredged to 8·7 m. The maximum draught accepted is 8 m and;

Type	*Max length (m)*	*Displacement (tonnes)*
LPG	120	3 000
Petroleum products	140	12 000

3 The canal leading W from Darse Pétrolière to Darse de Commerce provides the longest and deepest berth at Quai

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Est 2 (2.46). There is a Ro-Ro berth at the W end of Quai Est 2. Quai Est 1 is disused.

Darse de Commerce can handle vessels up to 110 m in length, draught 6·5 m. The maximum size of vessel accepted in this basin is 115 m length with a draught of less than 4 m.

Darse de Pêche, occupies the W end of the harbour and, except for the S side, is reserved for fishing vessels, maximum draught 4 m.

Port services

2.56

1 **Repairs**. Minor machinery repairs only. A slipway on the E side of Darse de Commerce can accept vessels up to 50 m in length.

Hospital. The nearest hospital is Narbonne, 12 miles N.

Supplies: Fuel, fresh water and provisions are available.

Communications. The nearest airport is Perpignan-Rivesaltes (16 miles SSW). The port is connected, at its W end, to Canal du Midi via Canal de la Robine.

Rescue. There is a lifeboat stationed at Port-la-Nouvelle.

Small craft

2.57

1 There are pontoon berths for 130 small craft on the S side of Darse de Commerce and Darse de Pêche. Maximum draught 1·5 m. Limited marina facilities.

Port-la-Nouvelle provides access to the inland waterways (2.56) and lagoons including Étang de Bages, S of Narbonne, for vessels with a maximum draught of 1 m, masthead height of 1·5 m and beam of 3 m.

Anchorages, minor harbours and small craft facilities

Ports de Gruissan

2.58

1 **General information**. There are two marinas associated with the village of Gruissan (43°06′N, 3°06′E). Port Barberousse lies SW of the village and is connected to the sea by Canal du Grazel. Port de Gruissan, a much larger complex NE of the of the village, is approached through Étang de Grazel. A prohibited area, shown on the chart and marked by light-buoys, lies off the entrance to the harbours.

2 **Danger**. Mariners approaching from the SSW should beware of the area of obstructions, shown on the chart, off Grau de la Vielle Nouvelle, 2¾ miles NNE of Port-la-Nouvelle (2.45). The obstructions may have as little as 8 m over them. The tower of an old fort which stands on the S side of Grau de la Vielle Nouvelle is a useful mark.

3 **Directions for Port Barberousse**. The entrance to Canal du Grazel lies 5 miles NNE of Port-la-Nouvelle and is protected by two breakwaters from which lights are exhibited. The canal is dredged to a depth of 1·2 m and the basin to 2·5 m.

4 **Directions for Port de Gruissan**. The marina complex is approached through Étang de Grazel, the entrance to which lies 6½ miles NNE of Port-la-Nouvelle and is protected by two breakwaters which exhibit lights. Approximately 2 cables W of the outer entrance two short breakwaters, also marked by lights, form the entrance to the channel leading through Étang de Grazel to the marina basins. Mariners should note the channel between the outer entrance and the lagoon is periodically dredged to a depth of 4 m but this is reduced to about 3 m by silting. The channel leading through Étang de Grazel is dredged to a depth of 3 m and marked by buoys and beacons, some of which are lit. At night the channel lights are difficult to see against the lights of the marina and village.

5 **Berths**. Port Barberousse provides 360 small craft berths, mainly at pontoons. Port de Gruissan has 900 small craft berths.

Facilities. Limited marina facilities at Port Barberousse.

Supplies. Available.

Communications: airport at Perpignan.

Rescue. There is an inshore life-boat at Port de Gruissan (Gruissan-Plage).

Chart 1705

Port de Narbonne-Plage

2.59

1 **General information**. Port de Narbonne-Plage (43°10′N, 3°11′E) is a yacht harbour consisting of two basins protected by three breakwaters.

2 **Directions**. The harbour is entered from the E between the N and S breakwaters, from which lights are exhibited. Mariners should note the prohibited area, shown on the chart, 2¾ miles E of the entrance. The radomes standing on Montagne de la Clape (43°10′N, 3°07′E) and Rocher de Saint-Pierre (43°11′N, 3°11′E) (5 m in height, with the sand covered ruins of a battery on it) are useful marks when approaching the harbour. Mariners are warned that in strong E winds the entrance is dangerous. Winter gales cause silting. The condition of the entrance should be checked with the Harbour Master.

3 **Berths**. The harbour provides 400 small craft berths at pontoons with depths of 1·5 m to 3·0 m.

Facilities. Limited marina facilities.

Port de Cabanes-de-Fleury and Port du Chichoulet

2.60

1 **General information**. The yacht havens of Port des Cabanes-de-Fleury and Port du Chichoulet are located near the mouth of Rivière de l'Aude (43°13′N, 3°14′E). The mouth of the river is protected by two breakwaters which extend SE from the coast then turn SSW. Lights are exhibited from the head of each breakwater.

2 **Directions**. The river is entered from the SSW. Inside the breakwaters the channel is between 1 and 3 m deep.

Berths. Port des Cabanes-de-Fleury has 220 berths in two basins, Port du Chichoulet 100 berths.

Facilities. Limited marina facilities only.

Port de Valras-Plage

2.61

1 **General information**. Valras-Plage (43°15′N, 3°18′E) is a resort at the mouth of Rivière de l'Orb. The mouth of the river is protected by breakwaters, from which lights are exhibited, and open to the E. Port de Valras-Plage is a small craft harbour consisting of Port Municipal, a marina and fishing harbour near the mouth of the river, Bassin Jean Gau, a private marina, and Port de l'Orb a larger marina approximately 5 cables upstream from Port Municipal.

2 **Directions**. A tower block, the casino and a water tower within Valras-Plage (2.43) are all useful marks when approaching the entrance. The entrance is very difficult in strong SE winds. A dangerous wreck lies approximately 1½ miles NE of the river mouth. A conspicuous water tower,

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shown on the chart, and a black steeple close N of it, 3½ miles NE, are also useful marks.

3 **Berths**. Port Municipal (Bassin Sud) has 170 berths at pontoons in depths of 1·5 m to 2·0 m. Bassin Jean Gau has 50 berths with a depth of 1·5 m. Port de l'Orb has 310 berths with a depth of 1·6 m.

Facilities. Comprehensive small craft facilities.

Communications. There are airports at Béziers-Vias and Montpellier-Fréjorgues.

Rescue. A life-boat is stationed at Valras-Plage.

Grau-d'Agde

2.62

1 **General information**. The mouth of Rivière de l'Hérault (43°17′N, 3°27′E) is contained between two breakwaters which extend S forming an entrance. Close inside the entrance small craft may find berths on either bank of the river. The river provides access to the town of Agde approximately 2 miles upstream. There are depths of 3 to 5 m in the river. Vessels may anchor 5 cables S of the E breakwater in 8 m. Mariners should note the sewer outfall and the dangerous wreck respectively 5 cables E and 1½ miles SSE of the entrance. Both are shown on the chart.

2 **Directions**. The river may be entered by day or night. Mariners should approach the entrance using the E breakwater light as a headmark. When ½ cable from the entrance alter course to pass through the middle of it.

Rescue. There is a lifeboat stationed close N of the E breakwater.

Port d'Agde

2.63

1 **General information**. A small inland haven connected, upstream from the town, to the Canal du Midi. Agde is a French Maritime Rescue Co-ordination Sub-Centre (MRSC) (Sous-CROSS) see 1.45 and the relevant *Admiralty List of Radio Signals*. The river has depths of 3 to 5 m as far as Agde but vessels with a draught greater than 3 m should navigate with caution. Anchorage within the river is prohibited. There is swinging room abreast the town where the river is 70 m wide.

2 The port has building and repair facilities for small vessels. A bridge with a vertical clearance of 12 m spans the river approximately 1½ miles above the entrance. Pilotage, which is advisable, is conducted by Sète pilots.

Directions. Generally the channel within the river lies on the concave bank, however along the banks are posts, some of which are grouped in threes and painted white. Mariners should navigate closer to the bank marked by these posts.

3 **Facilities**. There is a hospital at Agde.

Supplies. Small quantities of fresh water, fuel, provisions and stores are available.

Chart 2606

Port du Cap d'Agde

2.64

1 **General information**. Port Cap d' Agde (43°16′N, 3°31′E) is a large yacht harbour and fishing port consisting of 9 basins on the N side of Rade de Brescou.

Directions. The entrance is protected by two breakwaters, from which lights are exhibited, and approached through Rade de Brescou, 2 cables N of Île de Brescou. The island is a flat topped rock with a fort on it and surrounded by dangers. Mariners should pass E of Île de Brescou, remaining at least 3 cables clear of it, and W of La Lauze a rock 3¼ cables NE, on which stands a light, before steering NNE for the entrance.

2 The light on Île de Brescou and the summit of Mont Saint-Loup (43°18′N, 3°30′E) are useful marks. The passage between Île de Brescou and the coast is almost closed by rocks and should not be attempted.

Anchorages. Rade de Brescou. Small vessels may obtain anchorage 2 cables N of Île de Brescou in depths of 5 to 6 m, sand and weed. The anchorage may be approached N or S of La Lauze although a S approach is preferable. The anchorage is sheltered from S or SW winds but strong E or SE winds send in a considerable sea.

3 La Conque. Anchorage can be obtained 3½ cables NE of Cap d'Agde in 5 m to 5·9 m of water, sand and rock, poor holding ground. An area of foul ground lies in the S part of the anchorage about 4 cables E of Cap d'Adge. The anchorage affords shelter in W and NW winds. The alignment (326°) of Mont Saint-Loup dismantled signal station and the custom house on the shore at La Conque and the bearing (223°) of La Lauze beacon open SE with Île de Brescou may be used to gain the anchorage.

Berths. The complex provides 2400 small craft berths in depths of 2 to 3 m.

Facilities. Comprehensive small craft facilities.

Port Ambonne

2.65

1 **General information**. A small craft haven 1 mile NNE of Cap d'Agde. The maximum size of vessel accepted is length 8·5 m, draught 1·2 m. The narrow entrance, protected by two breakwaters, from which lights are exhibited, should only be attempted in good conditions. The entrance is regularly dredged to 1·7 m but subject to rapid silting. A canal, 20 m wide and also dredged to 1·7 m, leads from the entrance to Étang de Lano.

2 **Berths**. A small basin on the S side of the canal provides berths at mooring posts. The marina, dredged to a depth of 1·2 m, lies on the N side of Étang de Lano. There are pontoon berths for 250 small craft with the usual marina facilities.

Port de Marseillan-Plage

2.66

1 **General information**. Port de Marseillan-Plage (43°19′N, 3°34′E) is a fishing and yacht harbour at the seaward end of the Canal de Pisse-Saumes, which connects Étang de Thau (2.100) with the Mediterranean Sea. The canal is 2 m deep and is spanned by three bridges with a vertical clearance of 3 m. The harbour is protected by two breakwaters from which lights are exhibited. Silting occurs around the head of the N breakwater, a buoy (starboard hand) marks the NW limit of the entrance channel. Prolonged winds affect the tidal stream through the harbour, see 2.104 (Natural conditions), and depths can vary between 0·2 m and 0·6 m. The harbour has 160 berths at pontoons for vessels up to 8 m in length; it has a depth of 2·2 m. Access to Étang de Thau via Canal de Pisse-Saumes is limited to small craft with a maximum draught of 0·8 m and masthead height of 2 m (2.101). The usual marina facilities are available.

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Port de Sète, W part from SW (2.67)
(Original dated 1999)

(Photograph – SHOM)

Port de Sète

Chart 2606

General information

2.67

1 **Position and Function**. Port de Sète (43°24′N, 3°42′E) is a transit port for trade with Switzerland and Germany via inland waterways. The port handles crude oil, petro-chemicals, timber, grain, wines, super-phosphates and other chemicals. The port has attracted industries associated with these materials. There is also a fishing port and small marina. Étang de Thau (2.99), which lies SW of the port, supports a large shellfish industry.

2.68

1 **Topography**. The port lies at the NE end of a narrow beach separating Étang de Thau from the sea and close E of Mont Saint-Clair (Mont de Sète) (2.90).

2.69

1 **Approach and entry**. The port is approached from the SE and entered through Passe de l'Est (43°24′N, 3°44′E). Passe de l'Ouest may be used by small craft. Regulations affect approach and entry, see 2.85 and the relevant *Admiralty List of Radio Signals*.

2.70

1 **Traffic**. In 2000 the port handled 1036 vessels representing a total of 9 651 310 dwt.

2.71

1 **Port Authority**. Capitainerie du Port de Sète, Quai du Maroc, F.34200, Sète, France.

Limiting conditions

2.72

1 **Controlling depths:**

Passe de l'Est is dredged to 14·5 m.

Passe de l'Ouest has a least depth of 4 m.

Mariners are advised to check these depths with the harbour authority.

2.73

1 **Deepest and Longest berth**. The Bulk Cargo Terminal in the NE corner of Darse 2 is 230 m in length with a depth alongside of 14·5 m.

2.74

1 **Maximum size of vessel handled**. The oil terminal North Berth (2.94), 5 cables ENE of the entrance, can accommodate tankers up to 100 000 tonnes and a maximum draught of 13·1 m. Panamax type vessels, with a maximum draught of 13·2 m, are accepted at the Bulk Cargo Terminal (Berth 13).

2.75

1 **Abnormal water levels.** Generally sea level in the harbour does not vary more than about 0·6 m to 1·0 m however mariners should note that changes in excess of 1 m have been recorded.

2.76

1 **Local weather and sea state.** Strong winds between SE and SW prevent use of the the oil terminal North Berth (2.94). In very bad weather from the E or SE the port may be closed at night.

2.77

1 **Tidal stream**. A diurnal tidal stream attaining a rate of 3 kn flows through the port between Étang de Thau and the sea. Rates will be affected by prolonged winds see 2.104.

Arrival information

2.78

1 **Port operations**. Port de Sète operates 24 hours a day.

2.79

1 **Port radio**. Initial contact via Marseille. The port maintains a VHF watch, see relevant *Admiralty List of Radio Signals*.

2.80

1 **Notice of ETA** 24 hours in advance, see relevant *Admiralty List of Radio Signals*.

2.81

1 **Outer anchorage**. A waiting anchorage extends 3 miles S of Épi Dellon (the S breakwater) in depths of 5 to 30 m,

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mud, sand and shell. The anchorage is shown on the chart. Tankers will also be directed to anchor in this area.

2.82

1 **Restricted area**. Navigation and anchoring within the restricted area at the inner end of Port de Sète approach channel are prohibited, unless authorized by the Harbour Master.

2.83

1 **Prohibited anchorage**. Anchoring is prohibited within the area shown on the chart which protects the pipeline from the coast at Frontignan to oil terminal North Berth and the site of a former SBM and associated pipeline SE of the harbour entrance.

2.84

1 **Pilotage and tugs**. Pilotage is compulsory for all vessels 50 m or greater in length within a 6 mile radius of the E end of Épi Dellon and is available day or night. A pilot for a vessel entering the port will board 1 mile S of Épi Dellon. Tankers will embark a pilot within the approach channel, see relevant *Admiralty List of Radio Signals*. Tugs are available.

2.85

1 **Regulations concerning entry**. Vessels greater than 1600 GRT carrying hydrocarbons or other dangerous cargoes must use the approach channel shown on the chart. Permission to enter the channel must be obtained from the Harbour Master. All vessel movements within the port are controlled by the Harbour Master using VHF, see relevant *Admiralty List of Radio Signals.*

Harbour

2.86

1 **General**. The port is protected by three breakwaters: Môle Saint-Louis, which extends from the SE part of Mont Saint-Clair (2.90), Épi Dellon a detached breakwater protecting the S side of the port and Digue Est. The breakwaters contain a complex of basins and canals which are in turn connected to Étang de Thau (2.99) and major inland waterways. Close ENE of the E entrance is a mooring berth for oil tankers.

2.87

Development. Major developments changing the layout of the breakwaters to the N of the harbour entrance have taken place. The N part of the rubble breakwater extending S from Digue Est has been removed, the remainder joins a new breakwater extending generally NE to join the SW part of the breakwaters forming the basin at Port de Pêche de Frontignan-La Peyrade. The channel leading between Digue Est and the new breakwater has a least depth of 3 m. Mariners must navigate with caution and obtain current details of the development from the Port Authority.

2.88

1 **Traffic signals**. International traffic signals are displayed from towers on the breakwater protecting Port du Service, close W of Darse 2, and the E end of Môle Saint-Louis.

2.89

1 **Natural conditions**. All berths in Avant Port and Bassin aux Pétroles are exposed in strong NW winds and vessels berthed there tend to surge. Fresh NW winds also affect current through the harbour, causing water to flow out of Étang de Thau. Conversely winds from seaward can force water through the harbour into the lagoon. Rates of up to 4 kn have been observed.

2.90

1 **Principal marks**

Landmarks:

Mont Saint-Clair (43°24′N, 3°41′E).

Mont Saint-Clair Lighthouse (43°23′·7N, 3°41′·4E) (2.119).

Citadelle Richelieu (43°23′·9N, 3°41′·6E).

Sète – Mont Saint–Clair Lighthouse and Lookout (2.90)

(Original dated 1999)

(Photograph – SHOM)

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Môle Saint-Louis Lighthouse (43°24′N, 3°42′E) (white tower, red lantern, 30 m in height).

2 Grain silo, 2 cables N of Môle Saint-Louis Lighthouse.

Epi Dellon E Head Light (43°24′N, 3°44′E) (white pylon, red top, 7 m in height).

Directions for entering harbour

2.91

1 **Approach**. From a position close NE of Port de Sète approach channel light-buoy (43°15′N, 3°54′E) the track leads NW to a position, 5 miles SE of Passe de l'Est (43°24′N, 3°44′E).

2.92

1 **Entrance**. From a position 5 miles SE of Passe de l'Est the track leads NW. A chimney, 45 m in height, shown on the chart, may make a suitable headmark. Mariners should note the restricted area at the inner end of the approach channel and the light-buoy (special, pillar) which marks the site of a former SBM. Pass:

SW of a dangerous wreck 5 miles ENE of the harbour entrance, thence:

W of the S cardinal light-buoy, 1 mile E of the entrance. Mariners should not attempt to pass N of the buoy because of the danger of hoses and other equipment associated with North Berth, 5 cables ENE of the entrance. Thence:

2 S of the mooring buoys of North Berth and the dangerous wreck close SW of them. Thence:

N of Epi Dellon E Head and through the entrance. Mariners should note that the lights of departing vessels will be difficult to identify against the background lights of the port.

(Directions for Étang de Thau are given at 2.105, Directions for Bassin des Eaux Blanches are given at 2.106)

2.93

1 **Useful marks**:

Epi Dellon Middle Light (43°24′N, 3°24′E) (white truncated tower, red top, 21 m in height).

2 Epi Dellon W Light (elbow with Brise-lames) (white tower red top, 8 m in height).

Basins and berths

2.94

1 **North Berth** is a mooring berth for oil tankers 5 cables ENE of the E entrance to the port. Vessels anchor and secure stern-to the mooring buoys, bows SE. The berth is unusable during rough weather between SE and SW. See (2.74).

Darse 2. Dredged to 14·5 m over much of its area A Ro-Ro terminal is located in the NW corner and a bulk cargo handling berth on the N side, see 2.74.

2 **Bassin Colbert (Darse 1)**. Longest berth Quai Est (448 m) with depths of 10·4 m to 11·0 m alongside. There are Ro-Ro berths in the corners of the basin.

Avant Port lies between the dolphins of the Ro-Ro berth at the SW corner of Bassin Colbert and the Head of Môle Saint-Louis. It is mainly used for access to inner basins but it is possible, using two anchors ahead, to moor stern-to the jetty on the NW side.

3 **Bassin aux Pétroles**. The basin is reserved for tankers carrying petroleum products and other dangerous cargoes. The basin has pollution control equipment. The W side of the basin is formed by Môle Masselin.

Nouveau Bassin is entered close W of Môle Masselin. Quai d'Alger, on the W side, provides a berth 240 m in length with a depth of 9 m alongside. The S end of this quay has a Ro-Ro facility. This basin is primarily used for the regular services to Tangier and Nador.

4 **Bassin Orsetti**. Quai D on the SE side of the basin is the longest berth; 440 m with a depth of 9 m alongside. The basin is used mainly by vessels providing regular services to Algiers, Ilas Baleares and Tunsia.

Canal Maritime extends N from Nouveau Bassin and spanned by a swing bridge and a bascule bridge; both reduce the width of the channel from 70 m to 26 m. This area of the port is used primarily for the wine trade.

5 **Canal de Sète** extends 8 cables NNW from the N end of Vieux Bassin to Ètang de Thau. Two fixed bridges with a maximum vertical clearance of 1·1 m cross the canal.

Canal Latéral accepts vessels up to 7 m draught. There are cattle pens at the E end of the basin (Bassin du Midi), S of the Ro-Ro berth. Tankers load phosphoric acid on the N side of the basin. Canal Latéral also leads W and joins the N end of Canal de Sète and leads N to Étang de Thau, see 2.105.

6 **Vieux Bassin** to the W of Avant Port provides berths for small coasters, fishing vessels and yachts. Le Chenal extends N 2½ cables to a swing bridge, N of the bridge Canal de Sète continues N for 8 cables and connects with Étang de Thau, see 2.105.

Port services

2.95

1 **Repairs**. Limited hull and machinery repairs.

Other facilities. Deratting available. Port de Sète has all the facilities expected in a large town.

Supplies. Fresh water is available at the quays. Fuel is available. Small vessels fuel at Môle Saint-Louis.

Communications. Inland waterways connecting with the Rivers Rhône and Garonne and beyond. The nearest airport is Montpellier, 14 miles NE.

Harbour regulations. Vessels moving within the port must maintain a constant VHF watch, see relevant *Admiralty List of Radio Signals*. Authorised movements within the port as far N as the first bridge spanning Canal Maritime may take place 24 hours a day. Elsewhere movements are subject to the bridge opening times which should be checked with the Harbour Master.

2 **Rescue**. There is a lifeboat stationed in Vieux Bassin.

Small craft

2.96

1 **General**. Small craft berths are available within Vieux Bassin. Permission to enter the port must be obtained from the Harbour Master. Pleasure craft movement within the port must be authorised and will be subordinate to commercial vessel requirements. Small craft proceeding to Étang de Thau using Canal Maritime should note there are floating anti-pollution barrages at the Victoire and Sadi-Carnot bridges at the S end of the canal and the entrance to the lagoon respectively. Flashing light signals mounted in notices indicate use of the devices.

2 **Berths**. Vieux Bassin has 280 pontoon berths with depths of 3·8 m to 7·0 m. The maximum length of vessel accepted is 30 m. Mariners should note that there are frequent movements of fishing vessels through the basin and vessels should be secured with regard to this.

Facilities. Marina facilities. Limited VHF watch, see relevant *Admiralty List of Radio Signals*.

2.97

1 **Port des Quilles** (43°24′N, 3°40′E) is a small haven 2 miles SW of Port de Sète (2.67) which is also connected to Étang de Thau by the unavigable Canal des Quilles. The outer harbour is protected by a breakwater from which a light is exhibited. The entrance, approached from the SW, is

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also protected by two breakwaters, which exhibit lights, and has a road bridge with a vertical clearance of 2·5 m spanning it. Depths in the outer harbour and entrance channel are between 1·9 m and 2·2 m. The entrance can be difficult and in strong winds is dangerous.

2 **Berths**. A few are available between the entrance breakwaters however the inner harbour, consisting of a series of small basins between blocks of flats, offers 260 pontoon berths with a depth of 2·2 m. The maximum size of vessel accepted is 8 m in length, masthead height 2·5 m

Facilities. Limited marina facilities.

Other names

2.98

1 Âne, Roche l' (43°15′·7N, 3°30′·1E).
Franqui, Banc de la (42°56′N, 3°03′E).
Trou de Vias (43°16′·4N, 3° 20′·8E).
Vendres, Bancs de (43°11′·8N, 3° 15′·9E).

Étang de Thau including Bassin des Eaux Blanches

Chart 2606

General description

2.99

1 **Routes**. A navigable channel leads NW from the N entrance of Canal de Sète to the vicinity of Rocher de Roquerois (43°26′N, 3°40′E), on the W side of Bassin des Eaux Blanches (2.106), then 8 miles SW to Pointe des Onglous (43°20′N, 3°32′E) and the entrance to Canal du Midi (2.100).

2 A dredged channel, Chenal Maritime, leads NE from the N entrance of Canal de Sète then N along the E shore of Bassin des Eaux Blanches to Balaruc-les-Usines (43°26′N, 3°42′E).

2.100

1 **Topography**. Étang de Thau (43°24′N, 3°36′E), a large lagoon, lying NE of Cap d'Agde, extends 9 miles NE to Sète. The lagoon is shallow and separated from the sea by low sand dunes and salt marsh.

The villages of Balaruc-les-Usines, Balaruc-les-Bains, Bouzigues, Mèze and Marseillan stand along its NW shore. There are yacht havens or small marinas at each village except Balaruc-les-Bains.

2 An important shellfish industry utilises the generally shoaler water of the NW side of the lagoon. However, at the NE end of Étang de Thau, a significant industrial and chemical production area has developed on the E shore of Bassin des Eaux Blanches, within the hinterland of Port de Sète. An entrance to Canal du Rhône à Sète (43°25′·5N, 3° 42′·0E), which connects with Rivière Rhône, also lies on the E shore of Bassin des Eaux Blanches.

3 The Canal du Midi, linking the Mediterranean and Atlantic coasts of France, enters the SW part of Étang de Thau. Close SSE of it Canal (Grau) de Pisse-Saumes enters the lagoon from Marseillan-Plage (2.66).

2.101

1 **Controlling depths and clearances**

Channel	*controlling depth (m)*	*vertical clearance (m)*
Chenal Maritime	7·0	–
Étang de Thau	2·2	–
Canal du Midi	1·6	2·0
Canal de Pisse-Saumes	0·8	2·0

2.102

1 **Pilotage** within Étang de Thau is compulsory for vessels 50 m or greater in length.

2.103

1 **Rescue**. A lifeboat is stationed at Mèze.

2.104

1 **Natural conditions**. Prolonged N winds tend to lower the water level within the lagoon and winds from seaward tend to raise it. Tidal streams through Canal de Pisse-Saumes and Canal Maritime de Sète can achieve rates of 3 kn and are affected by prolonged winds.

Directions for Étang de Thau

2.105

1 From the N entrance to Canal de Sète, close E of Pointe Longue (43°24′·9N, 3° 41′·4E), the channel leads NW passing, with positions relative to Pointe Longue:
NE of Pointe du Barrou buoy (E cardinal) (7 cables NW), thence:
N of Pointe du Barrou beacon (green, conical topmark) (9 cables NW), thence:
S of Rocher de Roquerois light-beacon (black tower, red band) (1¼ miles NW).

2 The track then follows the channel, shown on the chart, which leads WSW then SW for about 8 miles to the entrance of Canal du Midi, passing, with positions relative to Mèze Jetée Est Light (43°25′N, 3°36′E):
Close S of numerous shell fish beds shown on the chart, thence:
SE of Mèze Jetée Est Light (white pyramidal tower, green top), thence:

3 NW of Château de Villeroy chimney (22 m in height) (2¾ miles SSE), thence:
SE of Pointe de Montpénèdre beacon (green, conical topmark) (3 miles SW), thence:
SE of Marseillan (5 miles SW), thence:
NW of Les Onglous Light (white tower, red top) (43°20′N, 3°32′E) into the entrance of Canal du Midi.

Directions for Bassin des Eaux Blanches

2.106

1 From the N entrance of Canal de Sète, close E of Pointe Longue (43°24′·9N, 3° 41′·4E), the channel leads N to the entrance to Chenal Maritime, marked by buoys (lateral). The channel is dredged to 7 m and initially leads NE to a position W of the entrance to Canal du Rhône à Sète (2.100) and the quays which serve the industrial complex N of Port de Sète (2.100).

2 The alignment (350°) of Belaruc-les-Usines leading beacons, which stand in the industrial area of the town, leads through the dredged channel to Port de Belaruc-les-Usines yacht haven (2.110):
Front beacon (white, diamond topmark) (43°27′N, 3°42′E).
Rear beacon (white, diamond topmark) (4 cables NNE).

Small craft harbours

2.107

1 **Bouzigues** (43°27′N, 3°40′E). The haven consists of two basins, the E is used by fishing vessels and the W by yachts. The W basin provides 180 m of quays with a depth of 1·7 m alongside and can accommodate up to 90 vessels of between 5 and 9 m in length. There are only limited small craft facilities.

2.108

1 **Mèze** (43°25′N, 3°36′E). A small fishing (including shellfish) and yacht harbour. The largest vessel accepted is

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length 12 m, draught 2 m. Entrance is straightforward except at night when mariners should beware of the unlit shell fish beds. The harbour has 150 berths and the usual marina facilities.

2.109

1 **Marseillan** (43°21′N, 3°32′E), a fishing, shellfishing and yacht harbour. There are berths for 200 small craft, mainly at pontoons inside the main breakwater. Lights are exhibited from the heads of the breakwaters and from each end of the detached breakwater, which protects the old harbour, thereby marking both entrances to the haven. There are depths of 1·2 to 1·5 m within the harbour. The harbour provides the usual small craft facilities.

2.110

1 **Port de Balaruc-les-Usines** (43°27′N, 3°42′E). A boatyard and marina with 200 berths with depths of 0·5 m to 1·5 m lying at the head of Crique de l'Angle, the NE extremity of Étang de Thau. The haven is approached through Chanel Maritime see 2.106. Marina facilities and comprehensive small craft repairs.

SÈTE TO MARSEILLE

GENERAL INFORMATION

Chart 1705

Area covered

2.111

1 This section covers the N coast of the Gulf of Lions as far E as Rade de Marseille, including the major port complex of Marseille-Fos. It is arranged as follows:

Port de Sète to Point de Beauduc (2.114).
Point de Beauduc to Cap Couronne (2.139).
Port de Fos and approaches (2.152).
Cap Couronne to Cap Croisette (2.263).
Port de Marseille and approaches (2.284).

Topography

2.112

1 The generally low lying and sandy coast continues E to Golfe de Fos (43°24′N, 4°55′E) then gradually becomes more rugged. In the vicinity of Marseille the coast is once again backed by ranges of hills and mountains.

Depths

2.113

1 The 100 m depth contour lies approximately 30 miles offshore E of Sète until close W of the mouth of the the river Rhône (43°20′N, 4°51′E). Here it quickly closes to approximately 7 miles from the coast providing deep water approaches to the Marseille-Fos complex.

PORT DE SÈTE TO POINT DE BEAUDUC

General information

Charts 1705, 2606

Route

2.114

1 From the outer end of of Port de Sète approach channel (43°25′N, 3°40′E) the offshore route leads E to a position S of Pointe de Beauduc, 27 miles E.

Coastal routes to seaward of the 30 m depth contour present little difficulty and are not described except for the approach to Port de Sète.

2 Mariners navigating inshore of the 30 m depth contour should note the prohibited areas, areas of obstructions and isolated dangers shown on the chart. The numerous inshore routes for small craft between yacht havens and marinas are not described. The directions and references for the offshore route may be useful for coastal and inshore navigation.

Topography

2.115

1 Frontignan (43°27′N, 3°45′E) stands between the NE shore of Étang de Thau and the SW shore of Étang de Vic. Inland from Frontignan Montagne de la Gardiole extend NE providing a useful landmark (2.118).

The low, flat and sandy coast backed by lagoons continues NE into Golfe d'Aigues-Mortes, which is entered between Palevas-les-Flots (43°32′N, 3°55′E) and Pointe de l'Espiguette 9 miles ESE. Rocky banks and ledges, sometimes covered with sand, run parallel to and extend up to 1½ miles from the N shore of the bay into depths of 15 to 20 m; they are only a danger to anchorage. In the E part of the bay the bottom is of grey sand. The head of Golfe d'Aigues-Mortes is low and regular.

2 The low, featureless coast continues E to Saintes-Maries-de-la-Mer (43°27′N, 4°25′E) a small town which in clear weather can be distinguished by its large church (2.118). The town marks the W side of Golfe des Saintes-Maries which extends 7 miles ESE to Pointe de Beauduc. The shores of the bay are sandy and backed by dunes 6 to 7 m in height. Pointe de Beauduc is reported to be extending NW at a rate of 15 m a year and should be given a wide berth.

Prohibited areas

2.116

1 A prohibited area 3½ miles ENE of Port de Frontignan (43°26′N, 3°46′E) extends ENE to seaward. The area, marked by light-buoys, is shown on Chart 2606.

Rescue

2.117

1 There are lifeboats stationed at Palavas-les-Flots (43°32′N, 3°56′E) (2.130), La Grand-Motte (43°35′N, 4°05′E) (2.132), Port-Camargue (43°31′N, 4°07′E) (2.134) and Saintes-Maries-de-la-Mer (43°27′N, 4°25′E) (2.136).

Principal marks

2.118

1 **Landmarks**:

Mont Saint Clair (Mont de Sète) (180 m in height) (43°24′N, 3°41′E).
Citadelle Richelieu, the fort has a signal station and radio mast at its S end (4½cables SE of Mont Saint-Claire).
Montagne de la Gardiole, extending NE from Étang de Thau (43°30′N, 3°45′E).
Mont Bauzille, the NE end of Montagne de la Gardiole. A chapel stands on the peak, (43°32′N, 3°49′E).
Pointe de Beauduc Lighthouse (white tower with white cupola, 27 m in height) (43°22′N, 4°35′E).

2.119

1 **Major lights**:

Mont Saint-Clair Light (white 8 sided tower with green lantern, 23 m in height) (43°24′N, 3°41′E).

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Port des Quilles, Môle Saint Louis Light (truncated white tower with red top, 30 m in height) (43°24′N, 3°42′E).
Pointe de l'Espiguette Light (see 2.118).
Pointe de Beauduc Light (see 2.118).

Directions for the offshore route

(continued from 2.44)

2.120

1 From the outer end of Port de Sète approach channel (43°15′N, 3°54′E) the offshore route leads E passing:
S of Pointe de l'Espiguette Light (2.118), thence:
to a position 10 miles S of Pointe de Beauduc Light (2.118).
(Directions for the offshore route continue at 2.150)

Useful marks

2.121

1 Palavas-les-Flots water tower, (43°32′N, 3°56′E).
Port de Carnon water tower, (43°33′N, 4°00′E).
La Grand Motte, pyramid shaped blocks of flats, (43°33′N, 4°05′E).
A conspicuous water tower and a chimney 1½ miles ESE of La Grand Motte.
Pointe de l'Espiguette Lighthouse, a white square tower with black top, (43°29′N, 4°08′E).
2 Saintes-Maries-de-la-Mer church, when viewed from 7 or 8 miles, in clear conditions, has the appearance of an isolated hillock, (43°27′N, 4°25′E).
La Gacholle Lighthouse (black and white square tower, 18 m in height) (43°27′N, 4°34′E).

Port de Frontignan-La Peyrade

Chart 2606

General information

2.122

1 **Position and function**. Port de Frontignan-La Peyrade (43°25′N, 3°45′E) is a fishing port which also provides access to Canal du Rhône à Sète (2.100).

Limiting conditions

2.123

1 **Controlling depths**. The entrance and outer harbour are dredged to 6 m.

Deepest and longest berth. The N quay of the N basin, adjacent to the refrigerated store, 100 m, in length with a depth alongside of 5·8 m.

Maximum size of vessel handled. Length 100m, draught 5·8 m.

Local weather. The entrance is dangerous in strong SE winds.

Harbour

2.124

1 **General**. The harbour is formed by two breakwaters from which lights are exhibited, the entrance between them faces SW. The breakwaters contain three basins and the entrance to Canal du Rhône à Sète lies in the NE part of the harbour. The canal is spanned by two road bridges above the entrance.

2.125

1 **Principal marks**
Landmark:
Oil storage tanks 4 cables N of the harbour.

Directions

2.126

1 The harbour is approached from the S, mariners may find the light structures on the breakwaters useful headmarks. The track passes, with positions relative to Digue Sud W Head Light (2.127) (43°25′·2N, 3°44′·7E):
W of S cardinal light-buoy (1¼ miles SSE), thence:
E of North Berth (8 cables S).

2.127

1 **Useful marks**
East Breakwater Light (concrete column, 8 m in height) (43°25′N, 3°45′E).
South Breakwater W Head Light (metal mast, 3 m in height) (1½ cables W of East Breakwater Light).
South Breakwater E Head Light (concrete column) (1 cable N of East Breakwater Light).

Basins and berths

2.128

1 Finger jetties provide alongside berths for fishing vessels on the NE side of the W basin. Depths in the basin are between 3·2 m and 4·3 m. Larger vessels can berth at the quay adjacent to the cold store at N basin see 2.123.

Port de Frontignan yacht harbour

2.129

1 **General information**. Frontignan yacht harbour (43°26′N, 3°46′E) lies SE of the town. The harbour is protected by two breakwaters, from which lights are exhibited, and consists of three basins. The outer, Avant-port, formed by the breakwaters is connected by a short channel to E and W basins which provide the main berthing area. The harbour is dredged periodically to 3 m. A short channel at the N end of the harbour, spanned by a bridge with a vertical clearance of 3 m, provides access to Étang d'Ingril.
2 **Directions**. Mariners will find the marks described for Port de Sète (2.118 and 2.121) useful. The entrance faces SW and can be dangerous in strong SE winds.

Berths: 600 at pontoons with depths of 2 to 3 m. The maximum size of vessel accepted is length 16 m.

Facilities. Comprehensive marina facilities including repairs. A VHF watch is maintained see relevant *Admiralty List of Radio Signals*.

Small craft

Chart 1705

Palavas-les-Flots

2.130

1 **General information**. Palavas-les-Flots (43°32′N, 3°56′E) stands at the mouth of the river Lez. A breakwater SW of the river mouth forms a large basin which is the main berthing area. The entrance to the river lies between the NE corner of the reclaimed land and a breakwater, from which lights are exhibited, extending from the N side of the river mouth. There are berths within the river and a marina basin 7 cables upstream from the entrance. Access is limited by an overhead cable close inside the river mouth, with a vertical clearance of 6·5 m, and, further upstream, two fixed road bridges with a vertical clearance of 2 m. The maximum draught accepted in the river is 1·2 m.
2 The entrance to the outer basin lies between the head of the outer breakwater and the SE corner of an area of reclaimed land, S of the river entrance, and is marked by lights.

Directions. The harbour entrances face NE and are straightforward accept in strong SE or SW winds. The water tower (2.118) within the town is conspicuous and provides a

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a useful mark when approaching the entrances. Mariners should note the prohibited area, marked by light-bouys, 4 miles SSW of the harbour (2.116) and an area of obstructions 2 miles SSE of Palevas-les-Flotes with a least depth of 8 m over it.

3 **Anchorage** can be obtained in good weather 1½ miles SSW of the harbour in a depth of 11 m, sand. The alignment (294°) of the peak of Mont Bauzille (2.118) with the tower of Maguelonne church (43°31′N, 3°53′E) leads into the anchorage which lies between Banc de Maguelonne to the SW and another bank to the NE, both are rocky. The holding ground is poor.

4 **Berths**. The outer basin has 1000 pontoon berths with depths of 2 to 3 m. The marina within the river has 230 berths with a depth of 1·2 m.

Facilities. Comprehensive marina facilities including repairs. The town is an important tourist centre. VHF watch is maintained see the relevant *Admiralty List of Radio Signals*. There is a lifeboat stationed at Palavas-les-Flotes during the summer.

Carnon

2.131

1 **General information**. Carnon (43°32′N, 3°58′E) is an artificial yacht haven at the mouth of Grau de Pérols. Although the harbour has comprehensive small craft facilities there are no arrangements for visiting yachts. The harbour is protected by breakwaters which form the outer harbour. Lights are exhibited from the head of each breakwater. A short channel leads from the outer harbour into E and W basins. Small craft with a draught of less than 1 m and masthead height of less than 1·4 m can reach Port de Sète (2.67) via Étang de Maugio, which lies N of the town, and Canal du Rhône à Sète.

2 **Directions**. The entrance faces E. When approaching the entrance mariners should remain outside the 3 m depth contour to avoid the sea defences which project from the shore. Although the entrance presents little difficulty in good weather by day it can be dangerous at night and in poor weather. The harbour is dredged to a depth of 2·2 m.

Berths. The marina has 700 berths.

3 **Facilities**. Comprehensive marina facilities. The town of Carnon-Plage has the usual facilities and is an important tourist centre. VHF watch maintained, see relevant *Admiralty List of Radio Signals*.

La Grand-Motte

2.132

1 **General information**. La Grand-Motte (43°35′N, 4°05′E) is a purpose built yacht harbour easily identified by the pyramid shaped blocks of flats N of the marina basins. The harbour is protected by breakwaters which form the outer harbour. Lights are exhibited from the heads of both breakwaters which form the E facing entrance to the harbour. The entrance channel is dredged to 4·5 m and the outer harbour 3·7 m.

2 **Directions**. The landmarks described above can be used to lead to the entrance. In poor visibility the radiobeacon at Fréjorgues, 3 miles W, may be useful. The entrance is straightforward. Mariners should make allowance for the W-going current along this part of the coast.

Berths. The marina can accommodate 1222 small craft in a depth of 2·7 m.

3 **Facilities**. Comprehensive small craft facilities. VHF watch maintained see relevant *Admiralty List of Radio Signals*.

Grau-du-Roi

2.133

1 **General information**. Grau-du-Roi (43°32′N, 4°08′E) is a small commercial and fishing port accessible to vessels of no more than 2·5 m draught. The harbour is at the seaward end of Canal Maritime which leads to Aigues-Mortes, 3 miles NE. The walls and towers of Aigues-Mortes are discernible but can be difficult to distinguish. The river Vidourle flows into Canal Maritime 4 cables from the harbour entrance. The fishing harbour lies close W of the river mouth. Canal Maritime is spanned by a swing bridge and a lifting bridge respectively 2½ cables and 6 cables from the entrance. The bridges have a vertical clearance of 2 m when closed. Mariners should check opening times with the Harbour Master. Small craft berths lie between the two bridges. An overhead power cable with a vertical clearance of 16 m spans the canal close NE of the lifting bridge.

2 **Directions**. When approaching the harbour mariners should beware of the dangerous wrecks, shown on the chart, which lie in the E part of Golfe d'Aigues-Mortes and keep W of the light-buoys W of Pointe de l'Espiguette (2.118). The harbour can be identified by the conspicuous water tower 1 mile NNW of it. The old lighthouse at the root of the NW breakwater is a useful mark when approaching the entrance during the day. The entrance faces SW and is protected by two breakwaters. Lights are exhibited from both. During N winds or after heavy rain the current which flows out of the entrance is very strong.

3 **Anchorage** can be obtained SW of the harbour entrance in depths of 6 to 9 m in Rade d'Aigues-Mortes. Mariners should avoid obstructing the approach to the harbour entrance and that of Port-Camargue (2.134). The holding ground is good and the anchorage sheltered from the E and NE however vessels should leave the anchorage when the wind blows from the S.

Berths. 100 small craft berths at pontoons between the bridges.

4 **Facilities**. Good small craft facilities including repairs and supplies. There is a hospital in the town. Limited VHF watch see relevant *Admiralty List of Radio Signals*. A lifeboat is stationed at Grau-du-Roi.

Port-Camargue

2.134

1 **General information**. Port-Camargue (43°31′N, 4°07′E) is a large purpose built yacht harbour consisting of four basins.

2 **Directions**. Approaching from the S keep W of the light-buoys W of Pointe de l'Espiguette (2.118). Mariners should beware of the dangerous wrecks, shown on the chart, which lie in the E part of Golfe d'Aigues-Mortes. The harbour entrance, protected by two breakwaters from which lights are exhibited, faces NNE. Mariners will find Pointe de l'Espiguette Light (2.118) and the distinctive triangular shaped harbour offices on the E side of the outer harbour useful marks.

3 Entry is straightforward however a sand spit which extends W from the spur breakwater at the root of the main W breakwater should be given a wide berth. Shoaling, with depths of 1·4 m, up to 3 cables seaward of the W breakwater has been reported and some silting of the harbour entrance occurs. The outer harbour is dredged to 3·7 m. A boat channel (Chenal Sud) 6 cables S of the entrance leads from the coast into the S part of the harbour. The entrance to the channel is protected by breakwaters and faces NNW. Lights are exhibited from the breakwaters.

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4 **Anchorage**. See 2.133.

Berths. 4400 berths, mainly at pontoons, in a depth of 2·7 m.

Facilities. Comprehensive small craft facilities including repairs. VHF watch maintained, see the relevant *Admiralty List of Radio Signals*. There is a lifeboat stationed at Port-Camargue.

Port de l'Amarrée

2.135

1 **General information**. Port de l'Amarrée (43°28′N, 4°24′E) is a private yacht haven on the E bank of the Petit Rhône river 1 mile from the river mouth. There are berths for 250 small craft with depths of 0·9 m to 1·1 m.

Port-Gardian

2.136

1 **General information**. Port-Gardian (43°27′N, 4°25′E) is a small fishing and yacht harbour 1 mile E of the mouth of the Petit Rhône river. The harbour is protected by two breakwaters from which lights are exhibited. The harbour is dredged periodically to 3 m. Prolonged strong winds have a considerable influence on water levels. The *Mistral* can reduce the depth by as much as 0·8 m whereas winds from the SW or the E can raise it by 0·5 m.

2 **Directions**. The church at Saintes-Maries-de-la-Mer (2.121) is a useful daymark to identify and approach the harbour. The harbour entrance faces ENE. The largest vessel accepted is length 14 m draught 2·5 m.

Berths. 350 at pontoons.

Facilities. Marina facilities. There is a doctor at Saintes-Maries-de-la-Mer The town has the usual shops and facilities. There is a limited VHF watch see *Admiralty List of Radio Signals*. There is a lifeboat stationed at Saintes-Maries-de-la-Mer

Golfe des Saintes-Maries anchorage

2.137

1 **General information**. Anchorage may be obtained in the E part of of Golfe des Saintes-Maries in 8 to 10 m, good holding ground. However a careful check of anchor bearings should be made during strong winds between SE and NW.

2 **Directions**. The anchorage should be approached with La Gacholle Light (2.118) bearing NE, remaining at least 1 mile W of Pointe de Beauduc and thence ENE towards the anchorage when Pointe du Beauduc Light (2.118) and the black beacon 1 mile NW of it are in alignment (128°). Mariners should beware of the area of obstructions, with a least depth of 8 m over them, WSW of the anchorage and note the prohibited anchorage area; both are shown on the chart.

Other names

2.138

1 Castellas (43°20′·3N, 3° 34′·6E), an old square tower.

POINT DE BEAUDUC TO CAP COURONNE

General information

Charts 1705, 2164

Route

2.139

1 The offshore route continues E from a position S of Pointe de Beauduc (43°23′N, 4°33′E) to the outer end of Port de Fos approach channel (43°12′N, 5°02′E). The route remains to seaward of the 50 m depth contour and is clear of isolated dangers.

2 Coastal and inshore routes are not described except for the approaches to ports within Golfe de Fos (2.140) however inshore waters between Pointe de Beauduc and the mouth of Le Grand Rhône (43°20′N, 4°51′E) are encumbered by numerous dangers. The seaward limit of the dangers is indicated by a series of light-buoys (cardinal); all mariners are advised to remain S of the buoys.

Topography

2.140

1 The coast E of Pointe de Beauduc continues low and featureless to the mouth of Le Grand Rhône. The low sand dunes are backed by a thin screen of trees in the vicinity of the river mouth. The banks formed around the river mouth are advancing seaward at about 50 m a year. The banks are known locally as "theys". The dangerous and shifting nature of the bar at the mouth of the Rhône prevents navigation and the river is entered from the W side of Golfe de Fos through Canal Saint-Louis. The river mouth is a poor radar target.

2 Golfe de Fos is entered between the mouth of Le Grand Rhône and Cap Couronne 9 miles E. The bay is mostly open S. The hills on the E side are the most dominant natural feature and appear as foothills to the mountains 20 miles inland.

3 The head of the bay is occupied by the industrial and port complex which surrounds Fos-sur-Mer (43°26′N, 4°57′E). Port de Bouc, 3 miles SE of Fos-sur-Mer, provides access to Étang de Berre via Canal de Caronte and the oil terminals at Mède (43°24′N, 5°06′E) and Pointe de Berre (43°28′N, 5°09′E). Golfe de Fos can be easily identified by the industrial installations which dominate the shores of the bay. At night the lights of these installations can make navigation lights and marks difficult to see.

Regulations

2.141

1 **Vessel Traffic Service**. The ports within Golfe de Fos, including the inland waterways, are controlled by The Port of Marseille using an integrated Vessel Traffic Service which incorporates Fos Port Control and Marseille Port Control. Regulations concerning entry and movement within Golfe de Fos area have been promulgated by the French authorities and movement reporting is compulsory for all commercial traffic. The area is bounded E and W by the Longitudes 4°41′·3E (Faraman Light) and 5°6′·5E (Sausset-les-Pins Light) and lies between the Latitude 43°11′·9N and the coast. See the relevant *Admiralty List of Radio Signals* for details and procedures.

2.142

1 **Dangerous cargoes**. See 2.5.

2.143

1 **Prohibited anchorage**. Anchoring and dredging within an area protecting submarine cables which extends SSW from Cap Couronne (43°20′N, 5°03′E) is prohibited. The area is shown on the chart.

Rescue

2.144

1 There is a lifeboat stationed at Port de Carro (2.182).

Natural conditions

2.145

1 **Current**. In the approach to Golfe de Fos, the current is weak and generally W-going. With strong NW winds an E-going counter-current, augmented by the outflow from the River Rhône sets across the mouth of the bay past Cap Couronne.

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2.146

1 **Wind and sea state**. Strong SW or SE winds send a heavy sea into Golfe de Fos. This is particularly acute on the E side of the bay with a strong SE wind. However the W part of the bay affords moderate shelter in W or SW winds.

Principal marks

2.147

1 **Landmarks**:

Pointe de Beauduc Lighthouse (2.118) (43°22′N, 4°35′E).

Faraman Lighthouse (black tower, white bands, 43 m in height) (43°21′N, 4°41′E).

Anse des Laurons power station chimneys. Four conspicuous chimneys (red and white bands) (43°21′N, 5°01′E). Red lights are exhibited at night.

2 Cap Couronne Lighthouse (white tower, red top, 31 m in height) (43°20′N, 5°03′E).

Île du Planier Lighthouse (white tower, red top, 66 m in height) (43°12′N, 5°14′E).

2.148

1 **Major lights**:

Faraman Light (2.147).

Pointe de Saint Gervais Sectored Light (grey tower, green top, 47 m in height) (43°25′·3N, 4°57′·5E).

Cap Couronne Light (2.147).

Île du Planier Light (2.147).

Other navigational aids

2.149

1 **Racon**:

They de Roustan, Grand Rhône Racon (43°21′N, 4°51′).

Golfe de Fos Approach Channel Omega Light-buoy Racon (43°12′N, 5°02′E).

Golfe de Fos GE Light-buoy Racon (43°23′N, 4°56′E).

Directions for the offshore route

(continued from 2.120)

2.150

1 From a position S of Pointe de Beauduc (43°23′N,4°33′E) the offshore route leads E passing, with positions relative to Faraman Light (43°21′N, 4°41′E):

S of Pointe de Beauduc Light (2.118), thence:

S of a light-buoy (S cardinal) (3 miles SW), thence:

S of Faraman Light (2.148), which also marks the W limit of the Port Fos approach zone see 2.141. Thence:

S of a light-buoy (S cardinal) (4 miles SE), thence:

2 S of Roustan Sud Light-buoy (S cardinal) (6½ miles SSE), marking the S limit of the shoal waters at the mouth of Rivière Rhône. Thence:

S of Roustan Est Light-buoy (cardinal), 1 mile ENE of Roustan Sud Light-buoy, marking the SE limit of the shoal water at the mouth of Rivière Rhône. Thence:

S of Golfe de Fos Approach Channel Omega Light-buoy (17½ miles SE) (2.149).

(Directions continue at 2.274)

Useful marks

2.151

1 White viaduct (43°20′·6N, 5° 03′·0E).

Chapel of Notre Dame des Marins (de la Miséricorde) (43°25′·0N, 5° 02′·9E), stands on top of a hill.

Saint Pierre church spire, 1 mile N of Cap Couronne.

PORT DE FOS AND APPROACHES

General information

Charts 2164, 3498

Position

2.152

1 Port de Fos (43°25′N, 4°50′E) occupies much of the NW part of Golfe de Fos (2.140) to the W of the town of Fos-sur-Mer.

Function

2.153

1 A large man-made harbour handling bulk raw materials, crude oil, refined products and container traffic.

Topgraphy

2.154

1 The NW part of Golfe de Fos is low lying and featureless. The older and smaller ports of Port-Saint-Louis-du-Rhône (2.184), which provides access to Rivière Rhône, and Port-de-Bouc (2.207), lie respectively SW and E, of Port de Fos. Port-de-Bouc is the seaward entrance of Canal de Caronte which leads to Étang de Berre (2.242). The buildings and structures of these ports and the industrial areas associated with them dominate the coast.

2 The basins of the port are open to the SSE and protected from the open sea by They de la Gracieuse which extends NE from They de Roustan on the NE side of the mouth of Rivière Rhône (43°21′N, 4°51′E).

Port limits

2.155

1 See 2.141.

Approach and entry

2.156

1 Port de Fos is approached through Golfe de Fos (2.140). A dredged channel leads from the bay to the port.

Traffic

2.157

1 In 2000 the port handled 3037 vessels representing a total of 106 636 007 dwt.

Port Authority

2.158

1 The port is controlled by the Port of Marseille (Port Autonome de Marseille) 23, Place de la Joliette, Marseille.

Limiting conditions

Controlling depths

2.159

1 The channel leading from Golfe de Fos to the entrance of the port (No 11 light-buoy) is dredged to 24 m.

Deepest and longest berth

2.160

1 Petroleum Wharf 3, length 550 m depth alongside 23·5 m.

Maximum size of vessel handled

2.161

1 Petroleum Wharf 3, 400 000 tonnes.

Petroleum Wharf 4, 540 000 tonnes (in ballast).

Local weather and sea state

2.162

1 See 2.146.

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Arrival information

Port operations
2.163

1 The port operates 24 hours a day.

Port radio
2.164

1 Fos Port Control operates 24 hour VHF coverage, see *Admiralty List of Radio Signals*.

Notice of ETA required
2.165

1 Vessels carrying hydrocarbons or other dangerous cargoes are subject to mandatory SURNAV movement reporting see 2.5 and the relevant *Admiralty List of Radio Signals*.

All vessels bound for Port de Fos should send ETA reports 48 and 24 hours in advance (see 2.141 for movements within Golfe de Fos area).

Outer anchorages
2.166

1 **Prohibited anchorages**. An area protecting submarine cables extends SSW from Cap Couronne through the approaches to Golfe de Fos. Anchoring and dredging within the area, which is shown on the chart, is prohibited.

Within Golfe de Fos anchoring is prohibited in:

The white sector of Saint-Gervais Light (2.148).

2 An area protecting submarine oil pipelines combined with an area 500 m each side of the leading line into the entrance to Port de Bouc (2.207), shown on the chart, generally NE of Lavéra Light-buoy (W cardinal) (43°22′·6N, 4°58′·2E).

Within the dredged channel leading to Port de Fos.

In the vicinity of Port de Fos Petroleum Wharves (43°24′N, 4°54′E).

2.167

1 **Anchor berths**. Anchorage can be obtained in three main areas:

Golfe de Fos West in depths of 15·4 to 54·0 m, sand and mud. The area lies W of the approach channel between the parallel of Cap Couronne Light (43°19′·6N) and the S limit of the dredged channel. The W limit is a line of bearing (007°) on Saint Gervais Light (2.148):

2 Golfe de Fos East in depths of 6·5 to 51·0 m, sand, mud and gravel. The area lies E of the approach channel between the parallels of Lavéra Light-buoy (43°22′·6N) and Cap Couronne Light (43°19′·6N).

Golfe de Fos North in depths of 10·0 to 18·2 m, sand and mud. The area lies NW of the the leading lines for Port de Bouc entrance. Mariners should note that Plateau du Grande Forté is an area of poor holding ground, mainly rock covered by mud. A spoil ground lies to the N, 7 cables NW of Point Cap d'Aiguade (43°24′·2N, 4°58′·5E).

Pilotage and tugs
2.168

1 **Pilotage** is available 24 hours a day and is compulsory within the area bounded by the meridians of Faraman Light (2.148) and Cap Couronne Light (2.147) and N of 43°19′N for:

All vessels 50 m or greater in length carrying hydrocarbons.

All other vessels 70 m or greater in length.

Mariners should note that pilotage is not compulsory for vessels of less than 70 m in length not carrying hydrocarbons or other dangerous cargoes, proceeding to Darse 3 or the Darse 2 container terminal.

2 The pilot usually boards 2½ miles S of Lavéra Light-buoy (43°22′·6N, 4°58′·2E) and for deep draught vessels at 43°19′·6N. Pilots will board vessels on request between the latitudes of Île du Planier Light (43°12′N) and Cap Couronne (43°22′·6N) see the relevant *Admiralty List of Radio Signals* for full details and procedures.

Tugs are available.

Entry regulations
2.169

1 Vessels carrying hydrocarbons or other dangerous cargoes must use the approach channel, see 2.5. All vessel movements are controlled and vessels must not enter the dredged channel without Fos Port Control approval.

Vessels required to use the approach channel have right of way over crossing vessels. Deep draught vessels are given priority by the Port Authority and show the following signals:

Entry regulations (2.169)

Vessels displaying these signals have right of way over all others.

Harbour

General layout
2.170

1 Port de Fos is a man-made harbour, designed for large vessels, which occupies the NW part of Golf de Fos. The port consists of a tanker terminal and four basins radiating from the inner end of the dredged channel which leads WNW through Golf de Fos. The entrance to Port-Saint-Louis-du-Rhône (2.184) lies SW of the dredged channel. An anchorage, with depths of 7 to 10 m, lies SE of Port-Saint-Louis-du-Rhône entrance and the channel leading to the fishing port of Carteau.

Prohibited area
2.171

1 A small prohibited area, protecting a wave recording buoy, lies NE of No 3 light-buoy (43°23′·4N, 4°56′·7E). The area is shown on the chart.

Principal marks
2.172

1 **Landmarks**:

Pointe de Sainte Gervais Light structure (2.148).

The port control tower (distinctive structure, combined with a water tower) (43°25′·3N, 4°53′·5E).

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2.173

1 **Major lights**:

Pointe de Sainte Gervais (2.148).

Directions for entering harbour

Approaches

2.174

1 From a position close E of Golfe de Fos Approach Omega Light-buoy (43°12′N, 5°02′E) the white sector (340°–348°) of Pointe de Sainte Gervais Light leads through the approach channel passing, with positions relative to Anse de Lauron Light (43°21′N, 5°01′E):

W of Les Ragues de Carro (2 miles SSE) and Les Ragues de Arnette (1½ miles SSE); the rocky ledges are marked by light-buoys (W cardinal), thence:

2 E of Balancelle Light-buoy (E cardinal) (8½ miles WSW), thence:

W of Anse de Laurons (2.147), thence:

E of Annibal Est Light-buoy (E cardinal) (4 miles WNW), thence:

W of Lavéra Light-buoy (W cardinal) (2½ miles NW, which marks the outer end of the dredged channel leading to Port de Fos.

Useful mark:

Anse de Laron Light (white column, red top, 6 m in height) (43°21′N, 5°01′E).

Entrance channel

2.175

1 From a position close W of Lavéra Light-buoy (2.174) a dredged channel, marked by light-buoys (lateral) leads 1¼ miles NW to the vicinity of No 3 light-buoy (starboard hand) (43°23′·4N, 4°56′·7E) see 2.171 (prohibited area).

Leading lights. The alignment (287°) of Port de Fos Leading Lights leads through the remainder of the dredged channel, also marked by light-buoys, to the basins:

2 Port de Fos Leading Light Front (two red horizontal squares on grey pylon) (43°24′·4N, 4°52′·1E).

Port de Fos Leading Light Rear (two red vertical squares on grey pylon) (520 m from front light).

(Directions for Port-Saint-Louis-du-Rhône are given at 2.199, Directions for Port de Bouc are given at 2.225)

Basins and berths

Alongside berths

2.176

1 **Tanker terminal**. The tanker terminal occupies the N side of the entrance to the port, N of the dredged channel, and part of the SE side of Darse Sud. The terminal provides berths for crude (up to ULCC) and product tankers. See 2.160 and 2.161.

2 **Darse Sud**, extends NE from the tanker terminal. At the NE end lies Export Quay, 400 m in length. Close E of Export Quay is the entrance to Canal de Port-de-Bouc à Fos-sur-Mer which leads to Port-de-Bouc. The canal is used by barges of up to 3·1 m draught. On the S side of the entrance to the canal berth is C2, for coastal product tankers and liquefied gas carriers.

3 **Darse 1**, W of Darse Sud, handles bulk minerals, primarily bauxite and coal. The main berth, Mineral Quay, lies on the SW side of the entrance to the basin. On the E side of the basin is another quay equipped to handle bulk mineral cargoes. A directional light (W 339°–341°) leads from the basin entrance to this berth.

4 A dredged channel marked by light-buoys leads from the NW corner of Darse 1 NNW to the LNG Terminal. The berth is approached through a turning basin dredged to 10·5 m and can accept vessels up to 75 000 m^3 capacity. Close W of the LNG Terminal is a lock leading to the Arles Canal.

5 **Darse 2** lies W of the entrance channel and is approached through a channel dredged to 14 m marked by light-buoys (lateral). A container terminal occupies the SW part of the basin. NW of the container terminal the basin is dredged to 12 m. A berth for chemical tankers up to 30 000 dwt lies in the N corner of the basin and 2½ cables SE of it is a berth which handles chemical or liquefied gas carriers.

6 **Darse 3 (Bassin du Gloria)** SW of Darse 2 is approached through a channel dredged to 12 m marked by light-buoys (lateral). A smaller basin dredged to 7 m lies N of the channel and is used by tugs, lighters and other harbour craft. Darse 3 handles general cargo. There is a Ro-Ro berth in the S corner of the basin.

7 **Anse de Lauron** (43°21′·4N, 5°01′·2E) serves the power station close E of it which has four conspicuous chimneys. A breakwater extending WSW then SSE from the coast protects the dolphin berth on its inner face. A light is exhibited from the head of the breakwater. The berth has an alongside depth of 5 m. A sea-water pumping station stands on the NW corner of the basin. A prohibited area extends 100 m N and W of the breakwater and includes the basin.

Port services

Repairs

2.177

1 There are no repair facilities at Port de Fos. Minor repairs can be undertaken at Port de Bouc (2.207); Marseille (2.284) has comprehensive facilities.

Other facilities

2.178

1 Full hospital and medical facilities are available.

Supplies

2.179

1 Fresh water is available from connections on the jetties. Fuel oil is normally supplied from lighters.

Communications

2.180

1 The nearest airport is Marseille-Provence.

Small craft

2.181

1 **Port de Saint-Gervais** (43°26′N, 4°57′E) is a marina with pontoon berths, in depths of 2 to 2·5 m, for 600 small craft on the E side of Pointe de Sainte-Gervais. The harbour is formed by breakwaters extending S from the coast. A light is exhibited from the S arm of the E breakwater. The entrance faces W. Saint-Gervais Light (2.148) stands close N

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Port–Saint–Louis–du–Rhone W entrance from SE (2.186)

(Original dated 1999)

(Photograph – SHOM)

of the entrance and is a useful mark for vessels approaching the harbour. The usual marina facilities are available.

2.182

1 **Port de Carro** (43°19′·9N, 5°02′·6E). A yacht and fishing harbour with a depth of 2·5 m. The harbour is entered N of Pointe de Carro on which stands a beacon (red and white). A breakwater, from which a light is exhibited (white column, red top, 4 m in height), extends NE from the headland. The white sector of the light (322°–355°) can be used to lead to the entrance at night. The basin provides 250 berths at quays and pontoons, mainly for local vessels. In E winds a sea sends into the harbour. Mariners are advised to obtain local knowledge before attempting entry in more difficult conditions. Usual small craft facilities. There is a lifeboat stationed here.

Other names

2.183

1 **Port de Ponteau** (43°22′·2N, 5°00′·9E).

Port-Saint-Louis-du-Rhône

Chart 3498

General information

2.184

1 **Position and Function.** Port-Saint-Louis-du-Rhône (43°23′N, 4°49′E) has developed along Canal Saint-Louis, the navigable connection between Rivière Rhône and the sea.

2.185

1 **Topography**. Canal Saint-Louis leads E through a low lying and naturally featureless area between the Rhône and Golf de Fos. The buildings of the port and the nearby industrial area are the most distinctive features.

2.186

1 **Approach and entry**. A lock at the W end of Canal Saint-Louis provides access from Rivière Rhône. The port is approached from seaward through Golf de Fos (2.140).

2.187

1 **Traffic**. In 2000 the port handled 400 vessels representing a total of 1 227 620 dwt.

Limiting conditions

2.188

1 **Controlling depth**. The main basins and Canal Saint-Louis are dredged to 8·5 m (1981), vessels of up to 7·6 m draught may use Canal Saint-Louis, see 2.190.

2.189

1 **Deepest and longest berth**. The N side of Bassin des Tellines has a quay 380 m long with a depth alongside of 7·9 m.

2.190

1 **Abnormal water levels**. N and NW winds can reduce the water level within the port by as much as 0·5 m. E winds can raise the water level by a similar amount.

2.191

1 **Maximum size of vessel handled**. This is affected by meteorological conditions see above. Generally vessels of approximately 130 m in length are accepted, the maximum

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draught accepted is 7·6 m. The lock which provides access to Rivière Rhône is 135 m in length, 19 m wide and has maximum depth of 6·9 m in the centre reducing to 5·5 m at the sides.

Arrival information

2.192

1 **Port operations.** The port operates 24 hours a day.
Port radio. See 2.164.
Notice of ETA. See 2.141 and 2.165.

2.193

1 **Anchorage** may be obtained in depths of 7 to 10 m mud, 1 mile SE of of the head of Digue Saint-Louis, the mole protecting the S side of the E entrance to the port.

2.194

1 **Pilotage and tugs**. Port-Saint-Louis-du-Rhône lies within the Golfe de Fos compulsory pilotage area, see 2.168. Pilotage is compulsory, and available 24 hours a day, for all vessels of 50 m length or greater proceeding to or from the port see relevant *Admiralty List of Radio Signals* for details. The pilot will usually board between 2½ and 4 miles S of Lavéra Light-buoy (43°22′·6N, 4°58′·2E). Tugs are available.

2.195

1 **Regulations**. The port is within the Port of Marseille Vessel Traffic Service area, see 2.141 and 2.169.

Harbour

2.196

1 **General layout**. The main area of the port extends from Bassin des Tellines, at the E end of Canal Saint-Louis, to

Canal Saint–Louis from E (2.186)

(Original dated 1999)

(Photograph – SHOM)

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Port-Saint-Louis-du-Rhône (Bassin de Saint-Louis) 1½ miles W. There are also small craft basins and berths within Port-Saint-Louis-du-Rhône. There are berths within the canal and fishing vessels use the W part of Quai de la Suisse on the S Bank of Canal Saint-Louis at the W end of the port.

2.197

1 **Traffic signals** are displayed at the lock between Rivière Rhône and Port-Saint-Louis-du-Rhône:

Day	*Meaning*
	No entry, lock closed
	No entry, lock being opened
	Enter lock open

Rivière Rhône and Port-Saint-Louis-du-Rhône traffic signals (2.197)

2.198

1 **Principal marks**

Landmarks:

Canal Saint-Louis Digue Sud Light (white tower, red top, 12 m in height) (43°23′N, 4°52′E).

Tour Saint-Louis (grey square tower with smaller domed turret, 21 m in height) (43°23′N, 4°48′E).

2 **Major light**:

Tour Saint-Louis Directional Light (W 262°–265°) (the light is located on the square tower, see above).

Directions for entering harbour

2.199

1 **Approaches**. See 2.174.

2.200

1 **Entrance channel**. From a position within the dredged channel, WNW of No 5 Light-buoy (lateral) (43°23′·7N, 4°56′·0E) the track leads W passing:

N of GN Light-buoy (N cardinal) (43°23′·5N, 4°55′·0E) which marks the N end of They de la Gracieuse (2.154). Thence:

N of Digue Sud into the entrance.

Mariners should note the white sectors of Tour Saint-Louis Directional Light and Canal Saint-Louis Digue Sud Light can be used to lead into the entrance but do not clear all dangers.

Basins and berths

2.201

1 **Bassin des Tellines**. On the S side of the basin are two berths for coastal product tankers and gas carriers. The N side of the basin is used for transhipment between river craft and sea-going vessels. The area handles grain, Ro-Ro and general cargo traffic.

Canal Saint-Louis North side. Three wharves handling distilled products and vegetable oil.

2 **Canal Saint-Louis South side**. There is a tanker berth close W of Bassin des Tellines. At the W end of the canal Quai de la Suisse provides a waiting berth at its E end; fishing vessels berth two deep at the W end.

Port-Saint-Louis-du-Rhône. Commercial vessels use the SE and SW sides of the basin where there are depths of 5·0 to 6·2 m. The lock (2.191) providing access to Rivière Rhône lies in the SW corner.

Port services

2.202

1 **Repairs**. Minor repairs only.

Supplies. Water is available at each berth. Fuel is provided by road tanker.

Rescue. There is a lifeboat stationed here.

Small craft

2.203

1 **Port Olga**, close inside the harbour entrance, provides 130 berths for small craft.

Port-abri de Carteau, 2 cables SW of Port Olga. The basin provides berths for 150 small craft and offers limited marina facilities.

Port de Plaisance occupies the NW and NE sides of Port-Saint-Louis-du-Rhône providing 250 berths for small craft between 6 and 12 m in length. Some marina facilities.

2 **Port-abri du Rhône** lies 4 cables NW of Port-Saint-Louis-du-Rhône on the E bank of Rivière Rhône. The haven has berths for 160 small craft, some marina facilities.

Harbour regulations

2.204

1 Yachts cannot berth within Canal Saint-Louis.

Small craft harbours

Port de Pêche de Carteau

2.205

1 **Position and function.** Port de Carteau (43°23′N, 4°51′E) is a fishing harbour.

Directions. The alignment (243°) of Port de Carteau Leading Lights leads through the buoyed channel, in a least depth of 3·4 m, to the harbour entrance:

Front Light (white pylon, 5 m in height) (43°22′·5N, 4°50′·6E).

Rear Light (white pylon, 11 m in height) (227 m from front).

2 **Berth**. A quay, on the N side of the harbour, 90 m in length with a depth of 4 m alongside.

Port Napoléon

2.206

1 Port Napoléon, a marina 7 cables W of Port de Carteau (2.205) with berths for over 200 small craft up to 30 m in length.

Port de Bouc

General information

2.207

1 **Position and function.** Port de Bouc (43°24′N, 4°59′E) handles crude oil, refined products and the raw materials for heavy industries close to the town which include steel and chemical production. There is also ship building and repair within the port. Port de Bouc provides canal access to Port de Fos (2.152) and Étang de Berre (2.242).

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Port de Bouc from SW (2.208)
(Original dated 1999)

(Photograph – SHOM)

2.208

1 **Topography**. Port de Bouc is a natural harbour which lies in the NE part of Golf de Fos (2.140). The coast here remains low and is without significant natural features. NE of the port a series of low hills extend E towards Étang de Berre. The harbour is dominated by Fort de Bouc which stands on the SE side of the entrance.

2.209

1 **Approach and entry**. The port is approached through Golf de Fos.

2.210

1 **Traffic**. In 2000 the port handled 1405 vessels representing a total of 22 554 158 dwt.

2.211

1 **Port Authority**. Port of Marseille, 23 Place de la Joliette, Marseille.

Limiting conditions

2.212

1 **Controlling depth**. The entrance to the port is dredged to 14 m (1997).

2.213

1 **Deepest and longest berth**. Lavéra tanker terminal berths F and G, 325 m in length, depth 13·5 m alongside. See 2.226.

2.214

1 **Maximum size of vessels handled**. Vessels up to 12·8 m draught are accepted.

2.215

1 **Sea state and currents**. SW winds raise the heaviest sea at the entrance and create an in-going current increasing the difficulty of the entrance. In a high sea state entry from Golf de Fos may become impossible. Heavy rain or prolonged NE wind can create an out-going current with a rate of 4 kn making manoeuvring within the harbour difficult. A prolonged period of SE winds can create a W cross current.

Arrival information

2.216

1 **Port operations**. The port operates 24 hours a day.

2.217

1 **Port radio**. Fos Port Control provides 24 hour VHF coverage, see the relevant *Admiralty List of Radio Signals*.

2.218

1 **Notice of ETA required**. Vessels carrying hydrocarbons or other dangerous cargoes are subject to mandatory SURNAV movement reporting see 2.169 and the relevant *Admiralty List of Radio Signals*. All vessels bound for Port de Bouc should send ETA reports 48 and 24 hours in advance, see 2.141 for movements within Golf de Fos area.

2.219

1 **Outer anchorages**. Mariners should note the prohibited anchorage area which extends NE from Lavéra Light-buoy (W cardinal) (43°22′·6N, 4°58′·2E) to the harbour entrance. See 2.166 for other prohibited anchorages and 2.167 for anchorage areas.

2.220

1 **Pilotage and tugs**. Pilotage is available 24 hours a day and compulsory for all vessels 50 m in length or greater, see 2.168 for further details. The pilot will usually board between 2½ and 4 miles S of Lavéra Light-buoy (W cardinal) (43°22′·6N, 4°58′·2E), see the relevant *Admiralty List of Radio Signals* for procedure.

2.221

1 **Regulations concerning entry and movement within the harbour**. Port de Bouc lies within the Golf de Fos Vessel Traffic Service area. All vessels proceeding to Port de Bouc and the inland waterways beyond the port must obtain permission to do so from Fos Port Control, see 2.169 and *Admiralty List of Radio Signals* for details and procedure. Vessels proceeding to sea have right of way. Within the harbour vessels moving to or from Canal de Caronte will have right of way over vessels leaving the other areas of the port. Small craft see 2.229.

Harbour

2.222

1 **General layout**. The harbour contains several basins, the largest is Port de Pétrolier de Lavéra, a tanker terminal on the SE side of the harbour, see 2.226. Port de Bouc is connected by Canal de Port-de-Bouc à Fos-sur-Mer to Port de Fos. Port de Bouc is also the entrance to Canal de Caronte which leads E to Étang de Berre (2.242).

2.223

1 **Natural conditions**. See 2.215.

2.224

1 **Principal marks**

Landmarks

Tower block (43°24′·0N, 4°58′·9E).
Port Control Tower (1 cable S of tower block).
Fort de Bouc (43°23′·7N, 4°59′·2E).

Directions for entering harbour

2.225

1 **Leading beacons**. From a position close W of Lavéra Light-buoy (2.174) the entrance is approached between the alignments (030° and 037°) of two sets of leading light-beacons.

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Leading light-beacons 030° alignment:
Front beacon (black rectangle with yellow stripe on red and white pylon, 11 m in height) (43°24′·2N, 4°59′·4E).

2 Rear beacon (white rectangle with yellow stripe, 11 m in height) (184 m from front).

Leading light-beacons 037° alignment:
Front beacon (white rectangle with red stripe on red pylon, 11 m in height) (43°24′·3N, 4°59′·7E).
Rear beacon (white rectangle with orange stripe on red pylon, 13 m in height) (167 m from front).

The alignments lead into the harbour entrance passing:
SE of Tasques Light-buoy (lateral) which marks Roches des Tasques, 1 cable SW of the harbour entrance.

3 During E winds mariners are advised to approach the harbour entrance using the 030° aligned leading light-beacons. With a *Mistral* blowing an approach using the 037° alignment is recommended. The latter leads 50 m S of the N side of the dredged channel. No vessel, however small, should pass N of Tasques Light-buoy. The entrance to Canal Caronte occupies the NE corner of the port.

Basins and berths

2.226

1 **Quai de La Lèque**, on the W side of the harbour, is not available to commercial vessels and the S part is reserved for pollution control and fire-fighting vessels. A distinctive circular tower, with radar and radio antennae above it, contains the Vessel Traffic Service control room and harbour offices and stands 1 cable SSW of Quai de La Lèque, see 2.224.

2 **Bassin d'entrée du Canal de Port-de-Bouc à Fos-sur-Mer** lies 3 cables NE of Quai de La Lèque.

Bassin Aubran, 1 cable E of Bassin d'entrée du Canal de Port-de-Bouc à Fos-sur-Mer has depths of 1·5 m to 3·0 m and is used by port service vessels, fishing vessels and motor barges up to 500 tons. The W entrance to Canal de Caronte lies S of the E end of this basin.

3 **Port Pétrolier de Lavéra** lies in the SE part of the harbour and consists of two basins. The NE basin provides 9 berths for liquified gas and chemical tankers. Berths F and G are 325 m in length with an alongside depth of 13·5 m, see 2.214. The SW basin is reserved for coasters and lighters and provides 8 berths.

Port services

2.227

1 **Repairs**. Minor repairs only. Marseille has comprehensive facilities.

Other facilities. Deratting, divers, oily waste disposal and tank washing. The port is equipped with marine fire fighting and pollution control vessels.

Supplies. Fresh water from shore connections. Fuel and provisions available.

2 **Communications**. The nearest airport is Marseille-Provence (28 km).

Small craft

2.228

1 **Port de La Lèque**, close N of the entrance to Port de Bouc, provides berths for port service vessels, tugs, fishing

Port Petrolier de Lavéra from SW (2.226)

(Original dated 1995)

(Photograph – SHOM)

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vessels and other small craft. There are no berths for visiting small craft.

2 **Port de Bouc yacht and fishing vessel harbour** occupies the NW corner of the port. The basin provides berths for 450 small craft up to 16 m in length and has depths of 3 to 5 m. The usual marina facilities are available.

2.229

1 **Small craft restrictions**. Sailing vessels and small, high speed, power driven boats are not permitted in the entrance channel NE of Tasques Light-buoy (2.225) or within Canal de Caronte (2.230). Small craft and fishing vessels are not permitted to use Canal de Port-de-Bouc à Fos-sur-Mer.

Canal de Caronte

Route

2.230

1 Canal de Caronte connects Port de Bouc (2.207) with Étang de Berre (2.242), 3 miles E. The section of the canal passing through Martigues (43°24′N, 5°03′E) is known as Passe de Jonquières (2.241).

Controlling depths

2.231

1 The W part of the canal, between Port de Bouc and the railway viaduct with swing bridge (2.233), is dredged to 10 m. East of the railway bridge the canal is dredged to 9 m.

Limiting dimensions

2.232

1 The maximum dimensions of vessels permitted to use the canal are:

Length	160 m
Beam	24 m
Draught	7 m
Masthead height	40 m

Bridges and overhead cables

2.233

1 **Viaduc de Caronte**, is a railway viaduct spanning the canal 1¼ miles E of Port de Bouc. The N section of the viaduct is a swing bridge. When the swing bridge is closed the viaduct has a vertical clearance of 21 m. The channel between the piers on which the swinging section rests is 40 m wide. See 2.236 and 2.237 for regulations and signals.

Viaduc routier de Martigues, 2 miles E of Port de Bouc**,** is a fixed single span road bridge with large pillars supporting the approach roads. The bridge has a vertical clearance of 44·6 m.

2 **Martigues bascule road bridge** crosses the E end of the canal. When closed the bridge has a vertical clearance of 5·8 m at the centre of its span, reducing to 4·4 m at 20 m either side of the centre. The width of the navigable channel beneath the bridge is 55 m. See 2.236 for regulations and 2.237 for signals.

Canal de Caronte from W (2.231)

(Original dated 1995)

(Photograph – SHOM)

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Overhead power cables span the canal 3 cables W and E of Viaduc routier de Martigues. Both have a safe vertical clearance of 40 m.

Pilotage

2.234

1 Pilotage is compulsory and available 24 hours a day for all vessels 50 m or greater in length. See 2.220 and the relevant *Admiralty List of Radio Signals* for details and procedure.

Movement reporting

2.235

1 Canal de Caronte lies within the Golf de Fos Vessel Traffic Service area, see 2.221 and the relevant *Admiralty List of Radio Signals*.

Traffic regulations

2.236

1 Permission to enter the canal is obtained from Fos Port Control. Navigation within the canal is made more difficult by wind and current and, because of the generally hazardous cargoes carried by vessels using the canal, mariners should note a number of important regulations.

2 Vessels greater than 6000 grt may use the canal E of Viaduc de Caronte during the day only; an exception can be made for vessels proceeding to Quai Verminck (2.240) close E of the rail bridge. The bridge can be opened at any time of day or night once agreement has been reached between the Harbour Master at Port de Bouc and French railways (S.N.C.F.). Mariners navigating vessels which need Viaduc de Caronte opened must confirm the bridge is open before proceeding closer than 3600 m from it. Vessels can communicate directly with railway staff responsible for the bridge using VHF. The bridge will not be opened at night for vessels of 6000 grt or greater or whenever there are strong winds (85 km/hour).

3 Within the canal large commercial vessels have right of way over all types of smaller vessels. Sailing vessels and power driven small craft are not permitted within the canal.

Crossing or passing at Viaduc de Caronte is prohibited. The vessel for which the bridge has been opened has right of way. Similarly in the vicinity of Martigues road bridge, at the E end of the canal, the vessel leaving Canal de Caronte will have right of way.

4 Berthing beneath Viaduc de Caronte and within Passe de Jonquières (2.230) is prohibited.

Mariners needing Martigues road bridge open should initially instruct their ship's agent to liaise with the Harbour Master's office at Port de Bouc. In more urgent cases arrangements can be made using VHF; see 2.237 for signals used by the bridge and vessels passing through it. The bridge will not be opened in strong winds (80 km/hour) for vessels greater than 3000 grt in ballast. The bridge is also closed at the following times;

0545–0600	1100–1240
0645–0715	1310–1400
0745–0830	1730–1900

5 Mariners navigating vessels of 3500 tons, or greater, requiring the bridge open between 2000 and 0600 must make their request before 1700.

Navigation within the canal can be suspended in poor visibility.

Traffic signals

2.237

1 **Signals at Viaduc de Caronte**;

Day	*Night*	*Meaning*
		The bridge is opening or closing
	Red lights in a cross formation	The bridge will not open
		The bridge is closed
		The bridge is open

2 Vessels are to use the following signals when approaching Viaduc de Caronte;

Day	*Night*	*Meaning*
		I intend passing through the bridge
	Single Green light extingushed	I am delaying my passage through the bridge

3 **Signals at Martigues bascule road bridge**;

To vessels needing the bridge open for passage

Signal	*Meaning*
	The bridge is open - proceed through the bridge.
(Flashing or Fixed)	The passage is closed. A fixed light indicates to a vessel on the E side that it must wait for a vessel on the W side to pass through the bridge.

To all vessels

Signal	*Meaning*
	The passage is closed - the bridge is opening/closing

To vessels not needing the bridge open for passage

Signal	*Meaning*
	Proceed under the bridge.
	The passage is closed

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Prohibited anchorages

2.238

1 There are a number of prohibited anchorage areas within Canal de Caronte:

Viaduc de Caronte, an area containing gas and oil pipelines between 160 m W and 10 m E of the bridge.

Pointe Sainte-Laurent (43°24′·2N, 5°02′·5E), a water pipeline and cables.

Martigues bascule road bridge, an area 920 m W of the bridge contains a water pipeline.

Within 50 m of notices (Interdiction de Mouiller) displayed along the N bank of the canal.

Natural conditions

2.239

1 Currents in the canal are mostly tidal but can be affected by the discharge of water from the hydro-electric power station at Saint Chamas, in the NW part of Étang de Berre, and by weather conditions (2.215). Rates of between 3 and 4 kn can be attained.

Basins and berths

2.240

1 **Turning Basin**. There is a turning basin 1 mile W of Port de Bouc, 130 m in width, 400 m in length.

Berths. The N side of the canal has three main quays:

Quai des Établissments Kulhmann lies close E of Bassin Aubran (2.226) and is reserved for ferries.

Quai de l'Établissment Maritme de Caronte, W of Viaduc de Caronte. The quay is used mainly for bulk mineral handling.

2 **Quai Verminck**, close E of Viaduc de Caronte.

The S side of the canal is under development for bulk chemical cargo handling to serve nearby industry.

Small craft

2.241

1 **Port de Martigues** (43°24′N, 5°03′E). The town stands at the E end of Canal de Caronte and is formed around Île de Brescon. Where Canal de Caronte passes S of the island it is known as Passe de Jonquières. To the N of the island is Bassin de Ferrières which containes 350 small craft pontoon berths and a quay for fishing vessels. The basin has depths of 1 to 4 m. The basin offers the usual marina facilities. Access to the small craft harbour via the channel leading from Étang de Berre is limited to vessels with a maximum masthead height of 2 m. The usual access is via Canal de Caronte. The port has a radio station see relevant *Admiralty List of Radio Signals*. There is a lifeboat stationed here.

2 **Port de Jonquières** (43°24′·3N, 5°03′·7E) lies within Étang de Berre, close S of the mouth of Canal de Caronte, and within the breakwater of Canal de Marseille au Rhône which leads along the S shore of the lagoon. The harbour was once an important inland waterways port. Port de Jonquières provides berths for 368 small craft in a depth of 2 m. The usual marina facilities are available. The harbour is sheltered from the NE and protected from the *Mistral* by the breakwater.

Étang de Berre

General information

2.242

1 **Routes**. The routes from the E end of the dredged channel leading from Canal de Caronte (2.230) to harbours associated with oil refineries at Berre (43°29′N, 5°10′E) and La Mède (43°24′N, 5°06′E) are self evident and not described in detail.

2.243

1 **Topography**. Étang de Berre is a large lagoon which lies NE of Port de Bouc and inland from Chaîne de l'Estaque, a range of hills extending E from Golfe de Fos to Golfe de Marseille. A number of rivers and streams flow into it and deposits transported by them are estimated to reduce the depth by 1 m every 60 years. Generally the W side of Étang de Berre is hilly whereas the E is flat. The shore of the lagoon is indented by a number of large bays, some of which provide good anchorage. The NE part of the lagoon, E of Berre, is known as Étang de Vaine. A shallow bar extends SE from Berre separating the two lagoons. Le Jai, a narrow strip of sand, forms the SE shore of Étang de Berre and separates it from Étang de Bolmon.

2 Canal du Marseille au Rhône can be entered close E of Martigues and follows the S shore of the lagoon passing through Le Jai and continuing along the S shore of Étang de Bolmon. The canal is blocked indefinitely by the collapse of Tunnel du Rove 8 miles E of Martigues.

2.244

1 **Controlling depths**. The channel leading from Canal de Caronte into Étang de Berre is dredged to 9 m. The lagoon has depths of 5 to 9 m over much of its area and shoals rapidly within 3 cables of the shore.

Passe de Marignane, the narrow channel which leads from Étang de Berre to Étang de Vaine, has a least depth of 2·3 m.

Étang de Vaine has depths of less than 5 m.

Canal du Marseille au Rhône is dredged to 3 m.

2.245

1 **Maximum permitted draught** within Étang de Berre is 7·3 m.

2.246

1 **Prohibited area**. A prohibited area surrounds the runway of Marseille-Provence Airport which projects into the SE part of Étang de Vaine. The area also encloses the Marignane-Berre seaplane operating area, close NE of the runway, and is shown on the chart. A restricted area, also shown on the chart, extends generally N from the prohibited area. Vessels may transit the restricted area, providing they do not obstruct aircraft. Vessels are not permitted to remain or anchor within the area.

2.247

1 **Prohibited anchorages**. Anchoring is prohibited in an area on the NW side of Étang de Vaine which contains a number of pipelines.

Within Étang de Berre anchoring is prohibited in the vicinity of pipelines. The main prohibited area lies E of a line joining a position 5 cables SE of Point de Berre (43°27′·5N, 5°8′·5E) and Pointe de la Mède (43°24′·3N, 5°07′·2E). There is also a prohibited area W of Pointe de Berre. The areas are shown on the chart.

2.248

1 **Seaweed**. The seabed throughout Étang de Berre provides good holding ground but is covered by thick weed. Generally heavy anchors remain effective. Vessels navigating

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in depths of less than 8 m could have their propellers fouled by weed.

2.249

1 **Tidal streams**. Tidal streams are only apparent in the immediate vicinity of the entrance to Canal de Caronte. The in-going tidal stream sets N along the W shore of Étang de Berre, the out-going stream sets S.

2.250

1 **Currents**. Within the lagoon currents are generally weak, induced by the wind and the discharge from the hydro-electric power station at Saint Chamas, see 2.239.

2.251

1 **Local weather**. In summer the prevailing winds are S or SW, with the latter often accompanied by rain. In winter NW gales on the coast become N or NNE over the lagoon and blow very hard, raising a short, steep sea. Strong winds between NW and NE create difficult conditions for small vessels. In spring W and NW winds prevail, often accompanied by squalls.

2.252

1 **Water level**. The water level within the lagoon rises between 0·2 m and 0·4 m above the mean level during October-December, falling about the same amount below it during February.

Directions for Étang de Berre entrance channel

2.253

1 From Martigues bascule road bridge (43°24′·3N, 5°03′·5E) a channel, 50 m in width and dredged to 9 m, leads ENE for 2 miles into Étang de Berre passing:

Between No 1 Light-buoy (lateral, starboard hand) and No 2 Light-buoy (lateral, port hand), thence:

N of the breakwater protecting Canal de Marseille au Rhône, thence:

2 S of No 4 Light-buoy (lateral, port hand), thence:

Between No 3 Light-buoy (lateral, starboard hand) and No 6 Light-buoy (lateral, port hand).

The dredged channel, unmarked beyond Light-buoys No 3 and 6, continues on a bearing of 080° for a further 1¼ miles passing:

N of Port Pétrolier de la Mède detached mole (43°24′·2N, 5°5′·7E), to a position 7 cables NW of Les Trois Frères Light (2.254).

2.254

1 **Useful marks:**

Port Pétrolier de la Mède (43°24′·2N, 5°05′·7E).

Water tower (43°24′N, 5°06′E).

Les Trois Frères Light (white tower, green top, 2 m in height) (43°24′N, 5°07′E).

Port Pétrolier de la Pointe de Berre Jetty Head Light (white pylon, red lantern, 10 m in height) (43°27′·6N, 5°08′·6E).

Port Pétrolier de la Mède

2.255

1 **General information**. Port Pétrolier de la Mède (43°24′N, 5°06′E) lies 1½ miles E of Martigues. The port consists of a basin within Canal du Marseille au Rhône, a jetty extending 100 m NNW into the lagoon from the N side of the breakwater separating the canal from Étang de Berre and a detached mole providing offshore berths for tankers. There are also berths at mooring buoys.

2 **Pilotage** is compulsory see 2.220 and 2.221.

Berths. The detached mole is 50 m in length and provides two berths in a depth of 9 m. A jetty extends 100 m NNW from Canal du Marseille au Rhône breakwater and can accept vessels with a maximum draught of 5·1 m. Mariners should avoid passing between the jetty head and the detached mole due to obstructions.

3 **Facilities**. There are facilities for receiving oily waste at the jetty and within the basin.

Port Pétrolier de la Pointe de Berre

2.256

1 **General information**. Port Pétrolier de la Pointe de Berre (43°28′N, 5°09′E), 1 mile NW of Pointe de Berre, provides berths for tankers with a maximum draught of 7 m servicing the nearby refinery. The berths are protected from the NW by a mole 170 m in length; a light is exhibited from its head.

2 **Pilotage and tugs**. Pilotage is compulsory for all vessels 50 m or greater in length see 2.220 and 2.221. Tugs are available from Port de Bouc.

Port Petrolier de la Point de Berre from SW (2.256)

(Original dated 1999)

(Photograph – SHOM)

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Directions. The port is approached from SSW through a channel dredged to 8 m, marked by light-buoy (lateral).

Berths. There are three tanker berths and a jetty for smaller vessels with a maximum draught of 5 m.

Other facilities. There are facilities to handle oily waste.

Minor harbours and anchorages

French Chart 6907

2.257

1 **Baie Saint-Chamas anchorage** (43°32′N, 5°02′E). Good anchorage may be obtained within the bay. Mariners should beware of the dangerous bank formed off the E side of the entrance to the bay by deposit from a river.

Small craft

2.258

1 **Anse du Ranquet**. A small craft harbour and landing place 4½ miles NNW of Martigues. The haven is sheltered from the S.

2.259

1 **Port des Heures Claires** (43°29′·9N, 5°01′·9E). A yacht harbour developed from the origninal fishing harbour. The haven, consisting of two basins, is formed by two breakwaters extending from a quay. A light is exhibited from the head of the E breakwater. The harbour is well protected from the NW *Mistral* by a wooded cliff 60 to 80 m in height. There are berths for 280 small craft with the usual marina facilities. The town of Istres-Saint Martin lies 1 mile NNW of the harbour.

2 **Port de Saint-Chamas** (43°32′·8N, 5°01′·9E) The original port consists of a rectangular basin on the E side of Baie de Saint Chamas. The port is approached through a short channel 80 m in length with depths of 1 m. The basin is reserved for fishing vessels. South of the basin a marina provides pontoon berths for 260 small craft. The S end of the marina is protected by a detached breakwater, from which a light is exhibited, and forms the S side of the entrance.

2.260

1 **Le Canet, Port de Beau Rivage** (43°31′·6N, 5°04′·8E). A small private harbour, formed by breakwaters, which offers shelter from the discharge from the hydro-electric powerstation. The harbour has berths for 120 small craft.

2.261

1 **La Sagnas ou port-abri de Merveille** (43°30′·9N, 5°07′·1E). A small fishing haven with berths for 60 small craft.

2.262

1 **Berre-l'Étang** (43°28′·3N, 5°10′·2E). A small craft haven close to Berre. The harbour consists of a single basin formed by a breakwater. A light is exhibited from the breakwater. The entrance has a depth of 1m. Limited small craft facilities.

Le Jaï Marignane (43°26′·3N, 5°11′·8E) A small craft haven at the NE end of Le Jaï (2.243) reserved for fishing vessels. There is a yacht club close to it.

CAP COURONNE TO CAP CROISETTE

General information

Charts 2164, 153

Routes

2.263

1 Ocean routes between the Marseille-Fos complex and the Bonafacio Strait (6.175) or S of Sardegna (9.177) commence approximately 10 miles S of Cap Couronne.

The offshore route leads ESE from a position S of Port de Fos Approach Omega Light-buoy (43°12′N, 5°02′E) to a position S of Cap Croisette (43°13′N, 5°21′E). The route remains to seaward of the 100 m depth contour, clear of the islands and dangers which lie S of Rade de Marseille (43°19′N, 5°18′E).

2 A coastal route leads E from a position S of Cap Couronne (43°19′N, 5°03′E) to Rade de Marseille. There are inshore routes between the islands and dangers which lie S of Rade de Marseille.

Topography

2.264

1 Golfe de Marseille lies between Cap Couronne (43°19′N, 5°03′E) and Cap Croisette (43°13′N, 5°20′E). The shore is generally rugged and rocky with high precipitous headlands; the coast is free from dangers to seaward of the 10 m depth contour. East of Cap Couronne several small islands lie close off the coast. The city and port of Marseille lie at the head of the bay between 4 and 9 miles N of Cap Croisette. A group of islands, Îles du Frioul, divides the E part of Golfe de Marseille into Rade de Marseille and Rade d'Endoume.

Marine reserves

2.265

1 There are marine reserves S of Cap Couronne and SE of Carry-le-Rouet (43°19′N, 5°10′E), the areas are shown on the charts. Fishing, dredging and anchoring within these areas is prohibited. The islands, islets and rocks in the vicinity of Cap Croisette (43°13′N, 5°20′E) form the Riou Archipelago Nature Reserve; details of the reserve must be obtained from the local authorities.

Fishing activity

2.266

1 There are a large number of fishing ports along this part of the coast to the W and S of Marseille.

Submarine cables and pipelines

2.267

1 A number of trans-Mediterranean submarine telephone cables land between Cap Couronne and Île Aragnon, 1¼ miles E, and in the vicinity of Prado (43°16′N, 5°22′E). There is also an area containing submarine cables and pipelines between Îles du Frioul and Pointe d'Endoume, 2 miles NW of Prado. Anchoring is prohibited within these area, which are shown on the charts.

Pilotage

2.268

1 Pilotage is compulsory and available 24 hours a day for vessels 50 m in length or greater carrying dangerous cargoes and all other vessels, 70 m or greater in length, navigating inshore of a line connecting Cap Méjean (43°19′·8N, 5°13′·2E), Cap Caveaux (43°15′·7N, 5°17′·4E) and Île Maire (43°12′·7N, 5°20′·0E) see the relevant *Admiralty List of Radio Signals* for details and procedure.

Traffic regulations

2.269

1 The Port of Marseille operates a Vessel Traffic Service which is compulsory for all commercial vessels. The service covers the port area of Marseille and the channels providing access to it, see relevant *Admiralty List of Radio Signals* for details and procedure.

Prohibited anchorages

2.270

1 See 2.267.

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Natural conditions

2.271

1 **Current** is irregular in this area. Strong winds can produce a noticeable effect close inshore.

Local weather

2.272

1 Fair weather is generally associated with NW winds whereas reduced visibility and rain often accompany an E wind. During the summer mist or fog, extending perhaps 2 miles offshore, may develop at dawn but will usually disperse by midday.

Principal marks

2.273

1 **Landmarks**:

Cap Couronne Lighthouse (2.147) (43°20′N, 5°03′E).

Château Gabriel, with a tower at one corner (43°20′N, 5°06′E).

Radio mast (43°23′N, 5°19′E) 337 m high.

Pilon du Roi (43°24′N, 5°28′E) 679 m high, resembles a thumb or truncated cone.

2 Mount Etoile TV Mast (43°24′N, 5°26′E) 652 m high, exhibits red obstruction lights.

Montagne de Marseilleveyere (43°13′N, 5°22′E) 432 m high, lies close E of Cap Croisette and is easily identified.

Île de Planier Lighthouse (white tower, 66 m in height) (43°12′N, 5°14′E).

Major lights:

Cap Couronne Light (see above).

Île de Planier Light (see above).

Directions for the offshore route

(continued from 2.150)

2.274

1 From a position S of Golfe de Fos Approach Channel Omega Light-buoy (43°12′N, 5°02′E) the offshore track leads E passing:

S of Cap Couronne (43°19′N, 5°03′E) to a position at the outer end of Port de Marseille Approach Channel approximately 3 miles WSW of Île de Planier (43°12′N, 5°14′E).

The offshore route now leads ESE passing:

SW of Île de Planier, thence:

S of Cap Croisette (43°13′N, 5°20′E).

(Directions continue at 2.336)

Directions for the coastal route

2.275

1 From a position S of Cap Couronne (43°19′N, 5°03′E) the coastal track leads E passing, with positions relative to Cap Couronne Light:

S of Château Gabriel (2¼ miles ENE), which stands close W of Sausset-les-pins, thence:

S of Carry-le-Rouet (4¼ miles ENE), a conspicuous tower block stands on the N side of the harbour, thence:

2 S of Le Redonne (6¼ miles ENE), which can be identified by the six-arched railway viaduct close N, thence:

S of Cap Méjean (7¼ miles E), which has a rounded, reddish summit. This headland marks the NW side of the entrance to Rade de Marseille.

(Directions for Marseille are given at 2.305)

Anchorages and small craft harbours

Port de Sausset-Les-Pins

2.276

1 **General information**. Port de Sausset-Les-Pins (43°20′N, 5°06′E) is a yacht and fishing vessel harbour with depths of 1·5 to 3 m. Vessels up to 12 m in length are accepted. Limited VHF watch see relevant *Admiralty List of Radio Signals* for details.

2 **Directions**. The harbour is entered between two breakwaters. A light is exhibited from the head of the W breakwater. Château Gabriel (2.273) provides a useful headmark when approaching the harbour. The entrance can be dangerous in a high sea state from the SE or SW.

Berths. The harbour has 500 berths at pontoons. The NW basin is reserved for fishing vessels.

Facilities. Usual marina facilities.

Port de Carry-le-Rouet anchorage

2.277

1 Anchorage can be obtained by coasters or medium sized vessels 5 cables SSW of Port de Carry-le-Rouet in depths 10 to 33 m, weed. Although the anchorage provides good shelter from NW winds mariners should avoid the rocky Plaine de Carry, shown on the chart, and the prohibited area close NE of it. Mariners will find that remaining N of the alignment (076°) of Cap Méjean (2.275) and Rocher du Moulon, 1 mile ENE it will clear Plaine de Carry. At night Cap Couronne Light (2.273) bearing between 271° and 278° may be used to gain the anchorage.

Port de Carry-le-Rouet

2.278

1 **General information**. Port de Carry-le-Rouet (43°20′N, 5°09′E), a yacht and fishing harbour protected by two breakwaters. The harbour can accept vessels of 2·8 m draught and 15 m length. Limited VHF watch see relevant *Admiralty List of Radio Signals* for details.

2 **Directions**. The harbour is approached E of Pointe du Mouton, a wooded headland from which a bare, rocky point extends into the sea. Pain du Sucre Light (white beacon, red top, 5 m in height) stands near the seaward end. A conspicuous 15 storey tower block is a useful headmark when approaching the harbour. A light (green mast), exhibited from the head of the E breakwater, can be used as a headmark (330°) to approach the entrance. Mariners should remain clear of the E side of Pointe du Mouton which is encumbered by shoals and rocks. A light-buoy (starboard hand) marks l'Esteo, a rocky bank extending from the E side of the bay.

3 **Berths**, 480 at pontoons. Berths at a quay extending from the N side of the harbour are reserved for fishing vessels.

Facilities. Usual marina facilities.

Port du Rouet

2.279

1 Port de Rouet, a small craft haven, lies 1 mile E of Port de Carry-le-Rouet (2.278). The harbour is formed by two breakwaters enclosing a small basin. The harbour entrance faces NE. Quays line the breakwaters and W side of the harbour providing small craft berths in a depth of 1 m. The harbour is well protected from the *Mistral* but exposed to strong S or SE winds. Limited small craft facilities.

Port de Gignac and Port de la Redonne

2.280

1 The yacht harbours of Port de Gignac and Port de la Redonne (43°20′N, 5°12′E) have been created within two coves occupying respectively the SW and N parts of the

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same inlet. Gignac is only accessible to boats. La Redonne offers alongside berths with depths of 0·8 m to 1 m and anchor berths in depths of 4·5 m to 6·0 m. There are limited small craft facilities.

Port de Méjean
2.281

1 Port de Méjean (43°20′N, 5°13′E) lies on the E side of Baie de la Figuières, entered between Pointe de la Loude and the W side of Cap Méjean (2.275). A railway viaduct stands at the head of the inlet. The harbour is suitable for boats and fishing vessels only and is being developed by the local sailing club. The haven is sheltered from all directions except S and strong S winds can make the entrance dangerous.

Port de Niolon
2.282

1 Port de Niolon lies 1¾ miles ENE of Port de Méjean. The boat harbour is being developed by the Conseil Général des Bouches-du-Rhône.

Port de la Corbière
2.283

1 Port de la Corbière (43°21′·5N, 5°17′·5E). A small harbour protected by a breakwater has depths of 8 to 9 m. The bottom is rocky. A sailing school operates in the harbour.

PORT DE MARSEILLE AND APPROACHES

General information

Charts 151, 153

Position
2.284

1 Port de Marseille (43°20′N, 5°20′E) occupies the NE part of Golfe de Marseille (2.264).

Function
2.285

1 The principal seaport of France handling dry and liquid bulk cargoes, container traffic, fruit, vegetables and other produce, general cargo, ferry and cruise traffic. Marseille is an important international port and industrial centre and has comprehensive ship repair facilities.

Topography
2.286

1 The port has developed NW from the old natural harbour of Port-Vieux in the SE corner of Rade de Marseille (2.287). Pointe de Mourepaine (43°21′·3N, 5°19′·8E), a cliff, marks the N end of the port and can be distinguished by the disused lighthouse standing on it.

2 The city of Marseille rises gradually from the port towards the surrounding mountains however the S part of the city is dominated by a hill which rises steeply from the surrounding area. The Church of Notre Dame de la Garde (2.304), stands on top of it.

Approach and entry
2.287

1 Port de Marseille can be approached through Rade de Marseille, which lies between Cap Méjean (43°20′N, 5°13′E) and Cap Caveaux (43°16′N, 5°17′E), the W end of Île Pomègues. Alternatively the port can be approached using the more difficult channel leading through Rade d'Endoume, which lies between between Cap Caveaux and Cap Croisette (43°13′N, 5°21′E). The port is entered through Passe Nord (43°21′N, 5°19′E) or Passe Sud (43°18′N, 5°21′E).

Traffic
2.288

In 2000 the port handled 4184 vessels representing a total of 32 212 965 dwt.

Port Authority
2.289

1 Direction du Port Autonome de Marseille, 23 Place de la Joliette, Marseille.

Limiting conditions

Controlling depths
2.290

1 Passe Nord, the maximum draught accepted is 15 m.
Passe Sud, the maximum draught accepted is 8·7 m.

Deepest and longest berth
2.291

1 Môle Lèon Gourret (43°20′·5N, 5°20′·0E), 5 cables in length with depths alongside of 11·9 to 14·5 m.

Abnormal water levels
2.292

1 Strong onshore winds and high sea states can rapidly change the sea level within the port by as much as 0·2 m. Often this will be accompanied by currents within the entrances.

Maximum size of vessel handled
2.293

1 The maximum draught accepted is 15 m. Vessels of up to 800 000 tons are accepted at the repair yards.

Local weather
2.294

1 The *Mistral* has the most significant effect and can make navigation within the port very difficult, although cargo handling is seldom stopped. Vessels greater than 130 m in length may find Passe Sud difficult in NW or SE winds.

Arrival information

Port operations
2.295

1 The port operates 24 hours a day.

Port radio
2.296

1 There is a port radio station remotely controlled from Brest-Le Conquet, see relevant *Admiralty List of Radio Signals* for details.

Notice of ETA required
2.297

1 Vessels carrying hydrocarbons or other dangerous cargoes are subject to mandatory SURNAV movement reporting, see also 2.5 and the relevant *Admiralty List of Radio Signals*.
All vessels bound for Marseille should send ETA reports 48 hours and 24 hours before arrival.

Outer anchorages
2.298

1 **Prohibited anchorages**. See 2.267. Mariners should also note that the use of anchors in the port entrances and between basins is prohibited because of underwater cables.
L'Estaque. Anchorage may be obtained off Port de la Corbière (43°21′·5N, 5°17′·5E) in depths of 15 to 30 m,

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sand and weed. The holding ground is good and the anchorage provides good shelter from N winds. Although exposed to the SW it has been reported that the wind can be less here than at sea.

2 **Marseille-Nord**. The anchorage occupies the N part of Rade de Marseille with depths of 10 to 65 m, mud, sand shell and some areas of weed. The S limit is the latitude of Cap Méjean. The anchorage area is shown on the chart.

Marseille-Sainte-Marie The anchorage lies off the S part of Digue du Large and Digue Sainte-Marie. The area is shown on the chart. Depths are between 10 and 41 m, mud. Inshore of the 20 m depth contour there are areas of gravel and rock. Mariners should also note the wreck with a depth 27·5 m over it in the centre of the anchorage.

3 **Marseille-Sud**, also known as Endoume, is shown on the chart and occupies the N part of Rade d'Endoume (2.287).

The anchorage has depths of 10 to 26 m, sand, weed and scattered rocks. Mariners should also note the proximity of prohibited areas.

Pilotage and tugs

2.299

1 **Pilotage** is compulsory inshore of a line connecting Cap Méjean (43°20′N, 5°13′E), Cap Caveaux and and Île Maire (43°12′·9N, 5°19′·7E) for vessels 50 m or greater in length carrying hydrocarbons or other dangerous cargoes and for all other vessels over 70 m in length. The pilot will board at least 2 miles to seaward of Passe Nord or 1 mile S of Île d'If (43°16′·8N, 5°19′·6E) for vessels entering via Passe Sud, see relevant *Admiralty List of Radio Signals* for details and procedures.

Tugs are available.

Regulations

2.300

1 **Entry regulations**. Any vessel carrying hydrocarbons or other dangerous cargo must use the approach channel which is shown on the chart. Vessels over 1600 grt are not to cross the S limit of the approach channel (43°12′N) unless authorised by Marseille Port Control.

2 A compulsory Vessel Traffic Service for all commercial vessels covers the channels providing access to and the Port of Marseille. All movements within this area are controlled by Marseille Port Control. Mariners should note that the Port Control will direct vessels to use a particular entrance according to the berth allocated and the draught of the vessel. See relevant *Admiralty List of Radio Signals* for details and procedures.

3 **Port regulations.** Rade de Marseille is divided into two regulated areas, shown on the chart. Sailing and power driven vessels can only enter these areas if entering or leaving the port or anchorages. Within these areas power driven vessels 50 m in length or greater and warships have right of way. Swimming, underwater activities and beach pleasure craft are prohibited.

Mariners should obtain details of other regulations affecting these areas from the pilotage service.

Harbour

General layout

2.301

1 The harbour consists of seven basins which open SW and occupy the E side of Rade de Marseille. A continuous breakwater protects them from the open sea and creates a connecting passage. The entrances, at the N and S ends of the breakwater, have associated basins which are effectively outer harbours to the main complex. The original natural harbour lies close E of the S entrance.

Seaplane operating area

2.302

1 Rade de Marseille is used by seaplanes to collect seawater for fighting forest fires.

Traffic signals

2.303

1 **Access**. International traffic signals are displayed from Sainte-Marie Lookout, 2 cables NE of the S entrance. Signals are displayed for all movements at this entrance.

2 **Within the port**. Bassin de la Pinède and Bassin National are joined by Passe de la Pinède, spanned by a bascule bridge which lifts in two parts. Further S Bassin d'Arenc and Bassin Grande Joliette are separated by a swing bridge spanning the channel SW of Traverse d'Arenc. Light signals are displayed from the E of Pinède bridge and a pylon at the swing bridge. The following signals are used at both;

To vessels needing the bridge open for passage

Signal	*Meaning*
●	Bridge closed
● ●	Bridge closed but a request to open has been recieved. The bridge will open at that time
●	The bridge is opening or closing.
●	Bridge open
● ●	The bridge will close in 5 minutes time

Pinède Bridge – traffic signals (2.303)

Principal marks

2.304

1 **Landmarks**:

Cathedral, stands on a terrace (43°18′N, 5°22′E).

Church of Notre Dame de la Garde, stands on the summit of a hill 158 m high 1 mile SSE of the cathedral. The church has a dome on which stands a statue; the top is 210 m high.

Directions for entering harbour

Approaches

2.305

1 **For vessels carrying dangerous cargoes**. From a position 3 miles W of Île de Planier (43°12′N, 5°14′E) the approach channel for vessels carrying dangerous cargoes leads N for 4 miles before turning NE towards Rade de Marseille. The channel continues NE passing:

NW of Îles du Frioul (43°17′N, 5°18′E), the group of rocky, barren islands marking the S side of Rade de Marseille, thence:

2 SE of Cap Méjean (43°20′N, 5°13′E), thence:

SE of Île de l'Erevine, (43°20′N, 5°14′E) a rocky island marked by a light, thence:

SE of Batterie haute de Niolon (43°20′N, 5°15′E), an old fortification on top of the cliffs.

The approach channel ends at the S limit of Marseille-Nord anchorage (2.298), in the vicinity of the pilot

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boarding position, approximately 2 miles SW of the N entrance to the port.

2.306

1 **From the SW**. From a position W of Île de Planier (43°12′N, 5°14′E)) the track leads generally NE towards Îles du Frioul. Mariners entering the port via the N entrance should adjust course NNE to pass NW of the islands and proceed to the pilot boarding position, 1½ miles E of Île de l'Erevine, (43°20′N, 5°14′E).

2 The approach to the S entrance can be made via the more difficult passage E of Îles du Frioul, which has a controlling depth of 21·5 m. From a position W of Île de Planier the track leads NE, passing, with positions relative to Île de Planier Light (43°12′N, 5°14′E):

N of Île de Planier, thence:

N of Le Veyron, a shoal with a depth of 13·5 m over it, (1 mile NE), thence:

3 S of Cap Caveaux, the S point of Île Pomègues (4¼ miles NE) to the pilot boarding position 1½ miles E of Cap Caveaux.

The track then leads NNE passing:

E of Île Pomègues, thence:

E of Port du Frioul, the man-made harbour between the N end of Île Pomègues and Île Ratonneau.

4 The channel providing access to Rade de Marseille lies close E of Île d'If, a fortified island 5 cables E of Port du Frioul. However the channel is narrowed considerably by dangers extending W from Pointe d'Endoume, which lies a further 8 cables ENE.

From a position E of the entrance to Port du Frioul the track leads 1½ cables E of Île d'If. The E end of the island is marked by a light (white tower, red top, 17 m in height) and several large rocks (Rocher Mourgon) extend a short distance E from it. This track follows the deepest part of the channel passing, with positions relative to Pointe d'Endoume (43°17′N, 5°21′E):

W of Roches Tarantan (5 cables WSW), a rocky patch with a depth of 8·5 m over it, thence:

5 E of Île d'If, (8 cables WSW), where the channel is narrowest, thence:

W of of a bank (3 cables WNW) with a depth of 1·2 m over it. The SW end of the bank is marked by Banc des Sourdaras light-beacon (W cardinal), the NE end by Canoubier beacon (unlit, N cardinal), thence:

E of Le Fromage (7 cables WNW), a spit with a depth of 16·5 m over it.

6 Once clear of Le Fromage the track leads NE towards the S entrance passing;

NW of the seaward end of Digue des Catalans, 5 cables N of Pointe d'Endoume, from which a light is exhibited.

2.307

1 **From the S**. From a position 3 miles E of Île de Planier (43°12′N, 5°14′E)) the track leads NNE passing:

W of Île Tiboulen, (43°13′N, 5°20′E), from which a light is exhibited (white column, dark green top, 4 m in height), thence:

E of Cap Caveaux (43°16′N, 5°18′E).

Directions for the channel N of this point are provided above for the approach from the SW (2.306).

Entrance channels

2.308

1 **Passe Nord** is entered between the SE end of Digue de Saumaty (43°21′·0N, 5°19′·3E), from which a light is exhibited (white tower, red top, 8 m high), and the N end of Digue du Large, also marked with a light (white tripod, green top, 12 m high), which lies 1 cable SW.

2 **Passe Sud** is entered between Digue Sainte-Marie (43°17′·9N, 5°21′·2E) from which a light is exhibited (white and red pylon, 20 m high) and, 1½ cables SE, Pointe de la Désirade, also marked by a light (white tower, green lantern, 15 m high). This entrance can be difficult see 2.294.

Basins and berths

Alongside berths

2.309

1 The port's seven basins and the inside face of Digue du Large provide a total of 139 berths, of which 23 are Ro-Ro berths. The ship repair yard and container terminal, at the N end of the port, are capable of handling the largest vessels. Berths capable of handling most types of specialised cargo are available.

Port services

Repairs

2.310

1 Comprehensive repair facilities are available. Dry dock No 10 at the N end of the port accepts ships up to 800 000 dwt.

Facilities

2.311

1 The usual facilities of a major international port and large city are available including deratting, hospitals, oily waste reception and salvage vessels.

Supplies

2.312

1 Water is available from shore connections at all quays. Fuel is readily available at fuelling berths or by lighter. All types of provisions are available.

Communications

2.313

1 Marseille-Marignane Airport, NW of Marseille, provides international and domestic services.

Rescue

2.314

1 There is a lifeboat stationed here.

Small craft

Ports de l'Estaque

2.315

1 **General information**. Ports de l'Estaque (43°21′N, 5°18′E) occupy the N and NE part of Anse de l'Estaque providing marina berths for small craft in four basins and berths for fishing vessels within Darse de Saumaty at the SE end of the complex. The basins are protected from the open

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sea by a series of breakwaters originally constructed to protect Canal de Marseille au Rhône. The canal leads generally W from l'Estaque to Port de la Lave and the entrance to Tunnel du Rove see 2.243. Port de la Lave has quays with depths alongside of 3·3 to 3·8 m

2 **Directions**. Gaps between the breakwaters provide access to the basins. The ends of the breakwaters are marked by lights and beacons.

Berths. The small craft basins provide 1500 berths. Darse de Saumaty can accept fishing vessels with a maximum draught of 3·5 m.

Facilities. Usual marina facilities. VHF watch, see relevant *Admiralty List of Radio Signals*.

Vieux-Port

2.316

1 **General information**. Vieux-Port (43°18′N, 5°22′E) is the original natural harbour of Marseille. It now lies to the E of the S entrance of the commercial port and is used by yachts, fishing vessels and port services vessels. Mariners using this harbour should note the traffic signals for Port de Marseille displayed from Sainte-Marie lookout, see 2.303. There is a 4 kn speed limit within Vieux-Port. Mariners are to obtain authority to enter or leave the harbour from the Harbour Master.

2 **Directions**. The entrance lies in the SE corner of Avant Port Joliette, between Fort Saint-Jean and Fort Saint-Nicholas. The entrance channel has depths of 6·0 to 7·5 m 20 m either side of its centre-line, reducing to 4 m on the N side and 2·7 m on the S.

Berths, 3200 mainly at pontoons. Vessels with a maximum draught of 6 m are accepted.

3 **Facilities**. Comprehensive small craft facilities, including repairs at Port de la Réserve on the S side of the entrance to the harbour. VHF watch maintained, see relevant *Admiralty List of Radio Signals*.

Port-abri du Vallon des Auffes

2.317

1 A boat harbour at the head of Anse des Auffes (43°17′N, 5°21′E) reached by passing beneath the support for the coast road. It has a depth of 2 m.

Port du Frioul

2.318

1 **General information**. Port du Frioul (43°17′N, 5°19′E) is an artificial harbour between the islands Pomègues and Ratonneau. A causeway, Quai Berry, linking the islands forms the W side of the harbour. A breakwater extends SSW from Île Ratonneau and protects the E side. The head of the breakwater, from which a light is exhibited, forms the N side of the harbour entrance. The *Mistral* is deflected by adjacent land producing a W wind through the entrance. The NE corner of the harbour is reserved for French naval vessels and contains a pilot station for Port de Marseille.

2 **Directions**. If approaching from the NE mariners should beware of Basse Sainte-Estève, a shoal with a depth of 2·5 m over it, which lies 3½ cables NE of the entrance. A light-buoy (cardinal) is moored 1 cable S of it. Mariners should also note that anchoring in the vicinity of the harbour is prohibited see 2.267.

Berths. There are pontoon berths and Mediterranean moorings along Quai Berry generally with depths of 5 m or more.

3 **Facilities**. Usual marina facilities. There are ferries to the mainland. Limited VHF watch see the relevant *Admiralty List of Radio Signals.*

Port de Pomègues

2.319

1 Port de Pomègues (43°16′·4N, 5°18′·3E) is entered N of Pointe Pomègues. Sheltered anchorage can be obtained in depths of 5 to 7 m by small vessels; local knowledge is needed. Roche de la Chiminée, a shoal with a depth of 1·7 m over lies on the N side of the entrance.

Baie du Grand Soufre

2.320

1 Baie du Grand Soufre (43°16′·7N, 5°18′·0E). Anchorage can be obtained in depths of 20 m, as shown on the chart. The anchorage offers temporary shelter from N winds. Rocher de Friou, 1·5 m high with rocks extending ½ cable N of it lies close off the S shore of the bay, 2½ cables SE of Pointe Rascas (43°16′·8N, 5°17′·9E).

Hâvre de Morgiret

2.321

1 Hâvre de Morgiret (43°17′N, 5°18′E). Anchorage can be obtained by small craft in fine weather in depths of 5 to 15 m, weed. The anchorage is entered between Île des Eyglaudes, marking the SW side of the entrance and Pointe du Soldat, 1½ cables NE. A rock with a depth of 2·1 m over it lies ½ cable WNW of Île des Eyglaudes and a line of rocks, with depths of 2·0 to 8·2 m over them, lies 1½ cables ESE. At the head of the inlet a road passes through a very prominent cutting.

Ribolles anchorage

2.322

1 Ribolles anchorage (43°17′·4N, 5°19′·4E) lies N of the E end of Île de Ratonneau, and is shown on the chart. Anchorage can be obtained in depths of about 35 m, weed. A good berth can be found on the alignment (153°) of Cap de Croix, the E end of Île de Ratonneau, with Rocher Mourgan (43°16′·9N, 5°19′·8E) and the entrance to Port de l'Eoube, 3 cables W of Cap de Croix, well open.

Port de la Pointe Rouge

2.323

1 **General information**. Port de la Pointe Rouge (43°15′N, 5°22′E) is a yacht harbour protected from the W by a breakwater, from which a light is exhibited (white tower, dark green top, 7 m in height) and from N by a broad mole.

2 **Directions**. The harbour entrance faces NNE and can be difficult; it is dangerous during the *Mistral.*

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Berths. The harbour provides 1200 pontoon berths with depths of 2·5 to 7·0 m.

Facilities. Comprehensive small craft facilities including repairs. VHF watch maintained see relevant *Admiralty List of Radio Signals.*

Port de la Madrague-de-Montredon

2.324

1 Port de la Madrague-de-Montredon (43°14′N, 5°21′E) is a small fishing harbour and yacht haven. The harbour is protected by two breakwaters. A light is exhibited from the head of the W breakwater. The harbour entrance faces NNE and is difficult with strong onshore winds between N and SW. However good anchorage can be had off the port in depths of 10 m, sand and weed, during offshore winds. There are limited small craft facilities.

Other names

2.325

1 Brégantin, Pointe de (43°16·9′N, 5°17·6′E).
Carapègue, Pointe de (43°16·9′N, 5°18·2′E).
Malmousque, Anse de (43°17′N, 5°21′E).
Pendus, Rochers des (43°17·1′N, 5°20·9′E).
Salaman, Grande Le (43°17·0′N, 5°17·6′E).

MARSEILLE TO PRESQU'ÎLE DE GIENS

GENERAL INFORMATION

Chart 1705

Area covered

2.326

1 This section covers the W part of the Gulf of Lions between Marseille and Golfe de Giens (43°03′N, 6°05′E) including the port of Toulon. It is arranged as follows:

Cap Croisette to Cap Sicié (2.329).
Cap Sicié to Presqu'île de Giens (2.371).
Port de Toulon (2.388).

Topography

2.327

1 The W part of the Gulf of Lions, E of Marseille, is rugged and mountainous with numerous bays and coves. The natural deep-water harbour of Toulon provides the main Mediterranean base of the French Navy.

Depths

2.328

1 The coast is steep-to and generally clear of dangers.

CAP CROISETTE TO CAP SICIÉ

General information

Charts 2164, 2165

Routes

2.329

1 The offshore route continues ESE from a position S of Cap Croisette (43°13′N, 5°20′E) to a position S of Cap Sicié approximately 25 miles distant. The route remains to seaward of the 100 m depth contour and is clear of dangers.

A coastal route ESE may also be followed and presents little difficulty. It is not described in detail but mariners may find the directions provided for the offshore route useful.

2 The inshore route leads N of La Cassidaigne (43°09′N, 5°33′E) an isolated danger 10 miles ESE of Cap Croisette. This route leads generally to the approaches of ports and harbours along this part of the coast.

Topography

2.330

1 The coast between Cap Croisette (43°13′N, 5°20′E) and Cap Sicié, 25 miles ESE, is high and rugged. Montagnes de la Sainte Baume, a range of flat topped mountains which lie 16 miles NW of Cap Croisette, rise to over 1000 m dominating the coast. The coastline is indented by a series of large bays as well as narrower inlets. A number of islands lie, generally, close inshore.

Hazards

2.331

1 **Naval exercise area**. See 2.4. Proximity to Toulon increases the likelihood of encountering French naval vessels and aircraft.

Seaplane operating area. Seaplanes collecting seawater to fight forest fires operate off Baie de Sanary (43°06′N, 5°48′E).

Prohibited areas

2.332

1 **Île Riou** (43°11′N, 5°24′E). A site of archeological importance is protected by a triangular area extending N from the E end of the island. The area is shown on the chart; anchoring, dredging and fishing are prohibited within it. Mariners should note that details of buoys and obstructions change quickly and floating objects in the area make navigation through it dangerous.

2 **Cap Morgiou** (43°12′N, 5°27′E). A circular area, centred on the headland and shown on the chart, protects a prehistoric site. Entry is prohibited.

Prohibited anchorages

2.333

1 **Pointe Caqau** (43°12′N 5°31′E). An area protecting a pipeline, shown on the chart, extends along the coast 1¼ miles either side of the headland and for 3½ miles to seaward of it. Anchoring and fishing are prohibited within the area.

Natural conditions

2.334

1 **Local weather**. Moderate visibility usually accompanies E winds, which can sometimes bring rain. Generally better weather will be experienced with NW winds. Morning mist extending up to 2 miles offshore is common during the summer.

Principal marks

2.335

1 **Landmarks:**

Île Riou (43°10′E, 5°23′E) bare, rising to a sharp peak 190 m high, is very prominent especially from the E. See 2.332 (Prohibited area).

La Grande Chandelle (43°13′N, 5°28′E), 464 m high, is a remarkable square mass of rock, conspicuous from W or E.

2 Cap Canaille and Mont de la Canaille (43°12′N, 5°33′E). Cap Canaille marks the N end of the high reddish cliffs, Mont de Canaille, which extend 3½ miles SE to Cap de l'Aigle.

Bec de l'Aigle signal station (43°10′·5N, 5°34′·5E).

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Cap Sicie from SW (2.335)

(Original dated 1995)

(Photograph – SHOM)

3 Chapel of Notre Dame de la Garde (43°10′N, 5°36′E).
Pointe du Défens (Déffend) (43°09′N, 5°42′E), identified by its white cliffs, 30 m high, which appear cut off from the higher land to the E.
Colline de Six-Fours (43°06′N, 5°50′E), a hill 215 m high on which stand four radio masts.
Cap Sicié (43°03′N, 5°51′E), a bold dark headland.

4 **Major light:**
Île du Grand Rouveau Light (white square tower with black lantern, 17 m in height, above a white building) (43°05′N, 5°46′E). A mast with a wind generator stands close E of the lighthouse.

Directions for the offshore route

(continued from 2.274)

2.336

1 From a position S of Cap Croisette (43°13′N, 5°20′E) the offshore route continues ESE passing, with positions relative to La Cassidaigne (43°09′N, 5°33′E):
S of Île de Riou (7 miles WNW) (2.335), thence:
S of an obstruction (2 miles WSW), with a depth of 21 m over it, at the end of a pipeline (2.328), thence:

2 S of La Cassidaigne a rocky shoal marked by a lighthouse (black tower, red bands, 24 m in height). Mariners should also note there are dangerous obstructions close E of the lighthouse. Thence:
S of L'Esquine (5 miles S), a bank with a depth of 84 m over it, thence:

3 S of Banc des Blauquières (7 miles SE), the outer part of a bank extending from the coast with a depth of 70 m over it, thence:
S of Île du Grand Rouveau Light (10½ miles (2.335), thence:

4 S of Cap Sicié (15 miles ESE) (2.335).

(Directions for the offshore route continue at 2.381)

Directions for the coastal route

2.337

1 From a position W of Cap Croisette (43°13′N, 5°20′E) the coastal route leads SE passing:
SW of Îlot Tiboulen Light (white column, dark green top, 4 m in height) (43°17′N, 5°17′E), thence:
SW of Les Moyadons, a group of rocks off the W end of Île Riou (2.335) to a position SW of Île Riou. The island is part of the Riou Archipelago Nature Reserve, see 2.265.

2 The coastal route then continues SE, passing:
S of La Cassidaigne (2.335) to a position S of Cap Sicié (2.335).

Mariners should beware of an orange buoy moored 5 miles S of Île du Grand Rouveau (2.335) which marks an area of oceanographic experiments.

Directions for the inshore route

2.338

1 From a position SW of Île Riou (43°10′N, 5°23′E) (2.335) the inshore route leads E passing, with positions relative to Pointe de Castel-Vieil (43°12′N, 5°30′E):
S of Îlot les Empereurs Light (white structure, 2 m in height) (5 miles WSW), thence:
S of Bec Sormiou (3 miles WNW), a rugged point extending SE from the coast, thence:
S of Cap Morgiou (2 miles W) see 2.332, thence:
S of La Grande Chandelle (1¾ miles NW) (2.335), thence:

2 S of Castel-Vieil, thence:
S of Baie de Cassis (1½ miles E), thence:
N of La Cassidaigne (3¾ miles (2.335) to a position SW of Bec de l'Aigle signal station (2.335).

The track then leads SE passing, with positions relative to Pointe du Défens (43°09′N, 5°42′E):
S of Cap de l'Aigle (4 miles WNW), a prominent rocky escarpment, thence:
S of Baie de la Ciotat (43°10′N, 5°40′E), thence:
SW of Pointe du Défens (2.335) to a position SW of Baie de Bandol (3 miles ESE).

3 The track then leads S and ESE passing, with positions relative to Île du Grand Rouveau Light (43°05′N, 5°46′E):
W of Île du Grand Rouveau Light (2.335), thence:
W of Sèche des Magnons (3 cables WSW), a group of rocks marked by a beacon (W cardinal), thence:

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Ports de la Ciotat (2.339)
(Original dated 1995)

(Photograph – SHOM)

W of Basse de la Moulinière, (7 cables WSW), a rocky bank with a least depth of 10 m over it.
S of Île des Embiez (7 cables SE), on which stands a conspicuous water tower, thence:
S of Cap Sicié (2.335).

(Directions continue, for Ports de la Ciotat at 2.343 and for the inshore route at 2.382)

La Ciotat

Chart, 2164 and 2164 Plan Port de la Ciotat

General information

2.339

1 **Position and function** La Ciotat (43°10′N, 5°36′E) is a shipyard, fishing and yacht harbour.

Topography. Ports de la Ciotat occupy the SW corner of Baie de Ciotat, which lies between Bec de l'Aigle (43°10′N, 5°36′E) (2.335) and Point du Défens (2.335), 4 miles ESE. The rocky coastline of Baie de Ciotat is further indented by a series of smaller bays, some of which contain small craft harbours. Île Verte, 49 m in height with a signal station on its SW side, lies 3 cables E of Bec de l'Aigle.

2 The channel between Île Verte and the mainland is reduced to approximately 1 cable width by a series of three rocky shoals which lie off the W side of the island. The most S, with a depth of 15 m over it, lies 1½ cables SE of Bec de l'Aigle. Canonnier du Sud, with a depth of 0·5 m over it, lies 1 cable W of the island and marked by a black masonry beacon. Canonnier du Nord, 1½ cables NNE of the beacon has a depth of 4 m over it. A spit with a least depth of 13·7 m over it extends 2½ cables SE of Île Verte. Within the bay the seabed slopes steeply to seaward of the 10 m depth contour.

3 **Approach and entry**. Ports de la Ciotat are approached through Baie de la Ciotat and entered from Rade de la Ciotat 2 cables NE of the shipyard.

Traffic

4 In 2000 the port handled 1 vessel representing a total of 2890 dwt.

Limiting conditions

2.340

1 **Controlling depths**. The shipyard basin and drydock entrance are dredged to 8 m but see Deepest and longest berth below. Vieux-port, close N of the shipyard can accept fishing vessels or yachts with a maximum draught of 3 m.

2 **Deepest and longest berth**. S side of Bassin de Stationnement, 2½ cables in length with an area 1 cable in length, midway along it, dredged to a depth of 8 m.

3 **Local weather**. Baie de Ciotat is exposed to strong S or SW winds. In strong SE winds small craft seek shelter in Vieux-Port.

Arrival information

2.341

1 **Outer anchorages**. Anchorage can be obtained in Rade de Ciotat (43°10′·5N, 5°37′·0E) in depths of 10 to 22 m. The seabed has a thick covering of weed and does not provide good holding ground. A recommended berth, about 3 cables NE of the shipyard, is shown on the chart.

Anchorage can also be obtained within Baie des Lecques, on the E side of Baie de la Ciotat, in depths of 5 to 10 m, sand. The anchorage provides shelter during E or SE winds with good holding ground but is untenable in onshore winds.

2 **Pilotage and tugs**. Pilots can be obtained from the shipyard. Two tugs available.

Harbour

2.342

1 **General layout**. La Ciotat shipyard occupies the S end of the main port, the drydock and the basins of Vieux-Port lie respectively 1 and 2 cables NNW. Small craft harbours front the town 4 cables N.

2 **Principal marks**

Landmarks:

The cranes and buildings of the shipyard.
Hôtel de Ville (many sided tower) (43°10′·5N, 5°36′·6E).
La Ciotat S Mole (Digue) Lighthouse (white tower, red top, 18 m high) (43°10′·3E, 5°37′·0E).

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Jetée de la Ciotat Lighthouse (white framework tower, red top, 15 m high) (43°10′·4N, 5°37′·0E).

Directions for entering harbour

2.343

1 **Approaches**. From a position S of Baie de la Ciotat (43°10′N, 5°49′E) the track leads N, passing:
W of Pointe du Défens (2.335), thence:
E of Île Verte (2.339), thence:
E of La Ciotat mole to a position E of Jetée de la Ciotat (2.342).
The track then leads W towards the entrance.

2 **Entrance channel**. From a position E of Jetée de la Ciotat (2.342) the track leads W through Rade de la Ciotat passing:
N of Jetée de la Ciotat Light, which marks the S side of the entrance to the port, thence:
S of Môle Bèrouard, the N side of the entrance to the port, marked by a light (white truncated tower, green top, 15 m high).

2.344

1 **Useful marks:**
Church tower (43°10′·5N, 5°36′·6E).
Clock tower (hexagonal) (43°10′·5N, 5°36′·7E).
Château de Tours (43°11′N, 5°37′E) enclosed by a grey wall and surrounded by trees, stands on Petit Cap Saint Louis, a low rocky point.

Basins and berths

2.345

1 Bassin de Stationnement provides the main berthing area within the shipyard. Other shipyard berths, for fitting out or associated with the launching ways close NW of the dry dock, form the SE side of Vieux-Port. Within Vieux-Port berths on the W side, and within Port-abri on the N side of the basin, are reserved for fishing vessels. Other berths may be used by yachts.

Port services

2.346

1 **Repairs**. The shipyard has the capability to handle most repairs but is primarily concerned with ship-building. The construction dock is 316 m in length; 54 m wide. There is also a dry dock 145 m in length; 21·4 m wide.

Supplies. Limited fuel. Fresh water is available from connections on the quays.

Communications. The nearest airport is Marseille-Provence.

2.347

Rescue. A life-boat is stationed at La Ciotat.

Small craft

2.348

1 **General information**. In addition to the berths available within Vieux-Port at La Ciotat (2.345) several small craft harbours front the town between Môle Bèrouard (43°10′·4N, 5°36′·7E) and Cap des Môulins, 1 mile NE.

2.349

1 **Bassin Bèrouard and Bassin des Capucins** (43°10′·7N, 5°36′·8E). The basins, protected by breakwaters, lie 3 cables N of Môle Bèrouard. The harbours provide 630 berths, mainly at pontoons. Bassin Bèrouard is entered from the S, Bassin des Capucins from the NNE. The usual marina facilities are available.

2.350

1 **Port des Capucins ou des Flots-Bleus** (43°10′·9N, 5°36′·9E). Is a private small craft haven with depths of 1 to 2 m.

2.351

1 **Port Saint-Jean** (43°11′·2N, 5°37′·7E) Is a small sailing club haven with berths at quays and pontoons with a depth of 1 m.

Anchorages and minor harbours

General information

2.352

1 Anchorage within the inlets between Cap Croisette (43°13′N, 5°20′E) and Pointe Cacao, 7½ miles E, is dangerous during the *Mistral* because of falling rocks and stones.

Four-à-Chaux anchorage

2.353

1 Anchorage may be obtained by small vessels 5 cables NNE of Île de Jarre (43′12′N, 5°22°E) in depths of 10 to 13 m, sand and weed. Mariners can utilise the N side of Île Maire (43°13′N, 5°20′E) bearing 287° and the alignment (184°) of Îlot de la Mounine (Moyade) with the E end of Île de Jarre to gain the anchorage. Mariners should note that Plateau de Chèvres (Chèvres Bank), which lies close W of the anchorage, is rocky and has a depth of 6·7 m over it.

Port de Cassis

2.354

1 **Anchorage** can be obtained off Port de Cassis (43°13′N, 5°32′E), S of the head of Mole Neuf, in depths of 10 to 12 m, sand and weed, see 2.333 (prohibited anchorages).

2 **Harbour**. Port de Cassis occupies the N corner of Baie de Cassis protected by Mole Neuf which extends 1½ cables W and from which a light is exhibited (white tower, dark green top, 17 m in height). The entrance faces WSW and is dangerous in strong E or S winds. A strong outgoing current can develop in the entrance following heavy rain. The first 100 m of the N side of the head of the mole is fringed with rocks and mariners should remain at least 40 m from it. The harbour provides berths for yachts and fishing vessels at quays and pontoons with depths of 1·0 to 4·5 m. Usual small craft facilities available. Limited VHF watch see the relevant *Admiralty List of Radio Signals*.

Rade du Brusc anchorage

2.355

1 **General information**. Rade du Brusc lies between Île des Embiez (43°05′N, 5°47′E) and the bank fronting the coast between Port de la Coudoulière (43°06′N, 5°49′E) (2.367) and Port du Brusc (2.368). The holding ground is not good, especially in the N part where the bottom is fine sand. The anchorage is sheltered from E through S to WSW.

2 **Anchorage** may be obtained in depths of 11 to 13 m on the alignment (267°) of the N extremity of Île du Grand Rouveau (43°05′N, 5°46′E) (2.335) with Pointe Sainte Pierre, the N extremity of Île des Embiez (43°05′N, 5°47′E).

Small craft

Calanque de Sormiou

2.356

1 **Anchorage**. Small craft can obtain good anchorage within Calanque de Sormiou (43°12′N, 5°26′E) in depths 4 to 10 m, sand and weed. The inlet is entered between Bec de Sormiou (2.338) and Cap Morgiou and sheltered from winds between W and NE however the *Mistral* causes strong gusts and quickly raises a sea.

2 **Harbour**. A small craft haven lies at the head of the inlet. The harbour is protected from the S by a breakwater and has berths for about fifteen small craft. There are no facilities.

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Calanque de Morgiou
2.357

1 **Anchorage**. Calanque de Morgiou (43°12′N, 5°27′E) lies between Cap Morgiou and Pointe de Castel-Vieil, a flat topped, bare and perpendicular headland. Anchorage for small craft may be had in depths of 4 to 10 m, sand and weed. Although sheltered between W and NE the *Mistral* can gust strongly and raise a sea. The anchorage is completely exposed between E and S.

2 **Harbour**. A small craft haven protected by two breakwaters occupies the head of the inlet. There are two small quays, local yachts and fishing vessels occupy most of the berths.

Calanque d'En-Vau and Port-Pin
2.358

1 Calanque d'En-Vau and Port-Pin (43°12′N, 5°30′E) share a common entrance which lies between Pointe Castel Vieil and Pointe Cacao. Small craft may obtain fair weather anchorage in depths of less than 25 m however local knowledge is needed.

Calanque de Port-Miou
2.359

1 Calanque de Port-Miou (43°12′N, 5°31′E) extends NE between Pointe de Caqao and Cap Cable, 4 cables NE of it. The chapel of Notre-Dame du Bon Voyage stands on Cap Cable. The harbour is well sheltered and has depths of 6 to 7 m. The entrance can be difficult in strong SE winds. A pipeline extends from the N side of the entrance, anchoring is prohibited in its vicinity, see 2.333.

The local sailing clubs operate the harbour which has berths for 500 small craft.

Port des Lecques
2.360

1 Port des Lecques (43°11′N, 5°41′E) is a yacht harbour occupying the NE corner of Baie de la Ciotat. The harbour consists of two basins protected by breakwaters. West Basin is the largest providing 431 marina berths. The entrance lies at the W end and is marked by lights. East Basin, separated from the larger basin by a quay, offers 187 berths. The entrance to East Basin faces E and is marked by a light exhibited on the S side. Generally this basin is reserved for local boats. The harbour is sheltered from NW to E. However strong winds between SW and SE send in a heavy surf and mariners should not attempt to enter the harbour in these conditions. Comprehensive small craft facilities.

Port de la Madrague (Saint-Cyr-Sur-Mer)
2.361

1 Port de la Madrague (43°10′N, 4°42′E) is a yacht harbour on the E side of Baie de la Ciotat. The harbour is protected by breakwaters and entered from the N through a short channel. The W side of the entrance channel is protected by an extension of the main breakwater. The harbour provides 200 berths mainly at pontoons. Limited small craft facilities. VHF watch maintained see relevant *Admiralty List of Radio Signals.*

2 Anchorage can be obtained in Mouillage de Tarente off the harbour in depths of 5 to 10 m, good holding ground, weed. The anchorage is untenable with winds from N through W to S. Tour Tarente, which stands at the S end of the harbour, maybe a useful mark. There is a landing place close to it.

Port des Engraviers
2.362

1 Port des Engraviers (43°08′N, 5°44′E), a private boat harbour with depths of 1·0 to 1·5 m alongside the quays lining the basin.

Port de Bandol
2.363

1 **General information**. Port de Bandol (43°08′N, 5°46′E) is a large marina on the N shore of Baie de Bandol. The harbour is formed by a mole extending S and a breakwater extending ENE. The entrance, facing NNE, is marked by lights and can be dangerous in strong winds from the S and SW. Viaduc d'Aran (43°08′N, 5°46′E), prominent from seaward, has nine arches and stands at the head of Baie de Bandol.

2 **Directions**. The harbour can be approached using the white sector (351°–003°) of the breakwater (Jetée Sud) light which clears the dangers off Pointe de La Cride but passes close E of La Fourmigue, a rock marked with a beacon, which stands on a shoal 1½ cables E of Île de Bendor.

3 **Anchorage**. Baie de Bandol offers good anchorage in depths of 12 to 14 m, sand and weed. The alignment (174°) of Île du Grande Rouveau Light (2.335) with the beacon off Pointe de la Cride (43°07′N, 5°46′E) can be used to gain a good berth. Although exposed to the SW vessels with good cables can lie to two anchors in almost any weather. Anchoring is prohibited within 50 m of the submarine cables and pipelines between Bandol and Île de Bendor, which lies 5 cables SW of the harbour.

4 **Berths**. The marina provides 1350 mainly pontoon berths in depths of 1·5 m to 4·0 m. The harbour accepts vessels up to 30 m in length.

Facilities. Comprehensive marina facilities including repairs. Limited VHF watch see relevant *Admiralty List of Radio Signals.* There is a lifeboat stationed here.

Port de Bendor
2.364

1 A private small craft harbour on the N side of Île de Bendor (43°08′N, 5°45′E). The inside face of the W mole can be used by visiting yachts up to 12 m in length. Limited facilities.

Port de Sanary-sur-Mer
2.365

1 **General information**. Port de Sanary-sur-Mer (43°07′N, 5°48′E) is sheltered by two moles; the head of the W mole is marked by a light (white tower, red top, 9 m in height). There is a speed limit of 3 kn within the harbour.

2 **Anchorage**. Baie de Sanary, between Point du Bau-Rouge (43°06′·8N, 5°47′·6E) and Pointe Nègre, 9 cables SE, provides good anchorage but is exposed from the W and SW, see 2.331 (seaplanes). A recommended berth lies SSW of the harbour entrance in depths of 9 to 12 m, sand and weed using the alignment of Pointe de la Cride beacon (43°07′N, 5°46′E) and Tour de Port Issol (40 m high), the tower standing on Pointe du Bau-Rouge, 5 cables WSW of the harbour. Anchoring within the harbour is prohibited.

3 **Directions**. The church tower (34 m high), N of the harbour is a useful mark when approaching the entrance. A buoy (lateral, starboard), moored approximately 40 m ESE of the head of the SW mole, marks the outer edge of a bank of sand and weed. The bank extends generally SW from the shore at the root of the NE breakwater and mariners should avoid the area. In the vicinity of the buoy the channel, which generally has depths of 3·0 to 3·5 m, narrows to 25 m. Entry at night is not recommended.

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4 **Berths**. The harbour provides 550 berths, mainly at pontoons, with depths of 0·6 m to 3·0 m.

Facilities. Comprehensive small craft facilities including repairs. Limited VHF watch see relevant *Admiralty List of Radio Signals.*

Port de la Méditerranée

2.366

1 Port de la Méditerranée (43°06′·3N, 5°48′·7) a boat harbour in the SE corner of Baie de Sanary controlled by the Harbour Master at Port de la Coudoulière.

Port de la Coudoulière

2.367

1 Port de la Coudoulière (43°06′N, 5°49′E) originally built to serve a nearby tile factory is now a yacht haven. The harbour is protected from the W and S by two breakwaters which form a basin. A light is exhibited from the W breakwater. The inner faces of the breakwaters and the shore on the E side of the basin are lined with quays. The harbour is sheltered from the NW, E and SE but NW winds make the entrance difficult. The harbour can accommodate 520 vessels. There are berths on the quays with depths of 2 m however the majority are anchor berths, in a depth of 3·5 m, in the middle of the basin. There are no visitors berths available. Anchorage with good holding ground (sand and weed) can also be obtained off the harbour. Mariners should beware of an obstruction 290° W breakwater light, 500 m. Very limited small craft facilities.

Port du Brusc

2.368

1 **General information**. Port de Brusc (43°04′·6N, 5°48′·2E) is formed by a breakwater, on its NW side, extending 120 m SW from the coast and, on its SW side, a quay extending NW from the coast towards the breakwater head. The NE end of a detached breakwater lies 50 m NW of the entrance to the harbour. The detached breakwater extends 150 m SW. Lights are exhibited from the NW end of the detached breakwater and the head of the breakwater on the NW side of the harbour. The maximum draught accepted within the harbour is 1·8 m.

2 **Directions**. The harbour is approached from the NNW, passing E of the detached mole. A channel dredged to 3·5 m leads round the NW breakwater and into the harbour entrance. Entry at night should only be attempted by mariners with local knowledge The white sector of the light on the NW breakwater can be used to lead towards the entrance.

3 **Berths.** There are alongside berths, with depths of 0·5 m to 1 m, at the quays within the harbour, generally they are occupied by local boats.

Facilities. Limited small craft facilities.

Port des Embiez

2.369

1 **General information**. Port des Embiez (Port Saint-Pierre) is a large marina complex on the N side of Île des Embiez (43°05′N, 5°47′E) consisting of four basins; Avant Port, leading to Port-Saint-Pierre with Arrière-Port on its NW side, occupy the W side of the marina and Port des Jeunes which lies ESE of them. There are depths of 3·5 m in the entrance channel, 3 m within Port Saint-Pierre, 1 m in Arrière-Port and 2 m in Port des Jeunes. The harbour has a speed limit of 3 kn.

2 **Directions**. A channel, marked by unlit buoys (lateral) leads WSW from Rade du Brusc to the entrances of Avant-Port and Port des Jeunes. Lights mark each side of the entrance to Avant-Port. The white sector (207°–213°) of the directional light (white square hut, 3 m in height), exhibited from the S side of Avant-Port entrance, leads through the channel.

3 **Berths**. The harbour has 650 berths for vessels 6 to 35 m in length.

Facilities. Comprehensive small craft facilities including repairs. VHF watch maintained see relevant *Admiralty List of Radio Signals.*

Other names

2.370

1 Alon, Cap d'(43°08′·7N, 5°41′·8E).
Alon, Port d' (43°08′·8N, 5°42′·6E).
Alon, Sèche d' (43°08′·6N, 5°42′·6E).
Bandol, Creux de (43°08′·1N, 5°45′·0E), a shallow bay NW of a promontory on which stands Château de Bandol.
Batterie, Calanque de la (43°12′·6N, 5°21′·4E).
Callelongue, Pointe de (43°12′·6N, 5°21′·4E), a disused signal station, with a yellow tower, stands above the point.
2 Calseraigne, Île de (43°11′·3N, 5°23′·1E).
Capucin, Rocher (43°09′·9N, 5°35′·9E).
Caramassaigne, Pointe de (43°10′·5N, 5°24′·0E).
Congloué, Grand (43°10′·6N, 5°24′·2E).
Congloué, Petit (43°10′·6N, 5°24′·2E).
Courtiou, Calanque de (43°12′·6N, 5°24′·0E).
Engravier, Pointe (43°08′·3N, 5°43′·5E).
Figuerolles, Calanque de (43°09′·9N, 5°35′·8E).
3 Fontagne, Pointe (43°10′·8N, 5°22′·4E).
Galère, La (43°08′·8N, 5°43′·2E), a rock connected to the coast by a drying spit.
Marseilleveyre, Calanque de (43°12′·6N, 5°21′·4E).
Miet, Écueil de (43°11′·7N, 5°22′·6E).
Mounine, La (43°12′·5N, 5°21′·8E) a low flat rock.
Moutte, Baie de la (43°08′·8N, 5°43′·1E).
Rousse, Île (43°08′·1N, 5°43′·7E).

CAP SICIÉ TO PRESQU'ÎLE DE GIENS

General information

Chart 2165

Routes

2.371

1 The offshore route continues ESE from a position S of Cap Sicié (43°03′N, 5°51′E) to the outer end of Toulon Approach Channel, 7 miles distant, then leads E to pass S of Presqu'île de Giens (43°02′E, 6°08′E).

2 The inshore routes lead NE from Cap Sicié to the entrance to Grande Rade de Toulon (43°05′N, 6°00′E), ESE from Grande Rade de Toulon into Golfe de Giens (43°04′N, 6°06′E) and SE to a position S of Presqu'île de Giens.

Topography

2.372

1 The coast NE of Cap Sicié decreases in elevation but remains rugged and rocky. The coast between Cap Sicié and Cap Cépet, the SE point of Presqu'île de Saint-Mandrier, which lies 4 miles ENE, is a series of small bays often fronted by rocky banks. Isolated dangers lie within 5 cables of the coast which is otherwise steep-to. Presqu'île de Saint-Mandrier, which forms the W side of the entrance to Grande Rade and protects Petite Rade de Toulon, is wooded and has a number of French naval establishments and installations on it. A signal station stands on the highest part of the island at its E end. The S coast of the large, natural

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harbour of Toulon extends N of Presqu'île de Saint-Mandrier as Petite Rade. The main naval dockyard and commercial port lie at the N end of Petite Rade although most areas of the harbour have naval or military establishments.

2 Grande Rade de Toulon lies generally NE of Presqu'île de Saint-Mandrier and is entered between Cap Cépet (43°04′N, 5°57′E) and Cap de Carqueiranne, 3 miles ENE. The N coast of Grande Rade is rugged and indented by numerous small bays and coves. Some headlands have sheer cliffs. The natural defences of the area are enhanced with numerous fortifications. The SE part of the city of Toulon lies close inland along this part of the coast, which is clear of dangers to seaward of the 10 m depth contour; generally the contour lies within 2½ cables of the shore. Peaks rising behind the city provide a number of useful landmarks.

3 Between Pointe de Carqueiranne and Pointe Escampobariou, 4½ mile SE, lies Golfe de Giens. The head of the bay, formed by Isthme de Giens, a narrow isthmus connecting Presqu'île de Giens with the mainland, is generally shallow. Presqu'île de Giens is high and rugged, several dangerous rocks lie as much as 1 mile W of it.

Hazards

2.373

1 **Naval exercise areas** see 2.4.

Seaplane operating area. Seaplanes collecting seawater to fight forest fires operate within Grande Rade de Toulon.

Traffic Regulations

2.374

1 **Movement reporting**. Vessels of 1600 grt or greater carrying dangerous cargoes proceeding to Toulon must use the approach channel shown on the chart. The movement of vessels required to use the approach channel and of all other vessels N of the entrance to Grande Rade de Toulon is controlled from Cap Cépet Signal Station, see relevant *Admiralty List of Radio Signals* for details and procedure.

2.375

1 **Prohibited areas**. The Renardière (43°04′·3N, 5°55′·6E) naval gunnery ranges extending at least 2 miles offshore, S of Presqu'île de Saint-Mandrier, are periodically activated. The ranges are closed in July and August.

Within a circular area, shown on the chart, 1½ miles SSW of Cap de Carqueiranne stopping, anchoring and fishing are prohibited.

2.376

1 **Prohibited anchorages**. Within areas protecting submarine cables landing at Anse des Sablettes (43°04′N, 5°57′E) and between the entrance to Grande Rade de Toulon and Presqu'île de Giens. The areas are shown on the chart.

Rescue

2.377

1 The French Mediterranean Maritime Rescue Co-ordination Centre (MRCC) CROSS, see 1.45, La Garde lies within Grande Rade de Toulon (43°06′·3N, 5°59′·5E).

Natural conditions

2.378

1 **Currents** are very weak and irregular in the approaches to Toulon and generally follow the direction of the wind.

2.379

1 **Local weather**. West or NW winds can be expected for much of the year, usually accompanied by clear weather. The *Mistral* can be strong, occasionally reaching Force 11. East and SE winds are often accompanied by rain, they can sometimes reach Force 7 to 9. Cloud over the mountains behind Toulon or Cap Sicié indicates rain.

Principal marks

2.380

1 **Landmarks**:

Massif de Sainte-Baume (43°20′N, 5°47′E), a range of high, flat topped mountains.

Mont Caumes (43°11′N, 5°54′E) a rounded peak 801 m high.

Mont Faron (43°09′N, 5°57′E), 584 m high with wooded slopes. Two towers stand at the W end of its summit and a fort at the E end.

Mont Coudon (43°10′N, 6°00′E), 702 m high with a radar tower close SE of the summit.

Cap Sicié (43°03′N, 5°52′E).

2 **Major lights**:

Cap Cépet Light (white square tower, black lantern on house with red roof, 14 m in height) (43°04′N, 5°57′E).

Directions for the offshore route

(Continued from 2.336)

2.381

1 From a position S of Cap Sicié (43°03′N, 5°51′E) the offshore route continues ESE then E passing:

S of Cap Cépet (2.380), thence:

S of the outer end of Toulon Approach Channel (42°53′N, 6°00′E), thence:

S of Pointe Escampobariou (43°02′N, 6°06′E).

(Directions continue, for Toulon at 2.410 and for passage S of Îles d'Hyères at 3.55)

Directions for the inshore routes

(continued from 2.338)

Cap Sicié to Grande Rade de Toulon

2.382

1 From a position S of Cap Sicié (43°03′N, 5°51′E) the inshore track leads ENE passing, with positions relative to Pointe de Marégau (43°04′N, 5°55′E):

SSE of Basse du Cap Sicié a rock with a depth of 4·7 m over it, 2 cables SE of Cap Sicié, thence:

SSE of Les Deux Frères, (2¼ miles SW), two dark rugged and pointed rocks, 15 m high (S) and 20 m high (N). The channel between these rocks and the coast is 1½ cables wide with depths of 15 m. Thence:

2 SSE of Pointe du Bau-Rouge, so named because of its colour, (1¾ miles W), thence:

SSE Anse de Sablettes, (1 mile NW) formed by the isthmus joining Presqu'île de Saint-Mandrier to the mainland, thence:

SSE of Sèche de Sainte-Elme (7 cables WNW), a rocky patch with a depth of 7·4 m over it. Inshore of this danger Anse de Sablettes is shoal, with depths of less than 5·5 m. Thence:

3 SSE of Pointe de Marégau and the rocky bank, with a least depth of 7·5 m over it, which extends 4 cables SSE, thence:

SSE of Pointe de la Renardière (7 cables ENE). The headland has distinctive perpendicular cliffs with strata showing as yellow stripes on a dark red background. Mariners should beware of a naval gunnery range in this area, see 2.375. Thence:

4 SSE of Banc des Dragages (1¼ miles ESE), with a depth of 12 m over it, thence:

SSE of Cap Cépet (1½ miles E) (2.380) to a position 1½ miles SE of the headland.

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The inshore route then leads N towards the entrance of Grande Rade de Toulon passing:
E of the dangers, obstructions and prohibited area which lie generally E of Cap Cépet, thence:
E of Cap Cépet.

(Directions continue for Grande Rade de Toulon at 2.410 and the inshore route at 2.383)

Grande Rade de Toulon to Presqu'île de Giens

2.383

1 From a position E of Cap Cépet (43°04′N, 5°57′E) the inshore route leads SE passing:
SSW of Cap de Carqueiranne (43°05′N, 6°01′E), thence:
W of Golfe de Giens (43°04′N, 6°06′E), thence:
SW of Les Formigues, a group of rocks marked by a beacon, 3½ miles SE of Cap Carqueiranne, thence
S of Pointe Escampobariou (43°02′N, 6°06′E).

(Directions continue for the inshore route S of Île de Porquerolles at 3.55)

Anchorage

Golfe de Giens

2.384

1 Good anchorage may be obtained in the NE part Golfe de Giens (2.372) in depths of 5 m to 25 m, sand and weed. Mariners should beware of two outfalls, shown on the chart. Anchorage in the SW part of the bay is prohibited within an area shown on the chart. The anchorage is sheltered from N through E to S. Although exposed to W winds the holding ground is good.

Small craft harbours

Port de Saint-Elme (La Seyne-sur-Mer)

2.385

1 Port de Saint-Elme (43°04′·5N, 5°54′·0E) is a boat harbour consisting of two basins formed by breakwaters on the E side of Anse des Sablettes. A light is exhibited from the head of the W breakwater. Limited small craft facilities.

Port des Salettes

2.386

1 Port des Salettes (43°5′·3N, 6°04′·7E) is protected by two breakwaters from which lights are exhibited. A buoyed channel leads NNW to the entrance. The entrance is dangerous in strong S winds. The harbour has 360 berths at quays and pontoons. Limited small craft facilities.

Port de la Madrague (Presqu'île de Giens)

2.387

1 Port de la Madrague (43°02′·4N, 6°06′·7E) is a boat haven protected by a detached mole which lies NNW of an area of pontoon berths.

PORT DE TOULON

General information

Charts 2165, 2170

Position

2.388

1 Port de Toulon (43°07′N, 5°55′E) occupies most of the inner part of a large inlet on the NE side of the Gulf of Lions.

Function

2.389

1 Toulon is the main French naval port in the Mediterranean, it is also an active commercial port and a harbour for fishing vessels and yachts.

Topography

2.390

1 The port occupies a large inlet, Petite Rade, which extends N from the W end of a wide deep bay, Grande Rade. The S end of Petite Rade is protected from the Gulf of Lions by a high, rugged promontory, Presqu'île de Saint-Mandrier joined to the mainland by Isthme des Salettes. The generally high coastline is rocky and in places consists of sheer cliffs. The city of Toulon has developed around Petite Rade, E along the N shore of Grande Rade and as far N as the mountains which rise dramatically 2 miles inland.

Port limits

2.391

1 Vessels approaching Toulon will be affected by a series of limits shown on the charts. The outer end of the approach channel (42°53′·5N) for vessels carrying dangerous cargoes is a reporting point for vessels required to use it.

Toulon operates a compulsory pilotage area, for all commercial vessels of 45 m or greater in length, see 2.404.

The military port begins SW of a line joining Grande Jetée and Jetée de Saint Mandrier, closing Grande Passe (43°05′·3N, 5°55′·8E).

Approach and entry

2.392

1 The Port of Toulon is approached through Grande Rade de Toulon which leads W to Grande Passe, the entrance to Petite Rade. Petite Rade leads N to the naval and commercial ports.

Traffic

2.393

1 In 2000 the port handled 375 vessels representing a total of 1 407 520 dwt.

Port Authority

2.394

1 Toulon La Seyne Port Authority, BP 501, Avenue de l'Infaterie de Mar 244, F–83041, Toulon.

Limiting conditions

Controlling depths

2.395

1 Within Grande Passe and the S part of Petite Rade the entrance channel has a least depth of 23 m. North of 43°06′N the channel has a least swept depth of 10·1 m.

Deepest and longest berth

2.396

1 **Commercial port**.
Quai Fournel, N side of Darse Nord de Mourillon 350 m, depths of 8·5 m to 9·5 m alongside.
Naval port.
Les appontements de Milhaud (W), 250 m, depths 10 m to 11 m.

Maximum size of vessel handled

2.397

1 **Commercial port**. 300 m length, draught 9·5 m.

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Toulon–Presqu'ile de Saint–Mandrier from E (2.389)

(Original dated 1999)

(Photograph – SHOM)

Arrival information

Port operations

2.398

1 The commercial port does not operate at night.

Port radio

2.399

1 Cap Cépet Signal Station operates 24 hour VHF coverage. See relevant *Admiralty List of Radio Signals*.

Notice of ETA required

2.400

1 Vessels carrying dangerous cargoes 48 hours, others 24 hours.

Outer anchorages

2.401

1 **Prohibited anchorages**. There are several areas, all are shown on the chart;

Close E of Presqu'île de Saint-Mandrier.

An area within Rade des Vignettes, in the NE corner of Grande Rade.

The channel between the entrance to Grande Rade and Grande Passe.

The entrance to Petite Rade.

2.402

1 **Baie de la Garonne** (43°06′N, 6°01′E). Anchorage may be obtained, as shown on the chart, in depths 10 m to 20 m, mud and weed in the N part of the bay sheltered from E winds. Pointe Sainte Marguerite, a steep grey cliff, marks the NW side of the bay. Mariners should beware of a sewage outfall, 2 cables E of the headland, marked by a light-buoy at its seaward end and a yellow pillar buoy in the vicinity of the 20 m depth contour. Anchoring and fishing within 1 cable of the outfall are prohibited.

2.403

1 **Rade des Vignettes** (43°06′N, 5°57′E) fronts the coast between Cap Brun to the E and the root of Grande Jetée 1¾ miles W. However a prohibited anchorage area, shown on the chart, extends across the roadstead (2.401).

Pilotage and tugs

2.404

1 Pilotage is compulsory for all commercial vessels, 45 m or greater in length, N of a line joining Cap Cépet (43°04′N, 5°57′E) and Cap de Carqueiranne (43°05′N, 6°01′E). Pilots are normally available during the day and will board 1 mile E of Grande Passe. See relevant *Admiralty List of Radio Signals* for details and procedures. Tugs are available.

Entry regulations

2.405

1 Entry (and subsequent movement) of all vessels 30 m in length or greater and those carrying dangerous or hazardous cargoes is controlled by the Port Authority through Cap Cépet Signal Station. Inbound vessels must pass N of the light-buoy moored 1¼ miles NE of Cap Cépet Light, outbound vessels must pass S of it. All vessels must remain 500 m clear of aircraft carriers and 300 m clear of submarines. There are speed limits of 12 kn throughout the port and 4 kn within the basins.

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Harbour

General layout

2.406

1 Petite Rade (43°06′N, 5°55′E) contains the naval port, commercial port and a number small craft harbours used by both fishing vessels and yachts. The deeper water on its E side provides the access channel which leads N to the main commercial and naval ports. The W and S sides of Petite Rade are a series of large but shallower bays or inlets containing a mixture of naval, commercial and small craft facilities.

Anchorage

2.407

1 Anchorage is not usually permitted within Petite Rade however in exceptional circumstances the Préfecture Maritime may give approval to use the triangular area, shown on the chart, at the head of the inlet. A pilot is compulsory for a vessel anchoring in this area.

Aircraft operating area

2.408

1 Seaplanes, see 2.373. A naval air station stands on the N coast of Presqu'île de Saint-Mandrier (43°05′N,5°56′E).

Principal marks

2.409

1 **Landmarks**:

Cap Cépet Signal Station (43°04′·8N, 5°56′·5E).

Fort de la Croix des Signaux (43°04′·8N, 5°56′·6E).

Pointe Sainte Marguerite, sheer rugged cliffs, wooded at the top, (43°06′·3N, 5°59′·6E).

Cap Brun Fort (43°06′·5N, 5°58′·2E).

Directions for entering harbour

Approaches

2.410

1 **For vessels carrying dangerous cargoes**. From a position 12 miles SE of Cap Sicié (43°03′N, 5°51′E) the approach channel leads NNW passing, with positions relative to Cap Cépet Light (43°04′N, 5°57′E):

W of Pointe Escampobariou (7 miles ESE), thence:

W of Les Formigues (5¾ miles ESE), a group of rocks marked by a beacon, thence:

E of Cap Cépet Light (2.380), thence:

E of numerous obstructions extending 3½ cables E from Pointe du Canier (4 cables NNE), thence:

To a position ESE of Cap de Carqueiranne (43°05′N, 6°01′E).

2 **For other vessels**. From a position E of Cap Cépet Light (2.380) the approach channel leads N and NW passing:

Between Cap Cépet (43°04′N, 5°57′E) and Cap de Carqueiranne, 3miles ENE, marking the entrance to Grande Rade de Toulon, thence:

N of a light-buoy moored 1 mile NE of Cap Cépet.

3 The approach channel then leads generally W and is marked by two buoys (starboard hand), one of which is lit. The final leg of the approach to the entrance to Petite Rade leads WSW passing:

N of Jetée de Saint Mandrier, extending 1½ cables N from Presqu'île de Saint-Mandrier naval air station (2.408), A light is exhibited from the head of the breakwater, thence:

SE of Grande Jetée, also marked by a light, into Grand Passe, the entrance to Petite Rade which lies N of Baie de Sainte Mandrier.

Entrance channel

2.411

1 From Grand Passe the entrance channel leads NW to a position 3 cables W of the head of Grande Jetée then leads N passing, with positions relative to Grande Jetée Light (43°05′·4N, 5°55′·5E):

E of Baie du Lazaret (5½ cables W), thence:

E of Pointe de Balaguier (7 cables NW), on which stands Fort de Balaguier, thence:

W of Banc de l'Âne (7¾ cables NNW) which lies W of Grande Jetée. Thence:

E of Pointe de L'Eguillette (9 cables NW) to pass between two light-buoys (lateral) moored 1½ and 4 cables E of the point.

2 From this position approaches to the commercial and naval berths can be made.

Basins and berths

Anchorage area

2.412

1 A triangular area centred on (43°06′·6N, 5°55′·0E) but see 2.407.

Alongside berths

2.413

1 Darse Nord du Mourillon, occupying the NE corner of Petite Rade, contains the main commercial berths. The quays provide three RoRo berths. The S side of the basin is now a marina.

La Seyne-Brégaillon at the head of Baie de la Seyne, the NW part of Petite Rade, consists of three basins. The N basin is capable of handling Ro-Ro vessels.

Port services

Repairs

2.414

1 Comprehensive facilities include dry-docks, are available at either commercial or naval dockyards.

Other facilities

2.415

1 Comprehensive facilities, including hospitals, medical assistance, deratting, fuel and supplies are available. A lifeboat is stationed at Port de la Seyne (2.418).

Small craft

Port de Sainte-Mandrier

2.416

1 Port de Sainte-Mandrier (43°05′·0N, 5°55′·5E) occupies an inlet on the N coast of Presqu'île de Saint-Mandrier, fronting the town of Sainte-Mandrier-Sur-Mer. The N side of the harbour is protected by two breakwaters. A light is exhibited from the head of the longer W breakwater. The harbour accepts vessels up to 20 m in length and 3 m draught. There are 650 berths at pontoons and quays. Comprehensive small craft facilities are available. Limited VHF watch. There is a local ferry to Toulon.

Port du Pin-Rolland

2.417

1 Port du Pin-Rolland (43°04′·8N, 5°54′·5E) is a private marina and shipyard, which specialises in refitting large motor yachts, in the SE corner of Baie du Lazaret. The marina is approached from the NNE through a channel with charted depths of 2 to 3 m, however vessels with a draught of 4 m are reported to have used the channel. The channel is marked by two buoys (lateral), one of which is lit. The boat

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shed on the W side of the marina is a useful mark. The harbour has 400 berths, mainly at pontoons for vessels of less than 20 m length and less than 3 m draught. The largest vessels accepted are berthed on the W side of the marina in depths of 4 to 5 m. Comprehensive small craft facilities.

Port de la Seyne

2.418

1 Port de la Seyne (43°06′·1N, 5°53′·0E) is a marina in the SW corner of Baie de le Seyne. A lifting bridge carrying a railway line spans the entrance and is closed occasionally. A light is exhibited from the N side of the entrance. The harbour provides 300 berths in depths of 2·1 to 4·6 m. Limited marina facilities. There is a lifeboat stationed here.

Darse Vieille

2.419

1 Darse Vieille (43°07′·1N, 5°55′·8E) is a French naval and military yacht club which is part of the naval port.

Darse Nord du Mourillon

2.420

1 The marina occupies the S side of the commercial port (2.413) and provides the main berthing area for visiting yachts. Berths are at pontoons with depths of 4·4 to 8·6 m. Limited marina facilities.

Port Saint-Louis-du-Mourillon

2.421

1 Port Saint-Louis-du-Mourillon (43°06′·4N, 5°56′·3E) is a boat harbour close W of Fort Saint-Louis protected from the S by two breakwaters. A light is exhibited from the head of the E breakwater. The basin provides alongside berths at the quays lining the basin and there are moorings in the middle of the harbour. There are depths of 0·5 to 2·0 m.

Port des Oursinières

2.422

1 Port des Oursinières (43°05′·2N, 6°01′·2E) is a small yacht and fishing vessel harbour protected by a breakwater extending NE from the coast. The harbour consists of three interconnecting small basins. The outer basin is exposed to the NE. There are 230 berths at quays and pontoons with depths of 0·6 to 1·3 m.

Other names

2.423

1 Balaguier, Anse de (43°05′·9N, 5°54′·6E).
Castigneau, Darse de (43°07′·4N, 5°55′·3E).
Castigneau, Passe de (43°07′·1N, 5°55′·3E).
Cavalas, Baie de (43°04′·0N, 5°56′·0E).
Creux Saint Georges, Ane du (43°05′·0N, 5°55′·5E).
Eguillette, Rade de l' (43°06′·4N, 5°54′·6E).
Fabregas, Anse de (43°04′·1N, 5°52′·4E).
2 Galette, La (43°04′·7N, 5°57′·1E).
Mar Vivo (Marvive), Pointe de (43°04′·4N, 5°53′·0E).
Magaud, Anse (43°06′·4N, 5°58′·8E).
Méjean, Anse de (43°06′·4N, 5°58′·5E).
Missiessy, Darse de (43°07′·3N, 5°54′·8E).
Neuve, Darse (43°07′·3N, 5°55′·3E).
Puits, Pointe des (43°04′·7N, 5°57′·1E).
3 Sainte Elme, Fort de (43°04′·5N, 5°54′·2E).
Sainte Elme, Pointe de (43°04′·5N, 5°54′·1E).
Suffren, Canal (43°07′·2N, 5°55′·0E).
Tour Royale, La (43°02′·0N, 5°55′·6E) a fort.

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NOTES

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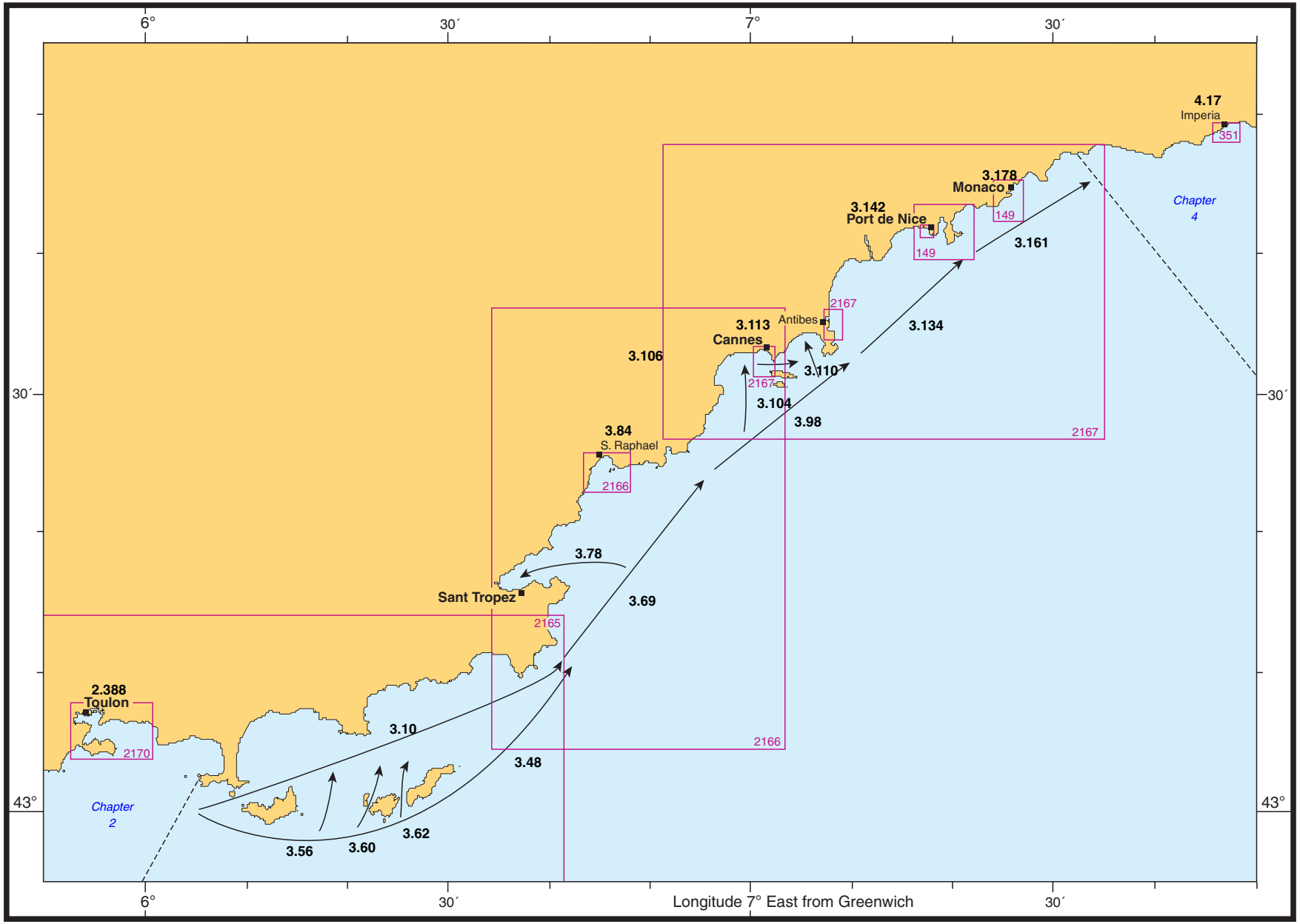
Chapter 3 - Presqu'île de Giens to the Franco-Italian Border



March 2004

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CHAPTER 3

SOUTH COAST OF FRANCE – PRESQU'ÎLE DE GIENS TO THE FRANCO-ITALIAN BORDER

GENERAL INFORMATION

Chart 1974

Scope of the chapter

3.1

1 This chapter describes the south coast of France from the W extremity of Presqu'île de Giens (43°02′N, 6°05′E) to the Franco-Italian border, 80 miles NE, including Îles d'Hyères, and the coast of the Principality of Monaco. The sections are arranged as follows:

Pointe Escampobariou to Cap Camarat (3.6).
Cap Camarat to Cap d'Antibes (3.65).
Cap d'Antibes to the Franco-Italian border (3.130).

Through routes

3.2

1 The ocean route between the W Mediterranean and Genova (44°25′N, 8°55′E) leads NW, through the Ligurian Sea, between the European mainland and the island of Corse (42°00′N, 9°00′E).

Topography

3.3

1 The coast between Presqu'île de Giens and Cap Camarat, 30 miles ENE, is dominated by the Maures mountain range which rises quickly from the coast and within 10 miles reaches peaks in excess of 700 m.

2 Îles d'Hyères, a group of rugged islands, lying between 4 to 6 miles offshore, extend 15 miles E from Presqu'île de Giens. The islands protect the wide bays of the mainland coast from the S and SE, particularly Rade d'Hyères, (43°05′N, 6°15′E). Deep water, free from isolated dangers, lies to seaward of the islands. Generally Îles d'Hyères are steep-to but mariners should beware of dangers within 8 cables of them as well as the shoaler water along their N coasts and in some of the channels between them. The W part of Rade d'Hyères has depths of less than 20 m, however depths increase considerably further E. The 20 m depth contour lies within 8 cables of the mainland coast between Rade d'Hyères and Cap Camarat. Mariners should beware of isolated dangers.

3 From Cap Camarat the coast continues NE towards the Franco-Italian border. Although generally high there are a series of wide bays or gulfs, further indented by numerous smaller bays and coves, some of which have sandy beaches. The rugged shore is backed by the thickly wooded foothills of the E part of the Maures and the Esterel mountains. However the popularity of the famous resorts between Saint-Tropez (43°16′N, 6°39′E) and Nice, 40 miles NE, has resulted in a near continuous development of villas, apartments and hotels along the coast.

4 Nice (43°42′N, 7°16′E), is the most significant commercial port of this area and provides passenger and cargo services to Corse. To the W of Nice the coast is lower and Rivière Var enters Baie des Anges (43°38′N, 7°14′E), but NW of the river there are several conspicuous peaks. East of Nice the coast becomes more mountainous and the snow covered peaks of the Alpes Maritimes, which rise 25 miles inland, can be seen in clear weather from well offshore. The generally high, rugged coast continues NE to the Principality of Monaco (43°44′N, 7°25′E) and beyond Menton (43°46′N, 7°30′E) to the Franco-Italian border.

5 Generally this coast is steep-to with the 50 m depth contour lying between 5 cables and 1 mile offshore however mariners should beware of dangers further offshore in the vicinity of Cap Camarat, Cap de Saint-Tropez, around Îles de Lérins (43°31′N, 7°03′E) and within Golfe Juan (43°33′N, 7°06′E).

Firing ranges and prohibited areas

3.4

1 A large area S of Îles d'Hyères is used by the Mediterranean Test Centre (Centre d'Essais de la Méditerranée, C.E.M) for air-to-air and air-to-surface firings, including missiles. When the range is in use warning signals are displayed from the following positions on Île du Levant (43°02′N, 6°29′E); the disused signal station at Pointe de Titan, a tower (la Madone) close to the centre of the island and from the firing battery.

Firing ranges and prohibited areas (3.4)

1 See also 3.5.
Prohibited areas are shown on the chart.

Exercise areas

3.5

1 The French Navy conducts trials and exercises in a number of areas established between Presqu'île de Giens and Cap Camarat (43°12′N, 6°40′E). Ships, submarines and aircraft will use these areas for live gunnery, missile or torpedo firings. Local Notices to Mariners give details of active exercise areas and must be consulted.

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POINTE ESCAMPOBARIOU TO CAP CAMARAT

GENERAL INFORMATION

Chart 2165

Area covered

3.6

1 This section covers the mainland coast between Pointe Escampobariou (43°02′N, 6°05′E) and Cap Camarat (43°12′N, 6°40′E). The chain of islands, Îles d'Hyères, which lie between 4 and 6 miles offshore extending E from Presqu'île de Giens are also described. The section is arranged as follows:

Passage N of Îles de'Hyères (3.10).
Passage S of Îles de'Hyères (3.48).

Topography

3.7

1 The mainland coast between Presqu'île de Giens and Cap Camarat, 25 miles ENE, changes significantly from low-lying sandy beach to a series of high rocky headlands separated by bays and coves. Close behind the coast are densely wooded hills which rise towards the mountain ranges further inland. Between Cap Bénat (43°06′N, 6°22′E) and Cap Camarat the foothills stand on the coast directly connected to the cliffs and headlands.

2 Offshore, Îles d'Hyères, the chain of rugged islands which extend E from Presqu'île de Giens, protects the W part of this coastline.

Rade d'Hyères lies between Presqu'île de Giens and Cap Bénat (43°06′N, 6°22′E) and is sheltered by Île du Grand Ribaud and Île de Porquerolles, the W islands of Îles d'Hyères. Petite Passe and Grand Passe are navigable channels respectively W and E of Île de Porquerolles providing access to Rade d'Hyères.

3 The E group of Îles d'Hyères, comprising Île de Bagaud, Île de Port-Cros (the highest of the d'Hyères group) and Île du Levant are separated from the mainland by Passe Est.

Depths

3.8

1 Generally the mainland and island coasts are steep-to and free from dangers to seaward of the 50 m depth contour. However mariners should note Sèche des Sarriniers, a shoal within Grand Passe 3 miles WSW of Île de Bagaud (43°01′N, 6°22′E), and La Fourmigue, an isolated danger 1¾miles NE of Cap Bénat.

Routes

3.9

1 From a position 10 miles S of Presqu'île de Giens offshore routes lead E to join the ocean route between the W Mediterranean and Gulf of Genoa or SE to join the ocean route between the Gulf of Lions and Bonifacio Strait.

A coastal route passes S of Îles d'Hyères then leads NE along the French coast to the Franco-Italian border and into the W side of the Ligurian Sea.

2 Inshore routes lead between Îles d'Hyères and the mainland, between the islands and to the approaches of ports and harbours along this part of the coast.

PASSAGE NORTH OF ÎLES D'HYÈRES

General information

Chart 2165

Description of waterway

3.10

1 This inshore route leads ENE, from a position S of Presqu'île de Giens (43°02′N, 6°05′E), through Petite Passe (43°01′N, 6°10′E), then between the mainland and the N coasts of Îles d'Hyères to a position SSE of Cap Camarat (43°12′N, 6°41′E).

Topography

3.11

1 The W side of Rade d'Hyères is mainly sandy beach becoming salt marsh in the vicinity of Port Pothuau (43°07′N, 6°12′E). Collines d'Hyères, a range of hills, overlook the NW shore of Rade d'Hyères. The town of Hyères, 2 miles from the coast, lies in an amphitheatre at the foot of a black mountain on which stand the ruins of a fortress.

2 The salt marshes continue E for about 3 miles along the head of the bay to the vicinity of Pointe de l'Argentière (3.28), here the coast leads SE and becomes a succession of beaches separated by rocky points backed by thickly wooded and much higher ground. A number of islets lie close offshore.

3 From Cap Bénat to Cap Camarat the coast continues in a series of bays separated by points and headlands. The heavily wooded foothills of the Maures mountain range lie close behind the coast. Despite the rugged nature of the landscape there are numerous buildings on the slopes of these hills. A number of villages and small towns stand on the coast together with small craft harbours or boat havens, some of which have developed into large marinas.

4 Although the NW part of Rade d'Hyères is relatively shallow, with the 20 m depth contour lying between 1½and 2½miles from the coast, depths increase significantly E of Cap Bénat.

Exercise areas

3.12

1 Naval exercises, involving ships, submarines and aircraft and may include live firing, are conducted in areas N of Îles d'Hyères, see 3.5.

Seaplane operations

3.13

1 Seaplanes collecting sea water to fight forest fires operate in Rade d'Hyères.

Prohibited areas and anchorages

3.14

1 Entry to an area extending 200 m offshore along the N coast of Île du Levant (43°03′N, 6°30′E) is prohibited. The area, shown on the chart, is part of a more extensive trials and exercise complex, see 3.4.

Anchoring, dredging and trawling are prohibited within Petite Passe (43°01′N, 6°10′E), between Cap Bénat (43°06′N, 6°22′E) and the E group of Îles d'Hyères and NE of Île du Levant. The areas are shown on the chart.

Anchoring and diving are prohibited in a circular area close NE of Cap des Mèdes (43°01′·6N, 6°14′·6E), the area is shown on the chart.

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2 Anchoring is prohibited in an area SE of the airfield at Hyères (43°05′N, 6°10′E); anchoring dredging and trawling are prohibited in a circular area centred on (43°06′N, 6°14′E). The areas are shown on the chart.

Measured distance

3.15

3 Between Cap de Brégançon (43°05′·6N, 6°19′·3E) and Cap de Cavalaire (43°09′·9′N, 6°32′·2E) there is a measured distance in six sections; distances W to E:

Cap de Brégançon beacon (43°05′·7N, 6°19′·4E) in line (335°) with Château de Brégançon (3.17).

Îlot du Christau beacon (43°05′·5N, 6°22′·4E) in line (337°) with Pointe du Pinet beacon (43°06′·0N, 6°22′·1E): 3422 m.

4 La Fourmigue beacon (3.19) in line (335½°) with Pointe du Nard Viou beacon (3.45): 3114 m.

Cap Nègre beacon (43°08′·6N, 6°26′·4E) in line (334½°) with the beacon 7 cables NW of it: 4374 m.

A conspicuous house 2 cable NW of Pointe du Dattier (43°09′·4N, 6°30′·7E) in line (341½°) with the beacon 1 mile NNW of it: 5261 m.

5 A beacon 4 cables NNE of Pointe du Dattier in line (330½°) with the beacon 9 cables NNW of it: 1112 m.

A white mark 2½cables NE of Cap Cavalaire (43°10′·0N, 6°32′·2E) in line (332°) with a similar mark 8 cables NNW of it: 2436 m.

6 Running track E-going; the line of bearing 064° of the white painted wall on Cap Lardier (43°09′·6N, 6°37′·3E) with the beacon on Cap Taillet.

Running track W-going; the line of bearing 244° of the lookout tower on Cap des Mèdes (43°01′·6N, 6°14′·6E), with the beacon on the W summit of Île de Porquerolles.

7 Fast vessels usually do not proceed farther E than the fifth alignment and submerged submarines do not use the three W sections.

National park

3.16

1 The islands of Port-Cros, Bagaud and their associated islets (43°00′N, 6°24′E) are within a national park. The limit of the park extends approximately 600 m from the shores of these islands, is shown on the chart, marked by special buoys (Parc National de Port-Cros) and indicated ashore by notices and coloured boards. Within the national park area there is a speed limit of 5 kn within 300 m of the shore and 12 kn to seaward of this. Fishing, anchoring and diving are strictly regulated. Mariners are advised to consult local authorities before attempting to enter the waters of the park.

Principal marks

3.17

1 **Landmarks**

Pointe Escampobariou (conspicuous dome) (43°01′·9N, 6°05′·9E).

Giens (43°02′N, 6°08′E), the village is prominent from seaward, particularly the church spire (white) and further E the tower of a chapel.

Chapel of Notre-Dame d'Hyères (Notre-Dame de la Consolation) (43°06′N, 6°07′·7E).

Mont Fenouillet (43°08′·3N, 6°06′·1E), with a distinctive rock on its peak.

Simone Berriau Building (43°06′·9N, 6°11′·7E), a conspicuous building which occasionally exhibits a red obstruction light.

Le Grand Ribaud (white tower and building, black lantern, 16 m in height) (43°01′·0N, 6°08′·7E).

Île du Porquerolles Signal Station (white building) (43°00′N, 6°14′E).

Fort de la Vigie (43°00′N, 6°24′E) and C.E.M. installations, see 3.4, stand on the summit of Île de Port-Cros.

2 Château de Brégançon (43°6′·9N, 6°18′·7E), a square, white building with turrets at each corner.

Mont Les Fouches TV Mast (43°06′·3N, 6°21′E), exhibits red obstruction lights.

Cap Blanc (43°05′N, 6°22′E), distinguishable some distance from seaward by its whitish coloured rocks, the disused signal station 5 cables NW of it and Cap Bénat Lighthouse, see Major lights below.

3 Île du Levant, Héliopolis Radio Mast (red and white, exhibits red obstruction lights) (43°01′·0N, 6°26′·6E) part of the Mediterranean Test Centre, see 3.4.

La Favière (43°07′·9N, 6°21′·9E) a conspicuous building which exhibits red lights.

Cap Nègre (43°08′·6N, 6°26′·4E), dark coloured, steep E side. A conspicuous tower stands on the headland and a beacon (black, rectangular topmark) marks the SW point of the headland.

4 Pointe du Dattier (43°09′·4N, 6°30′·6E), the building 2 cables NNW of the headland is conspicuous.

Le Titan Signal Station (43°03′·0N, 6°30′·4E).

Le Titan Lighthouse (white tower and building, black top, 10 m in height) (43°02′·8N, 6°30′·6E).

L'Esquillade (masonry tower, 11 m in height) (43°03′·1N, 6°32′·0E) marking a rock.

5 Cap Camarat Lighthouse (white square tower, black top, 25 m in height) (43°12′·1N, 6°40′·8E).

Cap Camarat Signal Station (close SE of Cap Camarat Lighthouse).

6 **Major lights**

Le Grand Ribaud – as above.

Cap Bénat (white tower, red lantern 16 m in height) (43°05′·3N, 6°21′·8E).

Le Titan Light – as above.

Cap Camarat – as above.

Directions

(continued from 2.383)

Presqu'ile de Giens to Rade d'Hyères

3.18

1 From a position S of Pointe Escampobariou (43°02′N, 6°06′E) the route leads 10 miles ENE, through Petite Passe, a channel approximately ¾mile wide passing, with positions relative to Pointe Escampobariou:

S of Sèche de Ribaud (2 miles ESE), a rock close S of Île du Grand Ribaud, thence:

NW of Pointe Saint Anne (3½ miles SE) the NW extremity of Île de Porquerolles, thence:

2 N of Jaune Garde, a reef (3 miles ESE), the NW extremity of which is marked by a light-beacon (N cardinal), thence:

S of Cap de l'Estérel (3½miles E), thence:

N of Rade de Porquerolles (5 miles ESE), thence:

N of Cap des Mèdes (6½miles E).

3 The inshore route then leads through the S part of Rade d'Hyères to a position SW of Cap Bénat (43°05′·5N, 6°22′·2E).

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3.19

1 **Useful marks:**

Pointe Escampobariou (43°02′N, 6°06′E), steep sided promontory with a dome 2 cables N of it.

Port (Baie) du Niel Jetty Head Light (red pylon, 5 m in height) (43°02′·1N, 6°07′·7E).

Île du Grand Ribaud, a château stands 2 cables NNW of the lighthouse (see 3.17 Major light) near the summit of the island.

2 Port de la Tour Fondue W Jetty Head Light (grey pedestal green top, 5 m in height) (43°01′·7N, 6°09′·3E).

Point de la Tour Fondue (43°01′·6N, 6°09′·4E), an old fort stands on the point.

Fort du Petit Langoustier, with a round tower, stands at the N end of Île du Petit Langoustier (43°0′·3N, 6°09′·7E).

3 Port de Porquerolles Pier Head Light (white column, red top, 6 m in height) (43°0′·3N, 6°12′·0E).

Pointe du Lequin (Alicastre) Fort (43°0′·9N, 6°13′·1E) stands on the NE part of the point.

Fort Alicastre (43°00′·8N, 6°13′·3E).

Cap des Mèdes Lookout Tower (43°01′·6N, 6°14′·6E).

4 Rochers des Mèdes, extend 1¼ cables N of Cap des Mèdes. The N and highest of these rocks is distinctive having two pointed peaks, one of which resembles an eagle's beak and has a hole piercing it.

Batterie des Maures, 2 cables W of Cap de Léboue (43°06′·7N, 6°17′·3E), a square artificial island from which a light is exhibited (W cardinal, 5 m in height).

5 Rocher de La Fourmigue (43°06′·4N, 6°24′·3E), an isolated rock 6·5 m high, marked by a mast (isolated danger) and exhibits a light (grey block, 2 m in height).

(Directions continue at 3.21)

Small craft channel

3.20

1 **Route and limiting conditions**. In calm weather small vessels of less than 4·6 m draught may use the passage between Île du Grand Ribaud and Île du Petit Ribaud. The deepest water is found closer to Île du Petit Ribaud.

Directions. The alignment (278°) of Point Escampobariou (43°02′N, 6°06′E) and Chapelle de Notre Dame de la Garde, which stands on Cap Sicié (43°03′N, 5°52′E), leads through the fairway. However mariners should note that Chapelle de Notre Dame de la Garde will only be seen in very clear weather.

Directions

(continued from 3.18)

Rade d'Hyères to Cap Camarat

3.21

1 From a position about 4 miles SW of Cap Bénat (43°05′·5N, 6°22′·2E) the inshore route continues 18 miles ENE passing;

N of Île de Bagaud (43°01′N, 6°22′E), a rocky island topped with thick trees and vegetation, thence:

S of Cap Bénat (43°05′N, 6°22′E), the SE part of a large rounded, rugged hill marked by a TV mast and a disused signal station, thence (with positions relative to Cap Bénat):

2 N of Île de Port-Cros (5 miles SSE) thence:

S of La Fourmigue (1¾ miles NE) see 3.19, thence:

N of Pointe du Castelas (5¼ miles SE), a light-buoy is moored 5 cables NW, thence:

S of Cap Nègre (4½ miles NE), see 3.17, thence:

N of Pointe de la Calle-Rousse (6½ miles ESE), the NE extremity of Île du Levant, thence:

3 S of Pointe du Dattier (7¼ miles ENE), see 3.17, thence:

S of Cap de Cavalaire (43°10′N, 6°32′E), thence:

S of Cap Lardier (11¾ miles NE), a barren headland of grey rock, a white wall 4 m in height stands on its S slope, thence:

S of Roche Quairolle (12 miles ENE), a rock with a least depth of 6·5 m over it, thence:

4 S of Cap Taillet, a whitish coloured headland (13 miles ENE), thence:

SE of Cap Camarat (15 miles NE), a rounded, wooded headland from which a light is exhibited see 3.17. A low rocky point extends E from it with submerged rocks up to 7 cables offshore.

3.22

1 **Useful marks**

Cap de Brégançon (43°06′N, 6°19′E), a steep sided island joined to the coast by a causeway; a beacon (black) stands on the S part of the causeway. A fort stands on the top of the island but is difficult to see from offshore.

Cap de Brégançon from NW (3.22)

(Original dated 1996)

(Photograph – SHOM)

Îlot du Christau (1 cable E of Cap Bénat), a rock 6 m high and marked by a beacon (white).

2 Pointe du Pinet beacon (black) (5 cables NNE of Îlot du Christau, close E of Cap Bénat).

Île du Levant, Tour de la Madone (43°01′·9N, 6°28′·2E).

Cap Taillet (43°10′N, 6°39′E), the SE point of a peninsula connected to the mainland by Isthme de Bon Porté. A beacon (black, truncated pyramid) marks the headland.

Château Voltéra (43°12′·0N, 6°39′·6E), conspicuous.

(Directions continue at 3.77)

Anchorages and minor harbours

Port du Niel

3.23

1 **General information**. Port du Niel (43°02′·2N, 6°07′·7E) is a small craft and fishing vessel haven in the NW corner of Baie du Niel which lies between Pointe des Mortes (43°02′·0N, 6°07′·5E) and Pointe Madame, 6 cables E. The haven is protected from the S by a breakwater; a light (red pylon, 5 m in height) is exhibited from its head. Despite the breakwater the haven is uncomfortable during heavy weather from the S and the entrance is dangerous in these conditions.

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2 **Directions**. The entrance, approximately 50 m wide, lies between the head of the breakwater, which extends 75 m NNE from the W side of the harbour, and the E shore of the harbour. The entrance has a depth of 6 m shoaling to 3·5 m in the vicinity of the breakwater head.

Anchorage: can be obtained by small vessels in depths of 10 to 13 m 1½cables NE of Pointe des Mortes.

3 **Berths**. The inside face of the breakwater has depths of 1 to 4 m; the W part is reserved for fishing vessels. Within the haven two concrete wharfs extend from the W shore with depths of 1 to 2 m. Berthing is generally by Mediterranean mooring using cables provided.

Facilities. Limited small craft facilities including minor repairs.

Port de la Tour Fondue (Pradue)

3.24

1 **General information**. Port de la Tour Fondue (43°01′·7N, 6°09′·4) lies at the SE point of Presqu'île de Giens. Pointe de la Tour Fondue extends S from the village and is crowned by an old fort. Close NW of the fort a breakwater, from which a light is exhibited (3.19), extends WNW and together with the the development of the W side of the isthmus creates a basin. The harbour is primarily for use by ferries and commercial vessels operating between the mainland and Îles d'Hyères. The Harbour Master may authorise visiting vessels to berth alongside.

2 **Anchorage** in depths of 1·5 to 2·0 m, in the N part of the harbour, is reserved for ferries and local vessels only.

Berths. Within the basin the inside face of the breakwater provides a 40 m berth with a least depth of 4 m alongside. The E side of the basin is occupied by a small passenger ferry terminal; two jetties extend from it. The least depth alongside is 3 m.

3 Outside the basin, NE of the fort, are two jetties which extend 50 to 60 m SE from the coast with depths alongside of 2 to 3 m. These berths are exposed and berthing can be difficult in strong winds including from NW. Mariners should also note that the approach to the E side of the S jetty is hampered by rocks, with a depth of 1 m over them, which lie close to it.

Facilities. Fuel and water obtainable.

Baie d'Alicastre anchorage

3.25

1 Baie d'Alicastre (43°01′N, 6°14′E) lies between Pointe Lequin and Cap des Mèdes, the NE extremity of Île de Porquerolles. Anchorage can be obtained in depths of 2 to 6 m, weed and sand, 5 cables E of Pointe Lequin. The holding ground is good. Mariners should note the obstruction and dolphin in the NW part of the bay.

Rade and Port de Porquerolles

3.26

1 **General information**. Rade de Porquerolles lies between Pointe Bon Renaud (43°00′N, 6°11′E), on which stands an old battery, and Pointe du Lequin 1½miles ENE. The bay provides good shelter from the prevailing E and NW winds but is untenable for small craft in strong NW to NE winds.

Port de Porquerolles at the head of the bay is protected by a breakwater; a light (3.19) is exhibited from its head. There is a speed limit of 3 kn within the harbour. Mariners are advised not to attempt entering the harbour under sail.

2 **Directions**. Château-fort Sainte-Agathe, standing on a rounded hill ESE of the harbour, provides a useful landmark. Mariners should navigate to pass within 60 m of the breakwater head to avoid shoal water, marked by buoys, which lies off the point on the SW side of the entrance. A depth of 4 m can be expected in the entrance with shoaler water within 15 m of the breakwater.

At night approach in the white sector (150°–230°) of the breakwater head light. The red sector of the light (230°–150°) covers offshore dangers within Rade de Porquerolles.

3 **Anchorage** can be obtained, in depths of 8 to 10 m, 3 cables NNE of the breakwater head on the alignment (272°) of Pointe Bon Renaud and Cap Rousset. Small craft may obtain anchorage in a depth of 7 m, 1½cables NNE of the breakwater head, on the alignment (282°) of Pointe Bon Renaud with the S extremity of Île de Grand Ribaud and the church tower of Porquerolles bearing about 155°. With winds from the N mariners are advised to moor. An alternative anchorage for small craft can be obtained close E of Pointe Bon Renaud in depths of 2 to 3 m, sand.

4 Vessels anchored further offshore are likely to drag their anchor with winds from ENE through N to NW.

Berths for 600 small craft at pontoons and moorings in depths of 1 to 4 m.

Facilities. Comprehensive small craft facilities. First Aid Station. There is a lifeboat stationed here.

Supplies. Fuel, water and provisions.

Port-Pothuau

3.27

1 **General information**. Port-Pothuau (43°07′·0N, 6°12′·2E) is the harbour of the village of Les Salins d'Hyères and also a base for small naval vessels. The French Navy has jurisdiction over the harbour. Mariners seeking shelter in bad weather must obtain permission to enter the harbour from the French naval authority. A small fleet of 20 fishing vessels operate from Port-Pothuau.

2 The harbour is formed by two breakwaters from which lights are exhibited (W breakwater head; green pylon, 8 m in height. E breakwater head; red mast, 6 m in height).

Directions. The entrance, marked by the lights, faces SSW and has a depth of 3·5 m.

3 **Anchorage** can be obtained in depths of 5 to 16 m, sand and weed, within Rade des Salins, 7 cables SSE of the harbour. The holding ground is good except during SE winds. Mariners should beware of the prohibited area 1¾miles SE of the harbour entrance, see 3.14. Mariners should also beware of several mooring buoys in this area.

4 **Berths**. At finger jetties extending from the shore and on the breakwater on the N and W sides of the harbour. The quays on the E side are reserved for naval vessels. Depths within the harbour are between 2 and 4 m but may be reduced by silting.

Facilities. Very limited small craft facilities. Small quantities of fuel possible by arrangement with the French Navy. Provisions and water can be obtained through Port d'Hyères (3.37).

Pointe de l'Argentière anchorage

3.28

1 Anchorage can be obtained in depths of 5·0 to 12·8 m, sand and weed, S of Pointe de l'Argentière (43°07′·3N, 6°16′·0E) and SW of a line (123°) joining Cap de Léoube and Cap de Brégançon.

Îlot de Jardin anchorage

3.29

1 Anchorage can be obtained SW of Îlot de Jardin (43°06′·3N, 6°18′·3E) in a depth of about 16 m, mud and weed. The alignment (136°) of Cap de Brégançon with the

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SW extremity of Île du Levant is a useful indication of the anchorage.

Rade de Port-Cros

3.30

1 **General information**. Rade de Port-Cros lies at the N end of Passe de Bagaud (3.58), between Île de Bagaud (43°01′N, 6°22′E) and Île de Port-Cros. A mooring buoy lies in its SE part, in a depth of 6 m, off the entrance to Port de Port-Cros (3.41). There are depths of 20 to 26 m throughout most of the anchorage.

Regulated area. Rade de Port-Cros lies within the Port-Cros National Park, see 3.16.

2 **Prohibited anchorage**. A prohibited anchorage area lies NE of a line connecting Cap Nord, the NE point of Île de Bagaud and Pointe du Moulin-à-Vent, 7 cables SE.

Directions. Rade de Port-Cros is entered from the N between Cap Nord (Pointe du Beau) and Pointe de Miladou 8 cables ESE. Alternatively Passe de Bagaud (3.58) provides access from the S.

Port de l'Avis, Île du Levant

3.31

1 **General information**. Port de l'Avis (43°01′·8N, 6°27′·3) lies between Pointe du Grand Avis and Pointe du Petit-Avis (2½cables E). A stranded wreck, forms a breakwater and exhibits a light (dark green pylon, 11 m in height). The harbour is operated by the French Navy and closed to non-naval craft. A sectored light is exhibited from Pointe du Petit-Avis.

Anse de Cavalière anchorage

3.32

1 Anchorage can be obtained in depths of 11 m, good holding ground, 1¾cables offshore, within Anse de Cavalière which lies between Point de Layet (43°08′·9N, 6°25′·3E) and Cap Nègre 8 cables ESE. The Moorish style villa, with minaret, at the head of the bay and the beacon 6 cables NW of Cap Nègre are useful marks. Mariners should note the outfall pipe extending 5 cables SSW from a position NE of Pointe de Layet.

Baie de Briande anchorage

3.33

1 Anchorage can be obtained in depths of 15 to 20 m, 5 cables W of Cap Taillet, within Baie de Briande (43°10′N, 6°38′E). The anchorage is sheltered from the *Mistral* but exposed to onshore winds.

Baie de Bon-Porté anchorage

3.34

1 Anchorage can be obtained in depths of 15 to 24 m, 1 mile NNE of Cap Taillet, within Baie de Bon-Porte (43°11′N, 6°40′E). The anchorage is sheltered from the *Mistral* but exposed to the E. Mariners should note the following, positions are relative to Cap Camarat Light (43°12′·1N, 6°40′·5E):

Historic wreck (9 cables S), diving within an area of radius 500 m centred on the wreck is prohibited.

2 A dangerous wreck, (6½cables SSW).

Basse de Cassin, (1 mile SW), a shoal with a depth of 2·8 m over it.

Rocher Escudelier (1¼miles SW), a rock 5 m in height is a useful mark.

There is also a speed limit of 20 kn within the bay, the area affected is shown on the chart.

Small craft

Port-Augier

3.35

1 **General information**. Port-Augier (43°01′·7N, 6°08′·9E) is a private small craft haven protected by a small breakwater and has berths for approximately 80 vessels. The maximum draught accepted is 1·5 m; maximum length of vessel accepted 8 m. The haven is reserved for local boats although visitors may be accepted in an emergency.

Port de la Capte

3.36

1 **General information**. Port de la Capte (43°04′N, 6°09′E), in the N part of Rade de la Badine, is a small craft haven for local vessels. The harbour is protected from the E and NE by a Y-shaped breakwater; a light (green column, white base, 2 m in height) is exhibited from the S head of the breakwater. Within the narrow entrance are two basins liable to silting. A shallow canal connects La Capte with the salt pans which form the N part of Étang des Pesquiers.

2 **Directions**. The entrance is approached from the SSE and becomes dangerous in strong E winds.

Anchorage can be obtained in Rade de la Badine, N of Cap de l'Esterel, in depths of 12 m, mud and weed. Mariners should note two buoys (yellow) 1 mile NW of Cap de l'Esterel which mark the ends of submarine pipelines.

3 **Berths** for 130 small craft at wharves within the basins in depths of 0·5 to 1·0 m. Silting may cause depths to vary.

Port d'Hyères (Port-Saint-Pierre)

3.37

1 **General information**. Port d'Hyères (43°05′N, 6°09′E) is a large marina which fronts Hyères-Plage. The marina consists of five basins protected from the E and S by a series of breakwaters from which lights are exhibited. The harbour offices stand at the E end of a mole in the S part of the harbour; a strong wind warning light is exhibited from the NE corner of the building. There is a speed limit of 5 kn within the harbour.

2 **Directions**. The entrances to the basins face S, are about 50 m wide and present little difficulty by day or night. However strong E winds create a substantial swell across the entrances and the approach and entrances can be busy during the summer months.

3 **Anchorage**. Mariners should note the prohibited anchorage area, shown on the chart, which extends SE from the coast N of the marina, see 3.14. Anchoring is also prohibited, between 1 March and 31 October, in an area bounded by the following positions:

43°04′·3N, 6°09′·2E
43°04′·3N, 6°09′·5E
43°04′·7N, 6°09′·6E
43°04′·7N, 6°09′·4E.

4 Small craft can obtain anchorage in depths of 2 to 4 m, sand, approximately 1 cable off the beach S of the harbour. The anchorage is sheltered from the *Mistral*.

Berths. The marina provides 1350 berths at wharfs and pontoons with depths of 2·0 to 3·5 m. The NE part of No 2 Basin, N of the harbour office building, is reserved for French naval craft. The jetty close NE of the harbour office is reserved for small local ferries providing services to Îles d'Hyères.

5 **Facilities**. Comprehensive small craft facilities. There is a lifeboat stationed here.

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Port du Ceinturon (Port de l'Ayguade)

3.38

1 **General information**. Port du Ceinturon (43°06′·1N, 6°10′·5E) is a small craft haven at the mouth of Le Roubaud river. The entrance, which faces SSE, is formed by two breakwaters; a light (green structure, 4 m in height) is exhibited from the head of the E breakwater. The harbour is liable to silting and depths may vary. A low, fixed road bridge spans the river 1 cable upstream from the entrance preventing access to the inner quays for masted vessels.

2 **Berths**. The haven provides 400 small craft berths; maximum draught accepted 1 m.

Facilities. Limited small craft facilities.

Port de Berriau-Plage (Port du Gapeau)

3.39

1 **General information**. Port de Berriau-Plage (43°06′·7N, 6°11′·7E) is a small craft harbour at the mouth of the Gapeau river. A breakwater extends 70 m SE from the NE side of the river mouth. The entrance is subject to silting, particularly on the SW side where sand and gravel banks develop, periodic dredging is necessary. The maximum size of vessel accepted is; length 12 m, draught 2 m.

2 **Directions**. Entry should only be attempted with local knowledge and in good weather. The Simone Berriau building (3.17) stands on the N bank of the river and provides a useful landmark with which to identify and approach the entrance. When closer to the entrance a blockhouse on the S bank can be identified. The deepest water lies closer to the breakwater.

3 **Anchorage** can be obtained in Rade des Salins, 8 cables SSE of the harbour, see 3.27. Mariners should beware of the prohibited area 1¾miles SE of the harbour entrance, see 3.14.

Berths. The main berthing area provides 200 small craft berths, with depths alongside of 1 to 2 m, at jetties lining the river banks between the entrance and a low fixed road bridge approximately 1½cables upstream.

Facilities. Limited small craft facilities including repairs.

Port de Miramar

3.40

1 **General information**. Port de Miramar (43°07′·0N, 6°14′·9E), is a large marina consisting of two basins. The outer basin, formed by two breakwaters, Contre-Jetée to the W and Grande Jetée to the E, is entered from the SW. Lights are exhibited from the heads of both breakwaters and also mark the entrance; Contre-Jetée (white pylon, red top, 4 m in height), Grande Jetée (white pylon, green top, 6 m in height). The river mouth, protected by Grande Jetée on its W side and Digue Est, extending ½cable SSE from the coast, provides the entrance to Basin Maravenne, the inner basin; a light is exhibited from Digue Est (S cardinal, 4 m in height). A fixed footbridge, with a vertical clearance of 3 m, spans the entrance channel to Basin Maravenne.

2 **Directions**. A yellow spar buoy, 5 cables SSE of the harbour, marks the seaward end of an outfall pipe.

Entering either basin at night is difficult. Mariners are advised to use the alignment (000°) of the lights on the heads of Contre-Jetée and Grande Jetée to approach the entrance channel of the outer basin. This track leads through a least depth of 1·6 m and remains clear of shoals with a depth of 0·2 m over them which lie close to the approach.

3 The light on Digue Est bearing 000° can be used to approach the entrance to Basin Maravenne. Mariners should beware of shoal water in the mouth of the entrance off Grande Jetée and remain closer to Digue Est.

There are depths of 1·3 to 1·5 m in both entrances.

Berths. The outer basin provides 800 berths at pontoons or on the inner faces of the breakwater; maximum length accepted 9 m, maximum draught 1·5 m.

Facilities. Comprehensive marina facilities.

Port de Port-Cros

3.41

1 **General information**. The small craft haven of Port de Port-Cros (43°00′·6N, 6°23′·0E) lies in the NE part of Baie de Port-Cros. The cove is entered between Pointe de la Pomme d'Or, the S headland, and Pointe du Moulin-à-Vent 2 cables NNE. The haven is sheltered except during the *Mistral*, which creates a high sea state, making the anchorage untenable.

2 **Directions**. The cove is approached from the NW. A channel, with depths of 2 to 5 m and marked by buoys (lateral, starboard hand), leads S of Pointe du Moulin-à-Vent into the haven. A fortified château stands on Pointe du Moulin-à-Vent.

Anchorage can be obtained in depths of 4 to 8 m, clear of the channel, N of Pointe de la Pomme d'Or. Anchoring is prohibited at the head of the cove.

3 **Berths**. There are alongside berths for vessels belonging to the national park and some local boats only at the small quay and jetties on the N side of the cove. The pontoons on the E side provide about 80 Mediterranean mooring berths (mooring wires provided) with depths of 0·8 m to 2 m; maximum length of vessel accepted 10 m. Mariners should also note that the outer ends of these pontoons are reserved for boats providing local ferry services and excursions. Swinging moorings are available SSE of the pontoons in a depth of about 2 m.

Facilities. Limited quantities of water, no other facilities.

Port de La Reine-Jeanne

3.42

1 **General information**. Port de La Reine-Jeanne (43°05′·5N, 6°20′·0E) is a private boat haven 5 cables WSW of Rocher de Brégançon, on which stands Fort Brégançon. The haven is protected by a breakwater, on its W side, which extends N from Pointe de la Galère; two jetties extend NNW from the shore close E of it forming a narrow dock. There are depths of 1·6 to 2·0 m in the vicinity of the jetties. The haven is entered from the N and access is difficult in strong winds from E or W. No facilities.

Port du Pradet

3.43

1 **General information**. Port du Pradet (43°05′·6N, 6°22′·1E) is a private boat haven protected on its N side by a breakwater. The entrance is on the NW side of the haven, W of the breakwater head. Entry should not be attempted in strong E winds which create a heavy surf. There are only 15 berths on the inside face of the breakwater or at a small wharf, with depths of 1·0 to 2·8 m alongside.

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Maximum size of vessel accepted; length 9 m draught 1·5 m. Water is available, no other facilities.

Port de Bormes-les-Mimosas

3.44

1 **General information**. Port de Bormes-les-Mimosas (43°07′·5N, 6°21′·9E), is an artificial harbour formed by a large breakwater built to the E of Pointe de Gouron and joined to the coast, S of the point, by an area of reclaimed land. The entrance lies close NNE of Pointe de Gouron between the N end of the main breakwater, from which a light is exhibited (white pylon, red top, 7 m in height), and another breakwater extending ½cable SE from the coast. The W side of the entrance is marked by a buoy. The harbour provides marina facilities and can accept vessels up to 30 m in length, maximum draught 3 m. Port Public, close inside the entrance, is reserved for small ferries providing local services. A boatyard occupies the SW part of the reclaimed area but can only be reached from seaward of the breakwater. A strong wind and storm signal is shown from the harbour.

2 **Directions**. Strong winds from the E make the entrance extremely difficult or dangerous. A buoy (special) marks the seaward end of an outfall pipe extending 4 cables ESE from the coast. Mariners will find the blocks of flats on the reclaimed area of the S of the harbour, two ochre-pink coloured buildings close W of the entrance and the light exhibited from the N end of the breakwater useful marks when approaching the harbour. The channel leading from the entrance to the marina and basins is dredged to 3 m and marked by buoys; mariners should beware of shoal water close W of the N part of the channel.

3 Vessels approaching the boatyard must navigate close to the S head of the breakwater in depths of 3 to 4 m to avoid the shoal further W which occupies much of the cove. A light (S cardinal, 5 m in height) is exhibited from the S head.

Anchorage. Mariners should note the extensive prohibited area, shown on the chart, which contains submarine cables.

4 **Berths** for 950 small craft mainly at pontoons in depths of 1 to 6 m.

Facilities. Comprehensive small craft facilities including repairs.

Port du Lavandou

3.45

1 **General information**. Port du Lavandou (43°08′·3N, 6°22′·3E) is a small craft harbour consisting of two main basins formed by breakwaters extending WSW from the coast. The original harbour occupies the W basin and a larger purpose built marina lies SE of it. A short channel, spanned by a fixed footbridge, links the two. Lights are exhibited from Môle Ouest which extends S into the old harbour (W cardinal, 8 m in height), the W end of Contre-jetée (red block, 1 m in height) which separates the the two basins, and the head of Digue Sud (green column red base, 8 m in height) which encloses the SE basin. The harbour accepts vessels up to 24 m in length.

2 **Directions**. Entry is straightforward but can become difficult in strong winds between E and S. The entrance to the SE basin is about 55 m wide but the usable width is reduced by a ferry pontoon secured to the inside face of Digue Sud.

3 **Anchorage** may be obtained in the N part of Rade de Bormes, which lies NW of La Fourmigue (43°06′·5N, 6°24′·3E) see 3.19, between Port du Lavandou and Pointe du Nard Viou, 5 cables E. The headland is marked by a beacon 6 m in height. Mariners should also note Sèche de Gouron, a rocky bank with a least depth of 10·9 m over it, 1½ miles NW of La Fourmigue. This anchorage is exposed to the S. The usual anchorages are in depths of 15 to 20 m either S of Pointe du Nard Viou, muddy sand good holding ground, or 3 cables S of the harbour, mud and weed, also good holding ground.

4 **Berths**. The harbour provides 950 berths, in depths of 1·5 to 8·0 m, at pontoons and wharfs on the inner faces of the basins. Berths on the S part of Môle Ouest are reserved for local ferries.

Facilities. Comprehensive small craft facilities including hull and machinery repairs. There is a lifeboat stationed here.

Port de Cavalaire

3.46

1 **General information**. Port de Cavalaire (43°10′·4N, 6°32′·3E) is a large marina, consisting of two large basins, on the N side of Cap de Cavalaire; a privately managed marina occupies the E or new basin and the local authority manages the public or old basin on the W side of the harbour. The basins are protected from the N and E by breakwaters from which lights are exhibited; Jetée Nord head (white column, green top, 4 m in height), Jetée Est head (white column, red top, 9 m in height). A mole, which also exhibits a light at its head (N cardinal, 4 m in height) extends N from the coast separating the basins and creates the entrance to each. The town of Cavalaire lies close NW of the harbour.

2 **Directions**. Entry is straightforward but the *Mistral* can cause whirlwinds within Baie de Cavalaire.

3 **Anchorage** can be obtained in a depths of 15 to 20 m, sand, within Baie de Cavalaire which is entered between Cap de Cavalaire and Cap Lardier 2½miles E. The bay is sheltered from the *Mistral* but untenable in winds from the E through S to SW. The usual anchorages are 3 cables NW of Port de Cavalaire and Jova anchorage, 3 cables NE of Point du Brouis (2¾miles E of the marina). Holding ground is good, mud and weed, providing anchorage is obtained in a reasonable depth; the steep slope of the seabed further offshore encourages dragging. Mariners should note the wrecks in the vicinity of these anchorages and the outfall pipe 1 mile NE of the harbour, all are shown on the chart.

4 **Berths**. The marina provides 980 small craft berths, mainly at pontoons, in depths of 2 to 5 m.

Facilities. Comprehensive marina facilities.

Other names

3.47

1 Port-Man, Baie de (43°01′N, 6°25′E).
Bormes-les-Mimosas (43°09′N, 6°20′E).
Esquillette, Pointe de l' (43°06′·2, 6°22′·2E).
Estagnol, Îlots de l' (43°06′·4N, 6°18′·0E).
Estérel, Îlot de l' (43°02′·0N, 6°10′·5E).
Léoube, Îlots de (43°07′N, 6°17′E).
Pansard, Torrent de (43°07′·0N, 6°14′·9E).
Ribaudon, La, a rock (43°01′·5N, 6°08′·9E).
Terre-Rouge, Pointe de (43°01′·6N, 6°09′·0E).

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PASSAGE SOUTH OF ÎLES DE HYÈRES

General information

Charts 2165

Description of waterway

3.48

1 From a position S of Presqu'ile de Giens (43°02′N, 6°05′E) the coastal route S of Îles de Hyères initially leads SE until S of Île de Porquerolles. The route then leads E, to a position S of Île du Levant, then NW to a position SE of Cap Camarat. Several inshore routes lead N between the islands.

Topography

3.49

1 When approaching from the S Îles de Hyères appear to be part of the mountain ranges of the mainland, however mariners will be able to distinguish the islands from about 12 miles offshore. Île de Porquerolles (43°00′N, 6°13′E), the highest of the group, will be discernible first whilst the islands E of it appear to be one.

2 The S coasts of the islands are generally steep-to and rocky however Île de Porquerolles and Île de Port-Cros typically have cliffs rising from the sea topped by dense wood or vegetation. Île de Levant has a less rugged appearance and its S coast has a number of small coves and inlets.

Prohibited areas and anchorages

3.50

1 Entry to an area SE of Île du Levant is prohibited. Anchoring, trawling and dredging are prohibited in an extensive area S of Île de Port-Cros and Île du Levant; the areas are shown on the chart. In addition there are a number of areas S of Îles de Hyères activated periodically for firings from the Mediterranean Test Centre (see 3.4 for signals).

Exercise areas

3.51

1 The French Navy uses a number of areas S of Îles de Hyères for exercises and trials including live gunnery, missile and torpedo firings. Local Notices to Mariners provide details of active exercise areas.

National park

3.52

1 The S coast of Île de Bagaud and Île de Port-Cros lie within the Port-Cros national park, see 3.16.

Natural conditions

3.53

1 **Current**. To seaward of Îles de Hyères the current usually sets W or SW at a mean rate of ½kn however rates in excess of 3 kn have occasionally been reported following NW gales. Within Passe Bagaud (43°0′·3N, 6°22′·0E) the current usually sets SW at a rate of about 1 kn.

Principal marks

3.54

1 **Landmarks:**

Pointe Escampobariou (conspicuous dome) (43°01′·9N, 6°05′·9E).

Cap d'Armes Lighthouse (white square tower, black top, 20 m in height) (42°59′·0N, 6°12′·4E). Red and white radio masts stand close W of the lighthouse.

2 Île de Porquerolles Signal Station (white building) (43°0′·1N, 6°13′·7E).

Île de Porquerolles radio masts and observatory domes (3 cables S of the signal station).

Île de Port-Cros domes (43°0′·0N, 6°24′·1E). A building with two domes, belonging to the Mediterranean Test Centre (3.4), stands on the summit of the island.

3 Île du Levant, Héliopolis Radio Mast, (red and white, exhibits red obstruction lights) (43°01′N, 6°26′·6E), part of the Mediterranean Test Centre (3.4).

Île du Levant, Tour de la Madone (43°01′·9N, 6°28′·2E).

Le Titan Signal Station (43°03′·0N, 6°30′·4E).

Le Titan Lighthouse (white tower and building, black top 10 m in height) (43°02′·8N, 6°30′·7E).

4 L'Esquillade (masonry tower marking a rock, 11 m in height, isolated danger topmark) (43°03′·1N, 6°32′·0E).

Cap Camarat Lighthouse (white square tower, black top, 25 m in height) (43°12′·1N, 6°40′·5E).

Cap Camarat Signal Station (close SE of Cap Camarat Lighthouse).

5 **Major lights:**

Grand Ribaud Light (white tower and building, black lantern, 16 m in height) (43°01′·0N, 6°08′·7E).

Cap d'Armes Light – as above.

Le Titan Light – as above.

Cap Camarat Light – as above.

Directions

(continued from 2.383)

3.55

1 From a position S of Pointe Escampobariou (43°02′N, 6°06°E) the route leads SW passing, with positions relative to Pointe Escampobariou:

SW of Île de Grand Ribaud (2¼miles ESE), from which a light is exhibited, see 3.54, thence:

SW of Pointe du Grand Langoustier (3½miles SE) to a position S of Cap d'Armes (5½miles SE). Mariners should note the light-buoy (special, pillar) moored 1 mile S of the headland.

2 The route then leads E passing, with positions relative to Cap d'Armes:

S of Sèche des Sarraniers (4 miles E), a rocky bank with a least depth of 15·8 m over it, thence:

S of Îlot de Gabinière (8½miles E), steep-to and 61 m in height, thence:

S of Pointe Maupertuis (43°0′·3N, 6°26′·3E), the S point of Île du Levant.

3 The route then leads NW towards Cap Camarat, passing, with positions relative to Pointe Maupertuis:

SE of Le Grand Cap (1½miles NW), thence:

SE of the prohibited area extending up to 1½miles offshore between Le Grand Cap and Le Titan (4 miles NE) (3.54). Two mooring buoys (3 miles NE and 4 miles ENE) lie within the area. Thence:

SE of L'Esquillade (5 miles NE) (3.54). The route crosses the inner end of Banc du Margaud, in depths of 55 to 66 m. The bank extends 7½miles E of Pointe du Titan. Thence:

4 SE of Cap Lardier (43°10′N, 6°37′E), thence:

SE of Roche Quairolle a rock, with a least depth of 7·1 m over it, which lies 5 cables SE of Cap Lardier, thence:

SE of Cap Camarat, a rounded, densely wooded headland from which a light is exhibited, see 3.54.

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A low rocky point extends E from the headland with submerged rocks lying up to 7 cables offshore.

(Directions continue at 3.77)

Grande Passe

General information

3.56

1 **Route**. Grand Passe (43°00′·4N, 6°18′·4E) leads N, between Île de Porquerolles and Île de Bagaud, into the SE part of Rade d'Hyères.

Depth. The channel has depths of 21 to 92 m over much of its 4½ mile width. However a tongue extends 2 miles ESE from Île de Porquerolles reducing depths on the W side of the channel. Sèche des Sarraniers the outer end of the tongue has a least depth of 15·8 m over it.

2 **Hazards**. The French Navy conduct gunnery firings in an area Close E of Île de Porquerolles, using Petit Sarraniers, a small island 4½cables SE of it, as a target. Local Notices to Mariners give details and signals are exhibited from Île de Porquerolles signal station (3.54), see also 3.4. The island is enclosed by a prohibited area shown on the chart.

National park. The Port-Cros National Park, which is a regulated area, lies on the E side of Grand Passe, see 3.16.

Directions

3.57

1 From a position about 5 miles SE of Cap d'Armes Light (3.54) the route leads N passing, with positions relative to Cap d'Armes Light:
E of Sèche des Sarraniers (3.56) (4 miles E), thence:
E of Petit Sarranier (2½miles ENE), thence:
E of Gros Sarranier (2¼miles ENE), thence:

2 E of Pointe de la Galère (3 cables N of Gros Sarranier), thence:
E of Cap des Mèdes (3 miles NE), (3.19), thence:
E of Rochers des Mèdes (3.19) into the SE part of Rade d'Hyères.

(Directions for Rade d'Hyères to Cap Camarat continue at 3.21)

Passe de Bagaud

General information

3.58

1 **Route**. Passe de Bagaud separates Île de Bagaud (43°01′N, 6°22′E) from Île de Port-Cros. Mariners should note that rocks fringing the entrances reduce the navigable width to about 1¼ cables.

Depth. There are depths of 13 to 20 m in the channel.

Directions

3.59

1 Passe de Bagaud is entered between Cap Sud (Pointe de Guérétion), the S point of Île de Bagaud, and Pointe de la Malalongue 2½cables SE; a house stands on the point. The channel leads NE into Rade de Port-Cros.

(Directions for Rade d'Hyères to Cap Camarat continue at 3.21)

Passe des Grottes

General information

3.60

1 **Route**. Passe des Grottes (43°00′·4N, 6°25′·4E) leads between Île de Port-Cros and Île du Levant. The channel is approximately 5 cables wide and generally steep-to. Mariners are advised to use the E side of the channel.

Depth. There are depths of 13 to 40 m within the navigable channel.

National park. The Port-Cros National Park, which is a regulated area, extends over much of the W side of Passe des Grottes, see 3.16.

2 **Prohibited anchorage**. An area protecting submarine cables, within which anchoring, dredging and trawling are prohibited, lies at the N end of Passe des Grottes. The S limit of the area is a line extending NE from Point de Port-Man (43°0′·9N, 6°25′·3E) to the W coast of Île du Levant; the area is shown on the chart.

Directions

3.61

1 From a position E of Îlot de Gabinière (3.55) (42°59′·4N, 6°23′·8E) the channel leads N passing, with positions relative to Îlot de Gabinière:
W of Pointe Maupertuis (2 miles ENE), thence:
E of Tourelle de la Dame (1½miles NE), a circular beacon (E cardinal, 11 m in height). The beacon marks Chenal Bank, a detached shoal with a least depth of 2·3 m over it. Thence:
E of Pointe de Port-Man (2 miles NE) thence:
W of the boat jetty at L'Aygaude (2½ miles NE) to a position NE of Pointe de la Galère (2 miles NNE).

(Directions for Rade d'Hyères to Cap Camarat, continue at 3.21)

Channel between L'Esquilladon and L'Esquillade

General information

3.62

1 **Route**. The channel leads between L'Esquilladon, a small rock 1¼cables E of Pointe du Titan (43°02′·8N, 6°30′·7E) and L'Esquillade, a low rock 1 mile E, marked by a masonry beacon (3.54).

2 **Depth**. There are depths of 25 to 45 m within most of the channel but mariners should beware of the rocky shoal, with a least depth of 1 m over it, 1 cable WSW of L'Esquillade and depths of less than 5·5 m ½cable NE of L'Esquilladon.

Hazards. Naval exercise areas in this area are used for gunnery and missile firings, see 3.51.

Prohibited area. The E limit of prohibited area extends SSE from Pointe du Titan and is shown on the chart.

Directions

3.63

1 The passage presents little difficulty; an approach from the S must be made clear of the prohibited area.

Other names

3.64

1 Arbousier, Fort de l' (43°01′·4N, 6°26′·4E) ruined.
Enfer, L' (43°10′·2N, 6°39′·9E).
Laysset (Laisset), Cap (43°01′·5N, 6°26′·3E).

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CAP CAMARAT TO CAP D'ANTIBES

GENERAL INFORMATION

Charts 1974, 2166

Area covered

3.65

1 This section covers the mainland coast of France between Cap Camarat (43°12′N, 6°41′E) and Cap d'Antibes (43°33′N, 7°08′E) including the inshore Îles de Lérins (43°31′N, 7°03′E). It is arranged as follows:

Cap Camarat to Cap Roux (3.69).
Cap Roux to Cap d'Antibes (3.98).

Topography

3.66

1 The coast extends NE in a series of large bays; Golfe de Saint Tropez, Golfe de Fréjus, Golfe de la Napoule and Golfe-Juan. The mainly rocky coastline is generally high and dominated by the E spurs of the Maures and Estérel mountains, which provide a series of landmarks. The slopes of the coastal hills and mountains are thickly wooded but the popularity of this fashionable resort area has resulted in development spreading between the villages and towns.

Depths

3.67

1 The coast is generally steep-to, with the 100 m depth contour lying about 1 mile offshore. However mariners should note several exceptions to this where banks extend up to 3 miles from the coast or lie further offshore and may cause breaks in heavy weather; Basses de Sainte-Anne extending 3 miles SE of Cap Camarat; La Nioulargo, an isolated bank 5 miles ENE of Cap Camarat; Basses du Verhuge, extending 3 miles ESE of Cap de Saint-Tropez; within Golfe de Fréjus (43°22′N, 6°48′E), Banc du Mourrenègre, Banc de Fréjus and Banc Nouveau; Banc des Vieilles 2 miles ESE of Cap du Dramont (43°25′N, 6°51′E).

2 Mariners should also beware of the many rocks and dangers fringing the coast, particularly in the vicinity of Île Saint Honorat (43°30′·5N, 7°03′·0E) and Cap d'Antibes.

Routes

3.68

1 From a position SE of Cap Camarat the coastal route leads NE to a position SE of Cap d'Antibes.

The ocean route between the W Mediterranean and the Gulf of Genoa lies approximately 20 miles off this coast and is not described.

There are a number of minor inshore routes to anchorages and harbours.

CAP CAMARAT TO CAP ROUX

General information

Charts 2166

Description of waterway

3.69

1 The coastal route leads from a position SE of Cap Camarat (43°12′N, 6°41′E) to a position SE of Cap Roux, 18 miles NE. An inshore route leads into Golfe de Saint-Tropez.

Topography

3.70

1 This rocky coastline continues to be dominated by the mountainous interior. The larger bays of Golfe de Saint-Tropez (43°18′N, 6°40′E) and Golfe de Fréjus (43°23′N, 6°48′E) are further indented by numerous smaller bays and coves, many with sandy beaches, others contain small craft harbours and havens. Larger vessels can also obtain sheltered anchorage on some parts of this coast. Coastal and offshore waters are deep and free from dangers. The coast, although generally steep-to, is fringed with rocks and dangers and navigation close inshore requires caution. Mariners should be particularly careful in the approaches to and vicinity of Cap de Saint-Tropez (43°16′N, 6°41′E), Pointe des Sardinaux (43°19′N, 6°40′E) and Pointe de la Beaumette (43°25′N, 6°52′E).

Seaplane operating areas

3.71

1 Seaplanes collecting seawater to fight forest fires may be encountered within Golfe de Saint-Tropez (43°17′N, 6°40′E) and Baie de Saint-Raphaël (43°25N, 6°46′E).

Speed restrictions

3.72

1 Speed restrictions apply to areas close inshore between Cap Camarat and Cap Roux and are shown on the charts.

Prohibited anchorages

3.73

1 Anchoring dredging and trawling are prohibited in the following areas shown on the charts:

Off Saint-Tropez (43°16′·2N, 6°37′·7E).
Baie de Saint-Raphaël (43°25′N, 6°46′E), an area extending SSW from Pointe de Lion, the NE headland.

Rescue

3.74

1 Lifeboats are stationed at Port de Saint-Tropez, Sainte Maxime, Cannes and Port de Cros de Cagnes.

Natural conditions

3.75

1 **Current**. To seaward of Golfe de Fréjus the current sets SW at a mean rate of ½ to ¾ kn but a weak NE-going counter-current is believed to flow along the shore creating a clockwise circulation.

Principal marks

3.76

1 **Landmarks:**

Cap Camarat Lighthouse (white square tower, black top, 25 m in height) (43°12′·1N, 6°40′·5).
Mont Paillas (43°13′·2N, 6°36′·2E), a ruined mill tower stands on the SE part of the summit.
Mont Saint-Pierre (43°18′·7N, 6°33′·7E).
Montagne Cheiron (43°49′·0N, 6°58′·3E).
Fréjus Cathedral Belfry (43°26′·0N, 6°44′·3E). The pointed belfry shows up well against a background of mountains.

2 Cap du Dramont, a conical headland with steep, red coloured cliffs, a signal station stands on its peak. (43°25′N, 6°51′E).
Le Rastel d'Agay (2 miles NNE of Cap du Dramont).
Conspicuous hotel (2 miles ENE Cap du Dramont signal station).
Mont Vinaigre (43°30′·2N, 6°49′·4E), the highest peak of the Esterel range. A microwave communications tower and a square lookout stand on its peak.
Montagne des Suvières (2 miles E of Mont Vinaigre).

3 Le Saint-Pilon (43°27′·2N, 6°54′·0E), a dramatic escarpment of red rock.

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Montagne du Cap Roux (4 cables ENE Le Saint-Pilon).

Major lights:

Cap Camarat Light – as above.

Pointe de la Baumette Light (R260°–294°, W294°–032°) (white tower partly obscured by pine trees, red top, 16 m in height) (43°25′·5N, 6°52′·3E).

Directions

(continued from 3.21 and 3.55)

3.77

1 From a position about 5 miles SE of Cap Camarat (43°12′N, 6°41′E) the coastal route leads NE passing, with positions from Cap Saint-Tropez (43°16′·0, 6°41′·9E):

SE of Basses de Sainte-Anne (5½ miles SSE)), the SE part of the banks extending from Cap Camarat, thence:

SE of La Niolargo (4¾ miles SE), an isolated bank, with a least depth of 52 m over it, thence:

2 E of Le Grand-Arbois, the E extremity of the bank extending from Cap de Saint-Tropez. Mariners should beware of the dangerous rocks and shoals that extend up to 2½ miles offshore in this area and that breaks develop over these banks in heavy weather. Thence:

SE of Pointe des Issambres (5 miles NNE), a low wooded point, thence:

3 SE of Cap du Dramont (11 miles NE) (3.76).

Thence to a position SE of Cap Roux (4 miles ENE Cap du Dramont). The headland is a relatively low point of red rocks but the high escarpment close inland, which includes the landmarks of Saint-Pilon and Montagne du Cap Roux (3.76), is easily identified.

Useful marks:

4 Ramatuelle (43°13′·0N, 6°36′·8E).

Château de La Messardière (43°15′·3N, 6°39′·6E).

Château Borelly (a group of square buildings surrounding a tower) (43°16′·4N, 6°40′·7E).

Saint-Raphaël church (dome) (43°25′·4N, 6°46′·1E).

Saint-Raphaël church (tower) (2 cables NNE of church with dome).

Île d'Or (43°24′·7N, 6°50′·9E), a barren rocky island on which stands a conspicuous square tower.

5 Roches Rouges Hôtel (1½ miles N Cap du Dramont signal station).

Viaduct 2 cables W of Pointe d'Anthéor (43°26′·2N, 6°53′·8).

Rocher d'Aurelle, a rock with two heads, the outer 1·5 m in height, the inner 0·6 m in height (43°27′·6N, 6°55′·6E).

(Directions continue at 3.103)

Golfe de Saint-Tropez

General information

3.78

1 **Route**. Golfe de Saint-Tropez is entered between Pointe de Rabiou (43°17′N, 6°41′E) and Pointe des Sardinaux, 2 miles N. The route leads 4 miles WSW to the yacht harbours of Ports de Cogolin (3.86) and Port Grimaud (3.87) at the head of the inlet.

The route also leads to the approaches of the small craft harbours at Saint-Tropez (3.82) and Sainte-Maxime (3.88) on the shores of Golfe de Saint-Tropez.

2 **Prohibited anchorage.** Anchoring is prohibited off Saint-Tropez, see 3.73; the area is shown on the chart.

Landmarks:

Chateau Borelly (3.76).

Saint-Tropez (43°16′·5N, 6°38′·5E), the citadel and church tower are conspicuous.

Water tower (¾ mile SW of Saint-Tropez) (round, grey masonry, 46 m in height).

3 Grimaud, the village and ruined château stand on a conical hill creating a distinctive grey mass (43°43°17′·2N, 6°34′·9E).

Sainte-Maxime, on the N side of the Golfe de Saint-Tropez, high-rise buildings are conspicuous.

Sainte-Maxime disused lookout (43°19′0N, 6°39′·0E).

Directions

3.79

1 From a position about 5 miles NE of Cap de Saint-Tropez (43°16′N, 6°42′E) the track leads WSW into Golfe de Saint-Tropez passing, with positions relative to Cap Saint-Tropez (43°16′·0N, 6°41′·9E):

N of Basse du N.E. (1 mile NE) a shoal with a least depth of 4 m over it, thence:

2 N of La Moutte (7 cables NE), a light beacon (E cardinal, 12 m in height) which stands on the NE extremity of Plateau Sauvère, the bank extending NE from Cap de Saint-Tropez. Drying rocks stand on the inshore end of the bank; there are depths of 2·4 to 2·7 m between the rocks and the beacon. Thence:

3 SSE of Tourelle Les Sardinaux (3 miles NNW), a beacon (E cardinal) standing on the NE part of Les Sardinaux, a rocky bank and shoals which extends ¾ mile E from Pointe des Sardinaux, thence:

SSE of Sèche à Huile (2¾ miles NNW) marked with a light-beacon (S Cardinal, 16 m in height), thence:

NNW of Rocher de l'Ay (¾ mile NNW) marked by a beacon (isolated danger), thence:

NNW of Basse Rabiou (1¼ miles NW) marked by a beacon (N cardinal), thence:

4 SSE of Pointe des Sardinaux (3 miles NW), thence:

N of Pointe de Rabiou (1¼ miles NW), thence:

SSE of La Fourmigue (3 miles NW), a drying rock, thence:

SSE of Sainte-Maxime (3½ miles NW), thence:

NNW of Saint-Tropez.

5 The track continues WSW to a position on the 20 m depth contour about 1mile NE of Port Grimaud breakwaters (43°15′·5N,6°35′·3E).

Anchorages and minor harbour

Baie de Pampelonne

3.80

1 **General information**. Baie de Pampelonne lies between Cap Camarat and (43°12′N, 6°41′E) and Cap du Pinet, 2¾ miles N. Château de la Messardière (3.76) is conspicuous NW of Cap du Pinet. The head of the bay consists of a low sandy beach fronted by bank, with depths of less than 10 m over it, extending up to 5 cables offshore. Sèche Salagru, 8 cables SSW of Cap du Pinet, with a depth of 0·3 m over it, is one of a number of submerged rocks within 2 cables of the shore.

2 **Clearing bearing**. Cap Camarat Lighthouse (43°12′·1N, 6°40′·5E) (3.54), on a line of bearing of not more than 180° will clear these dangers. The bay is sheltered from NW winds but untenable with strong winds from the E.

3 **Anchorage** can be obtained in depths of about 15 m, sand and weed, 1½ miles N of Cap Camarat Light. The

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alignment (326°) of a chapel, 8 cables NW of Château de la Messardière, with Haute Suane, 3¾ miles NW of it, and the alignment (034°) of the E rock of Teste de Can, 1½ miles ENE Cap du Pinet, with the railway cutting N of Cap du Dramont (43°25′N, 6°51′E) are useful marks. In good weather small vessels may obtain anchorage in the N part of the bay, closer to the shore, between Pointe de Bonne Terrasse, 6 cables NW of Cap Camarat Light, and Sèche Salagru, and to the W of Cap du Pinet. Local knowledge is required.

Anse de Canebiers

3.81

1 **General information**. Anse de Canebiers (43°16′N, 6°40′E) is entered from Golfe Saint-Tropez between Pointe de Saint-Pierre and Pointe du Cimetière. The shores of the bay are fringed with rocks which extend up to 1½ cables offshore. Basse des Canebiers, a shoal with a least depth of 6·4 m over it, lies 3¼ cables SW of Pointe de Saint-Pierre. An outfall extends NE from Pointe du Cimetière. The Bay is sheltered from S and SE; holding ground moderate. A fish aggregating device, marked by buoys, lies on the E side of the bay.

2 **Anchorage** can be obtained in depths of 12 to 15 m, mud and weed, about 3 cables NNE of a large factory which stands at the head of the bay.

Port de Saint-Tropez

3.82

1 **General information**. Port de Saint-Tropez (43°16′N, 6°38′E) is a yacht harbour consisting of two basins protected from the N by Portalet Breakwater and from the W by an L-shaped breakwater. The breakwater heads exhibit lights and form the entrance to the harbour, 50 m wide, which faces WSW. The harbour accepts vessels up to 60 m in length and maximum draught 4·9 m. Pilotage is not normally available and must be arranged through Toulon, see *Admiralty List of Radio Signals*. During the summer months the harbour is extremely busy and mariners should navigate with caution in the approach. Entry and berth allocation are controlled by the harbour office. There are depths of 10 to 20 m in the approach to the entrance and depths of 7 to 9 m within the entrance itself.

2 **Directions**. Entry is straightforward. However a strong *Mistral* causes a high sea state and, under these conditions, entry is impossible. Mariners will find the citadel to the E of the town, Portalet tower (at the root of Portalet breakwater) and the old lighthouse (which also stands on Portalet breakwater) useful marks. At night the lights marking the entrance are extremely difficult to distinguish from the lights of the town. Mariners should beware of the wreck, with a depth of 3 m over it, 2 cables WSW of the harbour entrance.

3 **Anchorage** can be obtained WSW of the entrance, remaining clear of a wreck, shown on the chart, or 3 cables W of Pointe de la Pinède, a low headland 5 cables WSW of the entrance, in depths of about 15 m, mud and sand. Anchoring is prohibited in the approach channel to Pilon hovercraft terminal 3 cables SW of the harbour; the area is shown on the chart and marked by buoys.

4 **Berths**. The harbour has 950 berths in depths of 1 to 6 m. The E basin, used for vessels greater than 15 m in length, provides Mediterranean moorings in depths of 2 to 6 m on the E and S walls; the NE corner of the basin is reserved for fishing vessels. There is a warping buoy in the SW part of the basin.

The W basin has marina berths at pontoons in depths of 1 to 6 m for smaller vessels.

5 **Facilities**. Comprehensive small craft facilities including repairs. Boat lift of 5 tonnes capacity, slipways of 10 and 40 tonnes capacity. There is a hospital.

Communications. Nearest airports Nice-Côte d'Azur and Hyères-Palyvestre.

Chart 2166 plan of Saint-Raphaël

Baie de Saint-Raphaël anchorage

3.83

1 **General information**. Baie de Saint-Raphaël (43°25′N, 6°45′E) is entered between the mouth of Riviére de l'Argens (43°24′·6N, 6°44′·2E) and Pointe des Lions, a low, red, rocky point 2¼ miles E. Palais Santa Lucia stands on the headland. A number of rocks and small islands extend W from Pointe des Lions the largest are; Le Lion de Terre, 3 cables W, connected to the mainland by a series of rocks, and Le Lion de Mer, 6½ cables WSW, which exhibits a sectored light (W275°–249°, R249°–275°) (white tower, 10 m in height). The bay is sheltered from E and SE by these islands and rocks. Mariners should note the outfall pipes extending into the bay from the N shore and the mooring buoys 6½ cables and 1 mile NW of Le Lion de Mer, all are shown on the chart. The bay is sometimes used by seaplanes collecting sea water to fight forest fires.

2 **Anchorage.** Naval vessels usually moor with a good scope of cable, anchors NE and SW, in depths of about 15 m, mud and clay good holding ground, on the alignment (053°) of Saint-Raphaël church (square tower) (43°25′·6N 6°46′·2E) with the head of Saint-Raphaël S mole marked by a light (grey tower, dark green top, 13 m in height).

3 An alternative berth for smaller vessels and merchant vessels lies closer inshore, WSW of the head of the S mole, in depths of 12 to 16 m. When anchoring at night mariners should beware of unmarked fishing nets; by day the seaward ends of fishing nets are marked by floats.

Port de Saint-Raphaël

3.84

1 **General information**. Port de Saint-Raphaël (43°25′·4N, 6°45′·9E), close W of the town, is a small commercial and fishing port with marina facilities. The single basin is protected by broad moles extending 1 cable W and ½ cable S from the coast. A light is exhibited from the head of the S mole (grey tower, dark green top, 13 m in height). The W facing entrance is 60 m wide and lies between the heads of the moles; there are depths of 5·5 to 8·0 m in the entrance. Vessels of up to 90 m in length and 4·5 m draught can be accepted. Some silting occurs in the entrance. In bad weather the harbour is inaccessible; NW winds cause a short steep sea to develop in the entrance, S winds can create surf across it. Larger vessels are advised to enter and berth stern first, laying out an anchor, to assist departure should conditions deteriorate.

2 **Pilotage**. Pilots are available and must be arranged with the harbour master 8 days in advance. Notice of ETA to be confirmed by VHF radio 24 and 2 hours ahead, see the relevant *Admiralty List of Radio Signals* for details.

Directions. The harbour is approached through Baie de Saint-Raphaël (3.83) which is straightforward by day. Le Lion de Mer Light (3.83), Saint-Raphaël S Mole Light (see above), the church dome close E of the harbour and a high-rise building, 2 cables E of the harbour, are all useful marks. At night mariners must beware of unmarked fishing nets, see 3.83, and the unlit mooring buoys shown on the chart.

3 **Berths**. The inner face of the S mole, Quai Amiral Nomy, is 1 cable in length, has depths of 8 m reducing to 3 m at its E end and is reserved for commercial vessels.

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Small craft berth at Mediterranean moorings on the finger jetties extending S into the basin in depths of 2 to 6 m. Most of the 200 berths are occupied by local boats.

Facilities. Good small craft facilities including minor repairs. There is a hospital at Saint-Raphaël, 5 cables E of the harbour.

4 **Rescue**. An inshore lifeboat is stationed here.

Communications. Nearest airport; Nice-Côte d'Azur.

Chart 2166

Rade d'Agay anchorage

3.85

1 **General information**. Rade d'Agay (43°26′N, 6°52′E) is entered between Cap du Dramont (3.76) and Pointe de la Baumette, 1 mile NE; a sectored light is exhibited from Pointe de la Baumette, see 3.76. Mournes Rouges d'Agay, a range of reddish hills stand at the head of the bay; Le Rastel d'Agay is the highest peak. The inlet is well sheltered from the *Mistral* but SE winds can send in a swell. There are small craft moorings in the NE part of the head of the bay.

2 **Directions**. The bay is approached from the ESE passing at least 3 cables clear of La Chrétienne Light-beacon (round masonry tower, S cardinal, 9 m in height), 1 mile ESE of Pointe de la Baumette, which marks the S part of a dangerous reef on which stand Île des Vieilles and La Boute. At night the white sector (294°–032°) of Pointe de la Baumette Light leads towards the bay. Dangers marked by La Chrétienne Light-beacon lie within the red sector (260°–294°) of Pointe de la Baumette Light. Mariners should also note Le Périguier, a rock with a depth of 13 m over it, which lies in the middle of the entrance, the white sector of Pointe de la Baumette Light clears this and dangers on the SW side of the entrance. A large four-storey hotel close NE of Pointe de la Baumette Light, Château d'Agay, 2½ cables NNW of the light, an hotel with a square tower close to the château and the Roche Rouges Hôtel at the head of the bay are useful marks.

3 **Anchorage** can be obtained in depths of 15 to 16 m, mud and weed, 3 cables SW of the Château d'Agay. Small vessels may anchor nearer the head of the bay in depths of about 8 m. In strong winds small vessels using light anchors may drag. All vessels sheltering from NW winds are advised to moor with anchors NE and SW.

Small craft

Ports de Cogolin

3.86

1 **General information**. Ports de Cogolin (43°16′·0N, 6°35′·3E) comprise the purpose built marina complex on the S side of the mouth of Rivière Giscle and Port Cogolin, a private marina with 150 berths for vessels up to 15 m in length, 5 cables upstream.

2 **Marins de Cogolin,** unconnected to Rivière Giscle, is protected by breakwaters which also form the entrance and is marked by lights. The NNW facing entrance leads into the basins. The entrance is 85 m wide and has depths of 6·5 to 7·0 m. Château Bertaud, close WSW of Pointe de Bertaud, is a useful mark. A jetty extends 1¾ cables WNW from a position close N of the château; a light is exhibited from its head. The ochre coloured apartment blocks adjacent to each basin are useful marks when approaching the harbour.

3 **Facilities**. Comprehensive small craft facilities, including repairs.

Port Grimaud

3.87

1 **General information**. Port Grimaud (43°16′·4N, 6°35′·0E) is a large marina complex close N of the mouth of Rivière Giscle. The marina consists of a series of small basins and short channels separating small artificial islands and is connected to the Giscle. There are numerous bridges spanning the waterways of the marina. Short curved breakwaters protect the E facing entrance, which is marked by lights; Jetée Nord (white structure, green top, 6 m in height), S Spur Head (white mast, red top, 6 m in height). Although the marina provides 2300 berths the majority are privately owned. The maximum size of vessel accepted is; length 50 m, draught 2·5m.

2 **Directions**. The entrance is difficult to identify from seaward however the brightly painted church of Port-Grimaud is a useful mark. There are depths of 3 m in the entrance. In strong E winds the relatively shoal water of the entrance can cause breaks making entry difficult.

3 **Berths**. There are 250 berths for visiting yachts; most are Mediterranean moorings in depths of about 3 m. Marina berths for 79 vessels are available for vessels of 12 to 20 m length. During the summer months the harbour is frequently overcrowded.

4 **Facilities**. Comprehensive small craft facilities including repairs; slipway of 40 tonnes capacity. During the summer months a 24 hour VHF watch is maintained.

Port de Sainte-Maxime

3.88

1 **General information**. Port de Sainte-Maxime (43°18′·4N, 6°38′·4), a yacht harbour, lies on the NE part of the small bay fronting the town. Moles extend S and W from the coast enclosing the harbour. A central mole divides the port into two basins. The harbour entrance lies between the heads of the N and S moles and faces W. The entrance is marked by lights; Jetée Sud Head (white structure, dark green lantern, 5 m in height), Jetée Ouest Head (red structure). The maximum size of vessel accepted is; length 26 m.

2 **Directions**. When approaching from the E mariners should remain at least 2 cables clear of Sèche à l'Huile light-beacon, see 3.79, and beware of the dangers fronting the coast WSW of it, including Le Périguier, a rocky bank with a least depth of 6 m over it, which extends 1½ cables SE from the harbour. At night only the light on the S breakwater is visible from seaward and the lights marking the entrance are difficult to distinguish from the lights of the town.

3 **Anchorage** can be obtained in depths of 5 to 20 m, sand and weed, off the harbour entrance. The holding ground is good and the anchorage sheltered from the *Mistral* but exposed to the E and SE. Mariners should beware of Le Périguier, see above.

Small craft can also anchor to the W of the W breakwater in depths of 3 to 4 m, sand.

4 **Berths**. Mediterranean moorings in depths of 1 to 5 m on the moles, including Môle Léon Condroyer which divides the basins, and at finger jetties within the basins. There are about 800 berths.

Facilities. Comprehensive small craft facilities including repairs.

Port des Issambres (Port de San Peïre-sur-Mer)

3.89

1 **General information.** Port des Issambres (43°20′·5N, 6°41′·3E) is an artificial small craft harbour on the N coast of Baie de Bougnon, entered between Pointe des Sardinaux

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(43°19′N, 6°40′E) and Pointe des Issambres, 3 miles NE. The harbour basin is formed by a short W mole, extending S from the coast and a much larger, L-shaped, E mole. The entrance, between the mole heads, faces S and is marked by lights; S Breakwater Head (green column, white base, 5 m in height), W Jetty Head (red structure, 1 m in height). The harbour is not well sheltered from the *Mistral*. Maximum size of vessel accepted; length 15 m.

2 **Directions**. From a position S of Pointe de la Garonne, 4 cables E of the harbour, the entrance lies NW; mariners will find a pink, four-storey hotel 2 cables NW of the harbour a useful mark by day. The white sector (289°–356°) of the S breakwater light leads to the harbour; dangers E and W of the harbour lie within the green sector (356°–289°). Vessels should not pass close to the S breakwater because of the danger of grounding on the stone used in its construction.

3 **Anchorage** can be obtained in depths of 5 to 20 m within Baie de Bougnon which is sheltered from the NW but untenable during onshore winds.

Berths. The harbour provides 450 Mediterranean moorings, at finger jetties and on the inner faces of the breakwaters, in depths of 1·8 to 3·0 m.

Facilities. Usual marina facilities including fuel and repairs. Water but not provisions.

Port Férréol

3.90

1 **General Information**. Port Férréol (43°21′·6N, 6°43′·2E) is a small private yacht harbour in a small bay 7½ cables N of Pointe des Issambres (43°20′·9N, 6°43′·1E). The harbour is formed by a mole extending 50 m N from the S shore of the bay and its rocky N shore. A sectored light (W250°–310°, R310°–250°) (white structure, red top, 4 m in height) is exhibited from the head of the breakwater; a rock which dries to 0·2 m lies ½ cable NE of the head of the mole.

2 **Directions**. The harbour is approached from the E through the SW part of Golf de Fréjus which lies between Point des Issambres and Cap du Dramont, 7 miles NE. The white sector of the light exhibited from the mole clears the dangers in the approach to the entrance. The harbour is sheltered from the *Mistral* but the entrance, with depths of 4·4 to 5·0 m becomes difficult in strong SE winds. During the summer months the rocky reef on the N side of the entrance is marked by a buoy (starboard hand).

3 **Berths**. There are berths for 130 small craft at finger jetties and on the inner face of the mole in depths of 0·8 to 4·5 m. The maximum size of vessel accepted, length 9 m.

Facilities. None.

Chart 2166 plan of Saint-Raphaël

Saint-Aygulf

3.91

1 **General infomation**. Saint-Aygulf (43°23′·6N, 6°43′·9E) is a small marina close N of Pointe de Saint-Aygulf. The harbour is formed by two moles extending NNE from the coast; the head of the W mole extends a short distance towards the E mole and creates the N facing entrance. A light is exhibited from the head of the E mole, 75 m NNE of the entrance. Maximum size of vessel accepted; length 15 m.

2 **Directions**. The marina is approached from the E. Inshore waters 5 cables S of Pointe de Saint-Aygulf are encumbered by a rocky bank extending up to 1½ cables offshore. Mariners should note Roche Portanier, with a least depth of 0·8 m over it, near the edge of the bank and a dangerous wreck, respectively 5 and 4 cables S of Pointe de Saint-Aygulf.

3 **Berths**. 230 Mediterranean moorings on the moles and at finger jetties within the basin.

Facilities. Marina facilities only. A VHF watch is kept during working hours.

Port-Fréjus

3.92

1 **General information**. Port Fréjus (43°25′·2N, 6°45′·1E) is a purpose built marina on the NW coast of Baie de Saint-Raphaël. The harbour entrance faces ENE and lies between the S side of a hardstanding and the head of the W breakwater. Lights are exhibited from the head of Jetée Sud (white post, red top, 3 m in height) and the elbow of the E breakwater (white post green top, 3 m in height). The maximum size of vessel accepted is; length 30 m, draught 3·5 m.

2 **Directions**. The harbour is approached from the SSE through Baie de Saint-Raphaël and entry straightforward. However strong winds from the S make the entrance difficult. There are depths of 3·5 to 4·0 m in the entrance.

The installations of the French naval air station WSW of the harbour, a conspicuous belfry with pointed top 7½ cables NW of the harbour, the buildings of Saint-Raphaël to the E and Le Lion de Mer, (3.83), are useful marks.

3 **Foul anchorage**. Anchoring should not be attempted in an area containing obstructions, shown on the chart, SE of the mouth of Riviére de l'Argens, 9 cables SW of the harbour entrance. Mariners should also note the outfall pipes, shown on the chart, SW of the harbour and in the vicinity of the mooring buoys in the N part of Baie de Saint-Raphaël.

4 **Prohibited anchorage**. An area within which anchoring, dredging and trawling are prohibited lies SSW of Pointe des Lions (3.83) and is shown on the chart.

Berths. The marina has berths for 750 small craft in depths of 2·0 to 3·5 m.

Facilities. Comprehensive small craft facilities including repairs.

Port de Santa-Lucia

3.93

1 **General information**. Port de Santa-Lucia (43°24′·9N, 6°46′·9E) is a large marina consisting of two basins each protected, from the W, by a breakwater fronting the coast for 6½ cables NW of Le Lion de Terre (see 3.83). The marina can accept vessels up to 23 m in length (South Basin).

2 **Directions for North Basin**. The entrance is approached through Baie de Saint-Raphaël. The lights exhibited from Le Lion de Mer, see 3.83, Port de Saint-Raphaël S Mole (3.84), the dome of the church in the S part of Saint-Raphaël, a high-rise building 1½ cables E of it and the light (green structure, 6 m in height) exhibited from the N end of Port de Saint-Lucia breakwater can be used to lead to a position W of the entrance. The entrance faces N, has depths of about 9 m and is 50 m wide. The proximity of the coast and shoal water close N of the entrance require careful navigation and make the entrance difficult. At night mariners must beware of unmarked fishing nets, see 3.83, and the unlit mooring buoys shown on the chart.

3 **Directions for South Basin**. The S entrance can be approached passing either N or S of Le Lion de Mer (43°24′·5N, 6°46′·5E). A sectored light (red pylon, 8 m in height) is exhibited from the S end of the main breakwater; a white sector (040°–057°) leads NE to the entrance

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passing between Le Lion de Mer and Le Lion de Terre. Another white sector (082°–130°) leads ESE, passing N of Le Lion de Mer, however mariners should note the N limit of this sector includes an area of fish pens shown on the chart.

4 Other dangers around the islands and in proximity to both approaches lie within the red sectors of Saint-Raphaël breakwater S Head Light and Le Lion de Mer Light.

Berths. North Basin provides 700 Mediterranean moorings at pontoons in depths of 2 to 9 m. South Basin has 650 similar berths in depths of 2 to 7 m.

5 **Facilities**. Comprehensive small craft facilities including repairs, the boatyard has a 36 tonne boat lift.

Chart 2166

Port de Boulouris

3.94

1 **General information**. Port de Boulouris (43°24′·8N, 6°48′·5E) is a small private boat haven protected from the S by an L-shaped breakwater. A jetty extends 40 m W from the coast towards the head of the breakwater; the entrance, facing NNW, lies between them. The haven is exposed to winds from W to SSW. The basin has berths for vessels up to 10 m in length in depths of 0·8 to 2·0 m. Limited small craft facilities.

Port du Poussaï

3.95

1 **General information**. Port du Poussaï (43°24′·9N, 6°51′·0E) is a small fishing haven protected from the S by a breakwater. The haven can accommodate 25 boats up to 5 m in length with a maximum draught of 1 m.

Anse de Camp Long

3.96

1 **General information**. Anse de Camp Long is a sandy cove, 5 cables NNE of Cap du Dramont, used as a haven by fishing boats. A conspicuous green house stands 2 cables NNW of its head.

Port d'Agay

3.97

1 **General information**. Port d'Agay (43°25′·8N, 6°51′·5E) is a small yacht haven in the NW part of Rade d'Agay, close N of Pointe Gastellas, the main feature of the W side of the bay. A breakwater protects the haven from the E. There are berths for small craft up to 5 m in length and maximum draught of 1 m. The haven is also used by fishing vessels and small craft belonging to the nearby Customs training establishment.

CAP ROUX TO CAP D'ANTIBES

General information

Charts 2166, 2167

Description of waterway

3.98

1 The coastal route leads 12 miles NE from a position SE of Cap Roux (43°27′N, 6°55′E) to a position SE of Cap d'Antibes.

Inshore routes lead into Golfe de la Napoule (43°31′N, 7°00′E), Golfe Juan (43°33′N, 7°05′E) and between Îles de Lérins.

Topography

3.99

1 The rugged nature of the coast continues NE from Cap Roux to Pointe de l'Aiguille (43°30′N, 6°57′E), which marks the W side of Golf de Napoule. Here the coast becomes lower and the mountains recede. The Siagne river enters the NW part of Golfe de Napoule from a plain extending NNW from the head of the bay; the town of La Bocca (43°33′N, 6°58′E), which has an important railway station, stands on part of it. Further E the city of Cannes occupies the NE part of the bay. Îles de Lérins stand on a rocky bank extending SSE from the mainland separating Golf de Napoule from Golfe Juan. Between Cannes and Cap d'Antibes the coast is more elevated, generally wooded and backed by hills. Development is almost continuous.

Speed restrictions

3.100

1 Speed restrictions apply to areas of inshore waters between Cap Roux and Île de Lérins (43°12′N, 7°03′E) and are shown on the charts.

Prohibited anchorages

3.101

1 Anchoring, dredging and trawling are prohibited in the following areas, also shown on chart 2167:

Golfe Juan (43°33′N, 7°04′E).

Baie des Anges 43°38′N, 7°14′E), within 3 cables of the shore NE of Nice-Côte d'Azur Airport, within the approaches to the Port of Nice and the vicinity of Cap Ferrat.

Baie de Beaulieu (43°42′N, 7°21′E).

2 Anchoring, dredging and trawling are also prohibited in the vicinity of outfall pipes.

Golfe de Napoule (43°31′N, 7°00′E), outfalls extend 7 cables SE and 3 cables S from the head of the bay.

Golfe Juan, an outfall extends 1 mile SSE from Port de Golfe Juan (43°34′N, 7°04′E).

Principal marks

3.102

1 **Landmarks:**

Montagne du Cap Roux (43°27′·4N, 6°54′·4E).

Pic de l'Ours TV Mast (1¼ miles N of Montagne du Cap Roux), red and white, exhibits red obstruction lights.

Villa de la Croix des Gardes (43°33′·5N, 6°59′·1E), yellow coloured and conspicuous.

2 Mougins Belfry (2½ miles NNE of Villa de la Croix des Gardes).

Le Mont Chevalier tower (43°33′·1N, 7°00′·7E),

Île Saint-Honorat Château and Abbey Belfry (43°30′·5N, 7°02′·9E), stand out against the dark wooded background of Île Sainte-Marguerite to the N.

La Californie Observatory (43°33′·5N, 7°02′·7E), a streamlined modern structure with two platforms.

3 Vallauris water tower (3 cables NNE of La Californie Observatory), round, castellated, masonry.

Vallauris Light (white masonry tower, black top, 19 m in height) (43°34′·1N, 7°03′·7E).

Major lights:

4 Vallauris Light – as above, sectored light (G265°–395°, W305°–309°, R309°–336°, W336°–342°, G342°–009°).

La Garoupe Light (white square tower, 25 m in height) (43°33′·9N, 7°08′·0E).

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Directions

(continued from 3.77)

3.103

1 From a position about 5 miles SE of Cap Roux (43°27′N, 6°55′E) the coastal route leads NE passing, with positions relative to Cap Roux:

SE of Roche La Vaquette, a rock 0·9 m in height (2¼ miles NE), marked by a floating light-beacon (E cardinal) 1½ cables E of it, thence:

SE of Îles des Lérins, Les Moines Light-beacon (6¼ miles ENE), thence:

2 SE of Pointe de l'Illette Lighthouse (10 miles ENE).

Thence to a position about 5 miles SE of Cap d'Antibes (43°33′N, 7°08′E).

Useful mark:

Trayas viaduct (43°27′·8N, 6°55′·3E).

(Directions continue 3.141)

Golfe de la Napoule

General information

3.104

1 **Description**. Golfe de la Napoule lies between Pointe de l'Aiguille (42°30′N, 6°57′E) and Pointe de la Croisette, 4 miles ENE. The bay is steep-to and free from dangers between Pointe de l'Aiguille and La Bocca, 3 miles NNE; the 20 m depth contour lies generally within 3 cables of the shore. There are several small craft harbours on this coast.

2 Rade de Cannes, in the NE part of the bay, fronts the city and provides access to the small craft harbours of Cannes. This part of Golfe de la Napoule contains a number of shoals, to seaward of the 20 m depth contour, with depths of 4·1 to 15·8 m over them.

3 Îles de Lérins, a group of wooded islands, standing on a rocky bank, extend 2 miles S of Pointe de la Croisette on the E side of the bay. Île Sainte-Marguerite (43°31′N, 7°03′E) is the largest and highest of the group, Île Saint-Honorat, close S, is low and flat. Shallow, navigable channels lead between them.

4 **Prohibited area**. An area S and SE of Pointe de la Croisette (43°32′·1N, 7°02′·3E), marked by small buoys, is the approach to the Cannes-Palm Beach Heliport; navigation and anchoring within it are prohibited.

Landmarks:

5 Piton de San-Peyre (Saint Pierre) a cone shaped peak, on which stand the ruins of a convent (43°31′·6N, 6°56′·3E).

Villa de la Croix des Gardes (3.102).

Mougins Belfry (3.102).

Cannes, Le Suquet, belfry and tower (43°33′·1N, 7°0′·7E).

6 Cannes Carlton Hôtel, conspicuous white building with a dome at each end of the S elevation (7½ cables E of Le Suquet tower).

Directions

3.105

1 From a position about 3 miles SE of Pointe de l'Aiguille (3.104) the route leads NNE passing, with positions relative to Pointe de l'Aiguille:

WSW of Les Moines Light-beacon, (S cardinal, 14 m in height) (4 miles E), thence:

ENE of Roche La Vaquette, a rock, 0·9 m in height, (1½ miles S), marked by a floating light-beacon (E cardinal) 1½ cables E of it. Thence:

2 WSW of Île Saint-Honorat (3½ miles E), thence:

ENE of Pointe de la Galère (5 cables S), thence:

ENE of Pointe Saint-Marc (3 cables SSE).

Thence to a position about 1½ miles ENE of Pointe de l'Aiguille.

Useful marks:

3 Port de la Rague railway viaduct, red coloured, six arches close W of the town, see 3.119.

Château de la Napoule, a castle-like building on the NW side of the entrance to Mandelieu-la-Napoule (3.120) (43°31′·5N, 6°56′·6E).

Port de Cannes Breakwater Lighthouse (white round tower, 17 m in height), disused, (120 m W of the breakwater head light).

4 The installations of Cannes-Mandelieu Airport (43°32′·8N, 6°57′·2E).

La Bocca watertower (43°32′·9N, 6°58′·7E).

La Bocca church tower (2 cables ENE of watertower).

Port de Cannes Breakwater Head Lighthouse (white six sided tower, red top, 22 m in height) (43°32′·7N, 7°01′·1E).

Port Pierre Canto, Jetée Sud Head Light (yellow tower, dark green top, 9 m in height) (43°32′·5N, 7°01′·8E).

5 Pointe de la Croisette Casino, (43°32′·2N, 7°02′·3E).

Batéguier Light-beacon (W cardinal) (43°31′·6N, 7°01′·9E).

Île Sainte-Marguerite Citadel (43°31′·5N, 7°02′·7E).

Île Saint-Honorat, Château and Abbey (3.76).

Passage North of Île Sainte-Marguerite

General information

3.106

1 **Route**. The passage between Pointe de la Croisette (43°32′·1N, 7°02′·3E) and Île Sainte-Marguerite, 7 cables SSE, can be used by small vessels seeking a short route between Golfe de la Napoule and Golfe Juan or to obtain shelter from onshore winds. Local knowledge is required.

Depths. The channel has a controlling depth of 3 m. The least charted depth within the passage is 1·2 m.

2 **Prohibited anchorage**. Anchoring is prohibited in the vicinity of submarine cables and a water pipeline, shown on the chart, laid between the mainland and Île Sainte-Marguerite.

Speed limit. Speed is restricted to 10 kn in the W part of the channel; the area is shown on the chart.

3 **Anchorage**, sheltered from all except E winds, can be obtained in depths of 20 to 24 m, sand and gravel, 3 cables NE of Île Sainte-Marguerite citadel; small vessels anchor closer inshore.

Directions

3.107

1 From a position about 5 cables SW of Pointe de la Croisette the alignment (110°) of the rocks at the base of Île Sainte-Marguerite citadel (43°31′·5N, 7°02′·7E) with Pointe du Vengeur, 8 cables ESE, leads across the shoal bank passing, with positions relative to Pointe de la Croisette:

N of Bronde de Batéguier (7½ cables SW), a shoal with a least depth over it of 8·6 m; breaks form during S winds. Thence:

2 N of Batéguier Light-beacon (W cardinal) (6½ cables SSW) which marks the NW part of Plateau de la Jonquière, a reef extending NW from Pointe Batéguier. Thence:

N of Pointe Batéguier (7½ cables SSW), the NW point of Île Sainte-Marguerite, to a position 2 cables NW of the citadel.

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3 The track then leads E, mariners should adjust course to remain 1 cable N of Île Sainte-Marguerite citadel passing, with positions relative to it:
N of a light-buoy (N cardinal) (6 cables E) marking a fish farm, thence:
N of Basse du Vengeur (9 cables E), a rock with a charted depth of 7 m over it, thence:
N of Basse de la Convention (1¼ miles ESE), a rock with a charted depth of 2·3 m over it, thence:
4 N of Île de la Tradelière, close E of Île Sainte-Marguerite.

Useful marks:
Île Sainte-Marguerite Signal Station (disused), stands within the citadel, (43°31′·5N, 7°02′·8E).
Île Sainte-Marguerite, mast (43°31′·1N, 7°04′·2E).
La Fourmigue Light-Beacon (green truncated tower, 17 m in height) (43°32′·4N, 7°05′·0E).
Hôtel du Cap, an extensive building on the W side of Cap d'Antibes.
(Directions for Golfe Juan continue at 3.111)

Passage South of Île Sainte-Marguerite

General information
3.108

1 **Route**. The passage between Île Sainte-Marguerite (43°31′·5N, 7°03′·0E) and Île Saint-Honorat, 4 cables S, can be used by small vessels; good local knowledge is essential. A channel, ¾ cable wide, with a least depth of 3·4 m, leads between a bank fronting the S coast of Île Sainte-Marguerite and N of the shoalest parts of Plateau du Milieu, the underwater ridge between the islands. Mariners should note the speed limit of 5 kn through this passage.

2 **Least charted depth** 1·5 m over Plateau du Milieu, 1½ cables N of Île Saint-Honorat.

Prohibited area. Anchoring and diving are prohibited within 150 m of submarine cables laid across the channel and shown on the chart.

3 **Anchorage** can be obtained in depths of 5 to 10 m, mud, sand and weed, good holding ground, either side of Plateau du Milieu, outside the prohibited area. The anchorage is untenable in E or W winds.

Directions
3.109

1 From a position 2 cables S of Pointe du Dragon (43°31′·1N, 7°02′·1N) the track leads ENE passing, with positions relative to Pointe du Dragon:
N of Pointe du Barbier (6 cables SSE), thence:
N of the shoal, with a least depth of 1·5 m over it, (7 cables SW) thence:
S of the shoal with a least depth of 1·3 m over it (6½ cables ESE) and remaining 1 cable off the coast.

2 The track then leads ESE passing:
N of Pointe Saint Féréol, the E end of Île Saint-Honorat, thence:
N of Île Saint Féréol, 1 cable E of Île Saint-Honorat.
Thence to a position about 3 cables S of Île de la Tradelière, the island close E of Île Sainte-Marguerite.

Useful marks:

3 Île Saint-Honorat Abbey Belfry (43°30′·5N, 7°02′·9E).
White turret surmounted by a statue close W of Port de Saint-Honorat (43°30′·6N, 7°02′·8E).
Île Sainte-Marguerite, mast (43°31′·1N, 7°04′·2).
(Directions for Golfe Juan continue at 3.111)

Golfe Juan

General information
3.110

1 Golfe Juan is entered between Pointe de la Croisette (43°32′·2N, 7°02′·3E) and Cap d'Antibes 4½ miles ENE. The bay is sheltered from the SW by Îles de Lérins and generally its shores are fronted by a bank, with depths of less than 5·5 m, which extends 4½ cables offshore.

The W side of the bay is dark and rocky, lying at the foot of some relatively high hills. The slopes are covered with vegetation and numerous buildings.

2 The N coast is fronted by a sand and gravel beach behind which there has been considerable development. The city of Golfe-Juan and resort of Juan-les-Pins occupy the head and NE side of the bay.

The E shore is dominated by La Garoupe, 1¼ miles N of Cap d'Antibes, on which stand a chapel, a signal station and La Garoupe Lighthouse (see below).

3 The entrance to Golfe Juan is encumbered by Basses de la Fourmigue, a rocky reef. La Fourmigue, a group of low dark rocks, lie at the W end of the reef, almost in the middle of the entrance. The highest of these rocks is marked by a light (green truncated tower, 17 m in height). The submerged part of the reef extends 8 cables ENE to Le Sécanion, a rock with a depth of 5 m over it; there are depths of 6·3 to 18·0 m over the remainder of the reef. Navigable channels lead W and E of Basses de la Fourmigue.

4 **Prohibited anchorages** lie within a rectangular area 8 cables NW of La Fourmigue Light-beacon, used for fish farming, and in the vicinity of the outfall pipe extending SSE from Golfe-Juan breakwater, both are shown on the chart.

Current. In the approaches to Golfe-Juan the currents are weak, variable and generally follow wind direction.

Landmarks:

5 Vallauris Lighthouse (43°34′·1N, 7°03′·7E) (3.102).
Vallauris Sanatorium, 1¼ miles NW of lighthouse.
La Garoupe Lighthouse (white square tower, 25 m in height) (43°33′·9N, 7°08′·0E).
La Garoupe Signal Station, round tower close SE of lighthouse.
6 Notre-Dame d'Antibes, chapel close SW of lighthouse.
Tour Graillon (round, 33 m in height) (43°33′·0N, 7°07′·2E).
Hôtel du Cap, an extensive building (1 cable SE of Graillon Tower).
Point de l'Îlette Lighthouse (white tower, black top, 15 m in height), (43°32′·7N, 7°07′·3E).

7 **Major lights**
Vallauris Light (3.102).
La Garoupe Light – as above.

Directions
3.111

1 **West channel**. From a position about 2 miles E of Les Moines Light-beacon (S cardinal, 14 m in height) (43°30′·0N, 7°03′·1E) a white sector (336°–342°) of Vallauris Light (3.110) leads through Passe de l'Ouest. The track passes:
E of Île de la Tradelière (43°31′·0N, 7°04′·5E). At night this island is difficult to distinguish. Thence:
2 E of Point de la Convention, (43°31′·1N, 7°04′·3E), thence:

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ENE of Basse du Vengeur (3.107), thence:
W of La Fourmigue Light-beacon, (green truncated tower, 17 m in height) (43°32′·4N, 7°05′·0E), which marks the W part Basse de la Formigue.

3 The dangers of Basse de la Formigue lie within a red sector (070°–090°) of Pointe de l'Ilette Light (3.110) which may be used to navigate N of these rocks into Golfe Juan. Mariners should also note the buoys marking the fish farming area (3.110); the SE corner of this area is marked by a light-buoy.

4 **East channel**. From a position about 1 mile S of Cap d'Antibes a white sector (305°–309°) of Vallauris Light (3.110) leads through Passe de l'Est passing, with positions relative to Pointe de l'Illette Light, (3.110):
SW of Sèche de Saint Pierre, a rocky shoal, with a least depth of 3·5 m over it, (2½ cables SSE), thence:

5 SW of Pointe de l'Illette Light, thence:
SW of Le Rascoui, a rock with a least depth of 1 m over it, (1½ cables W), thence:
SW of Tour Graillon, (4 cables NNW) (3.110), thence:
SW of Le Lampadour, a shoal, with a least depth of 4·6 m over it, (4½ cables NW), thence:
NE of Le Sécanion, a shoal, with a least depth of 5 m over it, at the E end of Basse de la Formigue.

6 **Boat channel**. In calm weather vessels of less than 5 m draught may pass between La Formigue Light-beacon and Le Sécanion.

Anchorage

3.112

1 **General information**. Golfe Juan provides one of the best roadsteads on this part of the coast however the quality of the holding ground has been reported to vary considerably. The anchorage lies E of the prohibited area surrounding the outfall pipe, which extends S from Port de Golfe-Juan, and a line between the SE corner of the area and La Formigue Light-beacon.

2 **Large vessels** may obtain anchorage, as shown on the chart, in depths of 13 to 15 m on the alignment (202°) of La Formigue Light-beacon with the E end of Île Sainte-Marguerite with La Garoupe Lighthouse bearing between 065° and 071°.

Small vessel anchorage. Smaller vessels can obtain anchorage in depths of 10 to 12 m further N with La Garoupe Lighthouse bearing approximately 080°.

Anchorages and minor harbour

Chart 2167 plan of Cannes

Rade de Cannes

3.113

1 **General information**. Rade de Cannes lies within the E part of Golfe de Napoule (3.104) with the town of Cannes occupying the coast and slopes of the hills rising close N of it. The anchorage in the NE part of the roadstead is used regularly by ferries and cruise ships.

2 Generally deep water, free from dangers, lies SW of a line between La Bocca church (43°33′N, 6°59′E) and Batéguier Light-beacon (2½ miles SE). To the NE of this line good anchorage can be obtained however mariners should beware of a series of rocks, which lie up to 1½ miles ESE of La Bocca church, with depths of 4·1 to 15·7 m over them. La Traille, a rock with a least depth of 15·8 m over it and La Liére, a rock with a least depth of 10 m over it lie respectively on the NW limit of and within the designated ferry anchorage; all are shown on the chart.

3 A sewer outfall extends S from the coast W of Port de Cannes, passing W of the small vessel anchorage, to the vicinity of La Traille. Le Four à Chaux, a bank with a least depth of 7 m over it lies close E of the anchorages.

Clearing bearing. The alignment (325½°) of Port de Cannes Breakwater Head Light with Le Sécant Light-beacon (white tower, dark red top, 14 m in height) (1 cable NW) can be used to remain clear of Le Four à Chaux.

4 **Anchorage**. The designated ferry anchorage, in depths of 10 to 53 m, mainly mud, good holding ground, lies 5 cables S of Port de Cannes Breakwater Head Light (3.114) and is shown on the chart.

Smaller vessels can obtain anchorage in depths of about 12 m, mud and weed, 2 cables S of Port de Cannes Breakwater Head Light. Mariners should note that in strong S winds a high sea state develops in the anchorages. During a strong *Mistral* vessels may obtain anchorage E of Pointe de la Croisette, N of Île Sainte-Marguerite.

Port de Cannes

3.114

1 **General information**. Port de Cannes (43°33′N, 7°01′E) is the largest and deepest of the harbours associated with the city. The harbour occupies the NW corner of the bay fronting Cannes and is now primarily a yacht harbour although small ferries, providing services to Îles des Lérins, and a small fishing fleet operate from it.

2 The harbour is protected from the SW by a mole extending 3 cables SE. The head of the mole exhibits a light (white six sided tower, red top, 22 m in height) (43°32′·8N, 7°01′·1E) and a disused lighthouse stands close W of it, see 3.105. A large area of hardstanding at the root of the mole forms the the SW side of the main harbour basin. The SE side of the harbour is protected by a mole extending 1 cable SW. Shoals extend S and SE from the E mole; Le Sécant Light-beacon (3.113), marks their S edge.

3 The harbour accepts vessels up to 122 m in length, maximum draught 5·5 m. There are no pilots however the Harbour Master can arrange for experienced local mariners to assist visiting vessels. Mariners are advised not to attempt entering harbour at night. There are depths of 5·6 to 8 m in the entrance channel. Between Île Sainte-Marguerite and Port de Cannes, within a regulated area shown on the chart, there is a speed limit of 10 kn; within the harbour itself there is a speed limit of 3 kn. The harbour is usually very crowded and vessels must not enter until allocated a berth.

Port de Cannes from S (3.114)
(Original dated 1999)

(Photograph – SHOM)

4 **Directions.** The harbour entrance channel is approached from the SSW, the track leads:

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N of Port de Cannes Breakwater, thence:
S of Le Sécant Light-beacon thence:
as required to pass through the basin entrance.

Anchorage see 3.113.

5 **Berths.** The harbour provides 800 berths in depths of 1·4 to 8·0 m. Larger vessels berth either on the SW (Quai Max Laubeuf) or E (Jetée Albert Edouard) sides of the basin.

Facilities. Comprehensive small craft facilities including repairs; boat lift with 50 tonne capacity; port radio station; hospital and a lifeboat.

6 **Communications**. Nearest airports Cannes Mandelieu and Nice-Côte d'Azur.

Chart 2167

Le Piton anchorage

3.115

1 Anchorage may be obtained in depths of 14 to 16 m, mud and weed, 5 cables NW of Tour Graillon (43°33′·0N, 7°07′·1E) (3.110). In the W part of the anchorage depths shoal to 9 m. There are fish farms, marked by small buoys, 2½ and 4 cables NNW of Le Graillon Tower. The anchorage is exposed to S winds.

Small craft

Chart 2167

Port de la Figueirette (Port de la Miramar)

3.116

1 **General information**. Port de la Figueirette (43°29′·1N, 6°56′·1E), a marina, lies in the NW part of Baie de la Figueirette, 5 cables W of Pointe de l'Esquillon, a wooded, cliffy headland with a viaduct girdling it. The harbour is protected from the E and S by an L-shaped mole; a sectored light (white column, green top, 9 m in height) (W275°–348°, G348°–275°) is exhibited from its head. The W facing entrance lies between the head of the main breakwater and a jetty extending S from the coast. A light (fixed red, strip) is exhibited from the jetty. The basin is well protected and accepts vessels up to 15 m in length and maximum draught of 1·9 m. A fish farm, marked by buoys, lies 1 cable E of the mole; another smaller fish farm occupies an area W of the harbour between October and June and is also marked by buoys.

2 **Directions**. Baie de la Figueirette is approached from the SE. Dangerous rocks extend 3 cables SE from Pointe de l'Esquillon. La Vaquette, a rock 1·8 m in height, is the most SE of these dangers and marked by a floating light-beacon (E cardinal), 1½ cables E of it. At night the white sector of Port de la Figueirette Mole Light clears the dangers SE of Pointe de l'Esquillon. There is a depth of about 6 m in the entrance.

3 **Anchorage** can be obtained in fair weather off the harbour in depths of 7 to 20 m sand and rock.

Berths. The marina provides 235 Mediterranean moorings with depths of 1·5 to 2·0 m. Mariners navigating keelboats should note there is less water at the foot of the basin walls. The NE part of the harbour is reserved for fishing vessels.

Facilities. Usual marina facilities.

Port de la Galère

3.117

1 **General information**. Port de la Galère (43°30′·0N, 6°57′·4E), a small yacht harbour, lies between Pointe de la Galère and Pointe Saint Marc, 2 cables NNE. The harbour is formed by a breakwater which extends ENE then N from Pointe de la Galère, its head is marked by a light (white tower, red top, 7 m in height). The N facing entrance is 30 m wide and can be dangerous in E winds. The harbour accepts vessels up to 12 m in length; maximum draught 2 m.

2 **Directions**. The harbour is approached from the E passing S of light-buoys (starboard hand) moored SE of Point Saint Marc and 60 m N of the breakwater head. The approach channel has depths of 6 to 8 m. Mariners should note that these buoys may be removed for maintenance, without replacement, during the summer. A rocky patch with a depth of 2·6 m over it lies close off the the SE corner of the basin.

3 **Berths**. The harbour provides 210 Mediterranean moorings with depths of 2 to 4 m.

Facilities. Limited marina facilities.

Théoule-sur-Mer

3.118

1 **General information**. Théoule-sur-Mer (43°30′·6N, 6°56′·4E) is a small yacht harbour protected by two moles; the E mole extends N from the coast and exhibits a sectored light (red tower, 6 m in height) (R, W265°–335°), the N mole extends E from the coast. The entrance, between the heads of the moles, faces NNW is 25 m wide and has depths of 2·8 m. The harbour is sheltered from the *Mistral* and from the E. Vessels up to 13 m in length are accepted.

2 **Directions**. The harbour is approached from the NE. The dangers from close E of Pointe de l'Aiguille to the harbour entrance lie within the red sector (265°–335°) of E mole light.

Anchorage can be obtained in depths of about 20 m, mud, good holding ground, 2 cables ENE of the harbour entrance. The anchorage is sheltered from the W and S.

3 **Berths**. The harbour provides 180 Mediterranean moorings, in depths of 2 to 3 m, on the inner faces of the moles and at finger jetties within the harbour basin.

Facilities. Limited marina facilities. There is a lifeboat stationed here.

Port de la Rague

3.119

1 **General information**. Port de la Rague (43°31′·0N, 6°56′·4E) is a medium sized, well protected harbour for small craft formed by an L-shaped mole extending SE then SW from the coast. A light (white tower, green lantern, 7 m in height) is exhibited from its head. The harbour consists of a large main basin and a smaller one NW of it. A railway viaduct, with a vertical clearance of 9 m, spans the short channel connecting the basins. The harbour entrance between the head of the mole and a short breakwater extending ESE from the coast is 50 m wide and faces SSW. The head of the breakwater also exhibits a light (red column, white top, 5 m in height). Vessels up to 30 m length are accepted.

2 **Directions**. The harbour is approached from the ESE and can be identified by the mole head light and the six arch railway viaduct described above. The harbour entrance has depths of 3 to 5 m; deeper water lying to the E. Mariners should note depths of less than 3 m lie 50 m SSE of the short breakwater head. The entrance becomes difficult in strong E winds.

3 **Anchorage** see 3.118.

Berths. The harbour provides 520 berths in depths of 1·5 to 5·0 m.

Facilities. Usual marina facilities including repairs and a boat lift of 30 tonnes capacity. Limited VHF watch.

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Port de Mandelieu-la-Napoule

3.120

1 **General information**. Port de Mandelieu-la-Napoule (43°31′·5N, 6°56′·8E) is a large yacht harbour protected to the N and E by an L-shaped mole extending E, from the S bank of the river L'Argentière, then SW, parallel to the coast. A light (white tower, green top, 7 m in height) is exhibited from its head. The well sheltered harbour accepts vessels up to 50 m in length.

2 **Directions**. The harbour is approached from SE; Le Piton de San-Peyre (3.104) and Château de la Napoule (3.105) are useful marks. The harbour entrance faces SW, is 60 m wide with depths of about 8 m.

Anchorage. Smaller vessels can, with permission, anchor on the NW side of the entrance.

3 **Berths**. The marina provides 1100 berths in depths of 1·5 to 6·0 m.

Facilities. Comprehensive small craft facilities. Limited VHF watch.

Cannes-Marina

3.121

1 **General information**. Cannes-Marina (43°32′·1N, 6°56′·3E) lies 5 cables upstream from the mouth of the river La Siagne. The marina complex consists of two basins separated by an artificial promontory on which stand several blocks of flats; high-rise developments surround the marina. The marina accepts vessels up to 12 m in length, maximum draught 1·1 m but access is limited by a sand bar, with a least depth of 0·8 m over it, at the mouth of La Siagne and the vertical clearance of 3·7 m beneath a cable car crossing.

2 **Directions**. Several conspicuous blocks of flats, standing on the coast between Port de Mandelieu-la-Napoule (3.120) and the mouth of La Siagne, are useful marks when identifying and approaching the entrance. The channel into the river is not marked. The river is spanned by two road bridges (vertical clearance 5 m), a railway bridge (vertical clearance 4 m) and the cable car crossing described above. The river mouth is navigable only in calm weather or with offshore winds; any wind or sea from the SE or E causes breaks over the bar.

3 **Anchorage** can be obtained in a depth of 10 m, mud and weed, 1 cable SE of the entrance.

Berths. The marina provides 1800 berths for motor yachts.

Facilities. Usual marina facilities.

Chart 2167 plan of Cannes

Port Pierre Canto

3.122

1 **General information**. Port Pierre Canto (43°32′·5N, 7°02′·0E) is a large purpose built marina occupying the SE corner of the bay fronting Cannes; sometimes referred to as the second port of Cannes. The harbour consists of two basins protected by two moles; the W mole extends SSW towards the curved S mole. The latter forms the smaller S basin of the harbour and also the W side of the harbour entrance. Lights mark the harbour entrance; Jetée Sud Head (yellow tower, dark green top, 9 m in height), Jetée Ouest (elbow) (red column, 4 m in height). A bouy (N cardinal) marks shallow water around the head of the S mole. There are depths of 6·3 to 7·0 m in the entrance. The harbour accepts vessels up to 60 m in length.

2 **Directions**. The entrance is approached from the SW, through Rade de Cannes (3.113) crossing Le Four à Chaux, a bank with a least depth of 7 m over it, 3 cables SW of the light. The approach and entry present little difficulty.

Anchorage see 3.113.

Berths. The harbour provides 750 Mediterranean mooring berths in depths of 2 to 8 m. Large yachts berth at Quai Grands Yacht on the S side of the S basin.

3 **Facilities**. Comprehensive small craft facilities including boat building and repairs; 70 tonne capacity boat lift.

Chart 2167

Port de la Croisette and Port communal de Cannes

3.123

1 **General information**. Port de la Croisette and Port communal de Cannes lie close NE of Pointe de la Croisette (43°32′·2N, 7°02′·3E). Port communal de Cannes, a boat haven with depths of 0·5 to 1·5 m, occupies the NE corner of this small complex. The haven is managed by the City of Cannes. During the *Mistral* the entrance is dangerous and the haven uncomfortable; it is also exposed to S winds.

2 Port de la Croisette (Palm Beach) is protected from the SW by a mole. The haven, operated by Yacht Club de Cannes, provides 80 berths in depths of 1·0 to 1·8 m for vessels up to 8 m in length.

Port du Mouré Rouge

3.124

1 **General information**. Port du Mouré Rouge (43°32′·6N, 7°02′·6E) is a small yacht harbour on the W coast of Golfe Juan which belongs to the City of Cannes. The harbour is formed by two moles; the W mole extends E, the E mole extends SSW and exhibits a sectored light (white tower green top, 6 m in height) (W282°–312°, G312°–282°) from its head. The entrance, between the moles, faces SW. Mariners should beware of a rocky obstruction which lies close off the central part of the E mole. The harbour accepts vessels up to 8 m in length and maximum draught 1·2 m.

2 **Berths**. Mediterranean moorings only.

Facilities. Limited small craft facilities.

Port de l'Île Saint-Honorat

3.125

1 **General information**. Port de l'Île Saint-Honorat (43°30′·6N, 7°02′·9E) is a small private boat haven midway along on the N coast of the island. The basin, protected from the N by two breakwaters, which also form the narrow (about 12 m wide) N facing entrance, has depths of 1·0 to 2·2 m. Vessels up to 10 m in length are accepted. Permission to use the harbour must be obtained from the owner; visiting vessels berth on the W quay. Ferries operating between Île Saint-Honorat, Île Sainte Marguerite Cannes and Golfe-Juan use a jetty close W of the haven.

Port de Golfe-Juan

3.126

1 **General information**. Port de Golfe-Juan (43°34′N, 7°04′E) is a large marina and fishing port formed by two breakwaters from which lights are exhibited. W breakwater (white tower, green lantern, 6 m in height), Digue (Jetée) Sud (white column, red top 6 m in height). The lights also mark the W facing entrance. The harbour is divided by Quai Napoleon, the W basin is Port Public, the E basin

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Port Camille Rayon, a privately owned marina. The harbour is well sheltered and accepts vessels up to 75 m in length.

2 **Directions**. The entrance presents little difficulty. A pink coloured high rise building, with two rows of arches on its S elevation, stands N of the harbour and can be a useful mark. The entrance has a dredged depth of 5 m however depths of 3 m lie as much as ½ cable SW and ¼ cable NW of Digue Sud Light; depths of 1·9 m lie within ¼ cable of the W breakwater.

3 **Berths**. The harbour provides a total of 1710 Mediterranean mooring berths. Port Public has berths in depths of 1·5 to 3·0 m and accepts vessels of maximum draught 2·5 m. However mariners should note a depth of 2·1 m in the entrance between the heads of Quai Napoleon and W breakwater. Fishing vessels berth in the NW part of this basin. There are depths of 2 to 5 m in Port Camille Rayon.

4 **Facilities**. Comprehensive small craft facilities including all types of repairs; a boat lift of 100 tonne capacity. VHF watch maintained at Port Camille Rayon, limited watch Port Public.

Port-Gallice

3.127

1 **General information**. Port-Gallice (43°33′·8N, 7°07′·0E), a yacht harbour in the NE part of Golf Juan, is formed by two moles. The head of the W mole exhibits a light (white column, dark green top, 8 m in height). The harbour is well sheltered, accessible in all weather and accepts vessels up to 30 m in length.

2 **Directions**. The harbour is approached from the SSW through a buoyed channel approximately 1 cable long. The channel lies SE of shoals with depths of about 2 m over them; Sèche de la Verne is the outermost. The seaward end of the channel is marked by light-buoys. The N facing harbour entrance lies between the head of the N mole and a spur extending NNE from the head of W mole.

3 **Berths**. The harbour provides 525 Mediterranean mooring berths with depths of 1 to 3 m.

Facilities. Comprehensive small craft facilities including repairs; 30 tonne capacity boat lift. VHF watch maintained.

Port du Crouton

3.128

1 **General information**. Port du Crouton (43°33′·7N, 7°07′·2E) a yacht harbour adjacent to Port-Gallice (3.127). A T-shaped breakwater protects the W side of the harbour, the E end of the head exhibits a light (red post, white base, 2 m in height). A short breakwater extending SW from the coast towards the W breakwater head forms the E side of the harbour. There are depths of 0·7 to 2·2 m in the approach. The entrance faces SE and is 30 m wide. The harbour accepts vessels up to 10 m in length.

2 **Berths**. The harbour is divided into two basins and provides 380 Mediterranean mooring berths in a depth of 1·5 m.

Other names

3.129

1 Anglais, Calanque des (43°25′·7N, 6°52′·8E).
Ay, Point de l' (43°16′·4N, 6°41′·3E).
Baumette, Calanque de la (43°25′·7N, 6°52′·5E).
Besse, Île (43°25′·6N, 6°52′·8E).
Bessons, Les (43°25′·7N, 6°53′·2E).
Boularis, Lycée de (Saint Joseph Orphanage) (43°25′·4N, 6°48′·8E).

2 Can, Basses de (43°15′·6N, 6°43′·0E).
Can, Basses de S.E. (43°15′·2N, 6°43′·7E).
Capon, Pointe du (43°15′·3N, 6°41′·5).
Cougoulin, Basse (43°19′·0N, 6°40′·7E).
Croisette, Pointe (43°17′·8N, 6°37′·5).
Galliarde, Pointe (43°18′·4N, 6°38′·0E).
Gourdon, Mont de (Rocher Gourdon), (43°43′N, 6°59′E).

3 Grand Jardin, Plateau du (43°31′·0N, 7°03′·0E), a bank fronting the S coast of Île Sainte-Marguerite.
Or, Basses de l'Île d' (43°24′·7N, 6°50′·7E).
Paume, Pointe de la (43°29′·0N, 6°56′·8E).
Saint-Julien, Le (43°16′·3N, 6°44′·5E), an offshore bank.

CAP D'ANTIBES TO THE FRANCO-ITALIAN BORDER

GENERAL INFORMATION

Chart 2167

Area covered

3.130

1 This section covers the mainland coast of France between Cap d'Antibes (43°33′N, 7°08′E) and the Franco-Italian border, approximately 25 miles NE. The coast of the Principality of Monaco. The section is arranged as follows:

Cap d'Antibes to Cap Ferrat (3.134).
Cap Ferrat to the Franco-Italian border (3.161).

Topgraphy

3.131

1 The generally rocky coast extends NE in a series of bays separated by unremarkable headlands. The most significant features of this coastline being the mountains close to the coast and, further inland, the peaks of the Alpes Maritimes which can provide useful landmarks from offshore in good weather.

Depths

3.132

1 The coast is steep-to and free from isolated dangers to seaward of the 20 m depth contour. Between Cap d'Antibes and Cap Ferrat the 100 m depth contour lies within 1 mile of the coast. NE of Cap Ferrat the 50 m depth contour lies generally within 1 mile of the coast.

Routes

3.133

1 From a position SE of Cap d'Antibes the coastal route continues NE to a position SE of the mouth of Rivière Saint Louis, also known as Fiume San Luigi, the approximate position of the Franco-Italian border.

The ocean route between the W Mediterranean and the Gulf of Genoa continues NE approximately 20 miles off this coast and is not described.

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CAP D'ANTIBES TO CAP FERRAT

General information

Chart 2167

Description of waterway

3.134

1 The coastal route from Cap d'Antibes to Cap Ferrat leads about 12 miles NE. The approach through inshore waters to Port de Nice (43°42′N, 7°17′E). The anchorages and minor harbours along this coast.

Topography

3.135

1 Between Cap d'Antibes and Cap Ferrat the Alpes Maritimes recede from the coast which, from seaward, appears low. To the E of Nice the coast becomes more mountainous.

2 Baie des Anges, the largest of the bays, extends from Pointe Belaye (43°35′·6N, 7°07′·8E) to Cap de Nice, 9 miles NE. The shores of the bay are low, fronted by a beach of sand and gravel and backed by a range of low hills a short distance inland. A promontory, created mainly by deposits from Rivière Var, divides Baie de Anges; Nice-Côte d'Azur Airport stands on the promontory. NE of the airport the city of Nice surrounds the NE part of the bay. Port de Nice lies close W of Cap de Nice and is the only significant commercial port on this part of the coast.

3 Between Cap de Nice and Cap Ferrat the narrower inlet of Rade de Villefranche extends N. Development has spread between the cities, towns and villages and is almost continuous along this fashionable resort coast.

Prohibited and restricted areas

3.136

1 Navigation is prohibited, except for authorised vessels, within an area extending 300 m off Nice-Côte d'Azur Airport. The area is marked by buoys and shown on the chart. Vessels with a masthead height greater than 4 m are prohibited from entering areas, also shown on the chart, SW and NE of the airport runways.

2 Anchoring is prohibited within 3 cables of the coast between Nice-Côte d'Azur Airport and Port de Nice and in the approaches to the port. The areas are shown on the chart.

Areas within which speed restrictions apply or use is limited to vessels entering or leaving harbour lie S of Port de Nice and Rade de Villefranche and are shown on the chart.

Seaplane operating area

3.137

1 Seaplanes collecting seawater to fight forest fires may be encountered in the vicinity of Cap Ferrat (43°41′N, 7°20′E).

Explosives dumping ground

3.138

1 A circular area, shown on the chart lies E of Antibes (43°35′N, 7°07′E).

Natural conditions

3.139

1 **Current**. A SW current with a rate of ¾ kn should be expected along this coast however strong SW winds can induce a counter current between Cap d'Antibes and Cap Ferrat.

Principal marks

3.140

1 **Landmarks:**

Montagne Cheiron (43°49′·0N, 6°58′·3E) (Chart 1974).

Mont Chauve d'Aspremont (Mont Calvo) (43°46′·3N, 7°15′·3E).

La Garoupe Lighthouse (43°33′·9N, 7°08′·0E) (3.110).

Pyramidal buildings Marina Baie des Anges (43°38′N, 7°08′E).

Cagnes-sur-Mer (43°40′N, 7°10′E).

2 Nice-Côte d'Azur Airport (43°39′·5N, 7°13′·0E).

Radio mast, Mont Leuza (Leuse) (43°43′·3N, 7°19′·3E).

Mont Boron Fort (43°41′·5N, 7°18′·1E).

Fort de Mont Alban (43°42′·1N, 7°18′·1E)

Cap Ferrat Lighthouse (white 8 sided tower, green band at base, green lantern, 34 m in height) (43°40′·5N, 7°19′·7E).

3 Hôtel du Cap Ferrat (43°40′·7N, 7°20′·0E).

Major lights:

La Garoupe – as above.

Antibes, Port-Vauban Digue du Large Head (tower, white to seaward, yellow to landward, red top, 13 m in height) (43°35′·5N, 7°08′·0E).

Cap Ferrat – as above.

Directions

(continued from 3.103)

3.141

1 From a position about 5 miles SE of Cap d'Antibes (43°33′N, 7°08′E), the coastal route leads NE passing:

SE of La Garoupe Light (3.110), thence:

SE of Nice-Côte d'Azur Airport (3.140), thence:

SE of Cap Ferrat Light (3.140) to a position SE of Cap Ferrat.

(Directions continue at 3.141)

Port de Nice

Chart 149 plans of Approaches to Nice and Nice

General information

3.142

1 **Position** Port de Nice (43°41′·7N, 7°17′·2E) is situated at the NE end of Baie des Anges.

Function. Port de Nice is the only significant commercial port on this part of the coast and is the main ferry port for services to Corsica. In addition to handling general cargo there is also a specialised bulk cement service to Corsica and North Africa. A small fishing fleet operates from the port and there are small craft facilities.

2 **Topography**. The port lies within the city of Nice, between Le Château, a distinctive wooded hill close inland of Pointe Rouba-Capéou (43°41′·6N, 7°16′·9E), and Cap de Nice, ¾ mile SE. Cap de Nice is the SW part of Mont Boron which dominates the E side of the city.

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Port de Nice from S (3.142)

(Original dated 1999)

(Photograph – SHOM)

Approach and entry. Port de Nice is approached through Baie des Anges and entered 4 cables NW of Cap de Nice.

3 **Port Authority**. Capitainerie du Port de Nice, Quai d'Entrecasteaux 2 F-06300 Nice, France.

Limiting conditions

3.143

1 **Deepest and longest berth**. Quai du Commerce, on the N side of Bassin du Commerce; 8·5 m depth, 240 m in length.

Abnormal water levels. Wind and atmospheric pressure can cause water levels within the port to vary between 0·3 to 0·7 m. A rise of 0·9 m has been recorded during a strong E wind.

2 **Current.** Within the port a S current with a rate of ½ kn should be expected. The rate increases following a period of heavy rain.

Maximum size of vessel handled. Length 185 m, draught 8·4 m.

Local weather and sea state. Winds from the S and SW are unusual but may accompany rain storms; they create a heavy swell in the entrance which then becomes difficult.

Arrival information

3.144

1 **Port operations**. 0600–2000 local time in summer, 0800–1800 local time in winter.

Port radio. VHF watch maintained, see relevant *Admiralty List of Radio Signals*.

Notice of ETA required; 24 hours in advance, confirmation when within VHF range, see relevant *Admiralty List of Radio Signals*.

2 **Anchorage**. A prohibited anchorage area, shown on the chart, extends 1 mile SSW of the entrance. Rade de Villefranche provides good anchorage, see 3.152, for vessels waiting to enter Port de Nice or that are too large for the port.

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Pilotage and tugs. Pilotage is compulsory for vessels greater than 50 m in length. The pilot vessel has a black hull, white anchor on the bow. There are no tugs.

3 **Regulated area**. Entry to an area, shown on the chart, which extends 1 mile to seaward of the harbour entrance, is limited to vessels entering or leaving the port or its anchorages. Within the area warships and vessels greater than 50 m in length have right of way. Swimming, diving and small boats are prohibited.

Harbour

3.145

1 **General layout**. Port de Nice comprises three main basins, Bassin du Commerce, Bassin des Amiraux and Bassin Lympia, which extend NW from the entrance, then N along the E side of Le Château. Jetée du Large, which extends 3 cables SE from the coast, protects the SW side of the harbour. A much smaller mole, Épi de la Poudrière, extends SW from the coast towards the head of Jetée du Large. The harbour entrance faces SE, between the heads of Jetée du Large and Épi de la Poudrière.

2 **Principal marks**

Landmarks:

Mont Gros Observatory (43°43′·7N, 7°18′·0E) (chart 2167).

Radio mast, Mont Leuse (43°43′·3N, 7°19′·5E).

Radio mast, Mont Alban (3.140).

Jetée du Large Head Lighthouse (white square tower, red lantern, white cupola, 22 m in height) (43°41′·5N, 7°17′·3E).

3 **Major light:**

Jetée du Large Head – as above.

Directions

3.146

1 The entrance is difficult to identify from offshore however the approach to Port de Nice is free from dangers and several landmarks can provide straightforward leads.

Leading marks. The alignment (012°) of the following marks leads towards the entrance:

Jetée du Large Lighthouse – as above and:

Mont Gros Observatory – as above.

2 Alternatively the alignment (036°) of the following marks may be used. Mariners should note this set of marks becomes obscured on closing the coast:

Radio mast, Mont Leuse – as above, and:

Radio mast, Mont Alban (3.140):

NW of Cap de Nice.

Thence as required to round the head of Jetée du Large and continue NW through the entrance.

Basins and berths

3.147

1 **Alongside berths**. The main commercial berths lie within Basssin du Commerce and Bassin des Amiraux. Quai Infernet, on the SW side of Bassin des Amiraux, is 150 m long with a depth of 7·8 m alongside. There is a Ro-Ro facility in the NE corner of Bassin du Commerce. Vessels up to 80 m in length and 4·5 m draught can be accommodated at Quai de la Douane, on the SW part of Bassin Lympia; small craft and fishing vessel berths occupy the NE part of this basin.

Port services

3.148

Repairs. Minor repairs, hull and machinery.

Other facilities. The usual resources of a city.

Supplies. Fuel is available. Fresh water connections on the quays.

Communications. Nice-Côte d'Azur Airport, 3½ miles SW.

1 **Rescue**. An inshore lifeboat is stationed at Nice.

Small craft

3.149

1 **General information**. The commercial berthing areas of the port are generally unsuitable for yachts or small craft. However berths for visiting small craft may be available on the E side of Bassin des Amiraux, mariners must confirm berth availability with the Port Authority before entering harbour. Bassin de la Tour Rouge on the N side of the harbour entrance and berths on the E side of Bassin Lympia, at the N end of the port, are reserved for local vessels.

Anchorages

Chart 2167

Anse de La Garoupe

3.150

1 **General information**. Anse de La Garoupe (43°33′·6N, 7°08′·7E) lies between Cap Gros (43°33′·2N, 7°08′·8E) and Point Bacon 1 mile N. Numerous buildings stand on the shore of the bay, many have small craft landings. A small jetty on the SE side of the bay provides a haven for fishing vessels.

2 **Anchorage** can be obtained in depths of about 19 m, sand and weed, good holding ground 5 cables SE of La Garoupe Lighthouse

Chart 2167 plan of Antibes

Anse de La Salis

3.151

1 **General information**. Anse de La Salis is entered between Pointe Bacon (43°34′·2N, 7°08′·5E) and Bastion des Cinq Cents Francs, 1 mile NW. Pointe Bacon is fronted by a rock bank, with depths of less than 5·5 m over it, which extends 2¾ cables NNE; La Grenille, a rocky reef partly above water, lies on the outer part of the bank. Le Pilon, a rock with a depth of 12 m over it, lies 1½ cables ESE of the point and La Péquerolle, a rocky patch with a least depth of 13 m over it, 3½ cables ENE. Except for La Péquerolle these dangers lie within the red sector (328°–160°) of the light exhibited from the head of Digue du Large at Port d'Antibes (3.140). Mariners should also note the explosives dumping ground, shown on the chart, 6 cables NE of Pointe Bacon. The shore of Anse de La Salis is fronted by a rocky bank extending up to 2 cables offshore.

2 **Anchorage** can be obtained in depths of 10 to 20 m, sand and mud E of Antibes. The alignment (349°) of the E side of Bastion des Cinq Cents Francs with the E side of Fort Carré, 1½ miles NNW, may be useful. An alternative anchorage lies SE of Bastion des Cinq Cents Francs.

3 Small craft can obtain anchorage in depths of 7 to 10 m closer inshore. The area between the dangers close to the coast and Petite Grenille may be used. Le Clapier, a rock with a depth of 6·3 m over it, Petite Grenille, an above water rock, and a rocky patch with a depth of 3·7 m over it, lie close N of Petite Grenille; all encumber the S part of the bay and the approach to Port de La Salis (3.153). Mariners should also note the submarine cables, shown on the chart.

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Chart 149 plan of Approaches to Rade de Villefranche

Rade de Villefranche

3.152

1 **General information**. Rade de Villefranche (43°42′N, 7°19′E) lies between Pointe des Sans Culottes, the SE extremity of Mont Boron, and Pointe Malalongue, the SW extremity of Cap Ferrat, 1 mile SE. The W side of the bay is dominated by Mont Boron and Mont Alban. The town of Villefranche occupies an amphitheatre on the NW coast; the citadel, which has four bastions and is conspicuous, stands close S of the town. The basins of the port of Villefranche-sur-Mer (3.158) lie SW and NE of the citadel.

2 The E coast of Rade de Villefranche is rugged and the S part moderately elevated. Cap Ferrat Lighthouse, see 3.140, Cap Ferrat Signal Station (4½ cable N of the lighthouse), Hôtel du Cap Ferrat, see 3.140, and Le Voët beacon (W cardinal), 3 cables W of the hotel, are conspicuous and useful marks on the E side of the bay. The bay offers safe anchorages and moorings for vessels of all sizes. Although S winds send in a swell causing vessels to roll this is unlikely to strain the cable.

3 **Pilotage.** Rade de Villefranche lies within the Nice pilotage area. Pilotage is compulsory for vessels over 150 tons, see *Admiralty List of Radio Signals* for details and procedures.

Regulations. There is a speed limit of 5 kn N of a line joining Pointe Madame (43°41′·5N, 7°18′·6E) and Pointe Pilone, 5 cables E.

4 **Moorings**. Two mooring buoys lie within Rade de Villefranche. The S buoy, 4 cables SSE of the citadel, can accept vessels up to 35 000 tons; the N buoy is suitable for vessels up to 10 000 tons.

Prohibited anchorage. Anchoring is prohibited in an area, shown the chart, containing the mooring buoys described above and an historic wreck.

5 **Anchorages**. Vessels usually anchor in depths of 10 to 20 m, soft mud and weed on the W side of the bay. Mariners should avoid a rocky patch approximately 3 cables SSE of Darse Sud E Jetty Head Light (white building red lantern, white cupola, 9 m in height) and the dangerous wrecks shown on the chart.

6 Anchorage can also be obtained in depths of 5 to 10 m within Anse de l'Espalmador, entered S of Pointe Gassuet (Pointe du Rube) (43°42′·0N, 7°19′·3E). Mariners should beware of Rochers du Rube, a rocky bank with a least depth of 1·6 m over it, which extends 1 cable W of the point. The berth is sheltered from E winds.

7 An alternative anchorage, providing shelter in E winds, can be obtained in depths of 12 to 15 m, soft mud and weed, good holding ground, within Anse de Passable. The cove is entered between Pointe Passable (43°41′·8N, 7°19′·5E) and Pointe Pilone, 3 cables SW. Mariners should note that both Anse de l'Espalmador and Anse Passable are untenable in SW winds.

8 **Facilities**. Water can be supplied to vessels by lighter from Port de Villefranche, Darse Sud.

Small craft

Chart 2167 plan of Antibes

Port de La Salis

3.153

1 **General information**. Port de La Salis (43°34′·2N, 7°09′·0E) a boat haven, protected by two breakwaters, lies in the S corner of Anse de La Salis (3.151). The haven has depths of 1·5 to 2·0 m and limited small craft facilities. The approach to the haven is encumbered by several dangers, see 3.151.

Antibes, Port-Vauban

3.154

1 **General information**. Port-Vauban (43°35′·2N, 7°07′·7E) lies in the NE part of the ancient and picturesque town of Antibes. The harbour is one of the most important yacht harbours on this coast. Digue du Large protects the E side of the harbour and exhibits a light (3.140). Fort Carré dominates the W side of the harbour and can be used to identify the entrance which lies between it and the head of Digue du Large. The harbour consists of series of basins; Avant-Port, Bassin de Grande Plaisance, Vieux Port and the inner-most basin Anse Saint-Roch. Vessels up to 165 m in length are accepted. Pilotage is available. The harbour operates 24 hours a day. There is a speed limit within the harbour of 3 kn.

Antibes, Port–Vauban from NE (3.154)

(Original dated 1999)

(Photograph – SHOM)

2 **Directions**. The entrance is approached from the NE and is straightforward except in E winds. The track leads between the head of Digue du Large and a light-buoy (starboard hand) moored ½ cable NW of it, marking a rocky bank, with depths of less than 5·5 m over it, which extends from Fort Carré. A belfry and Tour de Recrutement, close SSE of it, stand 1½ cables S of the harbour and are useful marks when approaching the entrance.

3 **Anchorage**. Anchoring inside the harbour is prohibited. See 3.151.

Berths. The harbour provides 1100 berths in depths of 1·9 to 8·0 m; 20 berths are reserved for vessels between 60 and 165 m in length. Large yachts must contact the harbour office before arrival and normally berth stern-to on Digue du Large in depths of 7 m.

Repairs. Comprehensive small craft repairs, boat lifts of 40 and 120 tonne capacity.

4 **Facilities**. Comprehensive small craft facilities. Antibes has all the usual resources of a large town including two hospitals. There is a lifeboat stationed at Port-Vauban.

Supplies. All types of supplies available including fuel.

Communications. Nearest airport Nice-Côte d'Azur, 6 miles distant.

Chart 2167

Marina Baie de Anges

3.155

1 **General information**. Marina Baie de Anges (43°38′·2N, 7°08′·5E) is an artificial yacht harbour adjacent to the town of Villeneuve-Lobet. The harbour is protected from the E by a breakwater approximately 2 cables in length which extends initially ESE from the coast then

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turns SSW parallel to it. The breakwater also forms the E side of the entrance to the inner harbour. A much smaller S breakwater, SW of the E breakwater head, extends E from the coast creating an outer harbour basin and the harbour entrance. The outer harbour entrance is marked by lights; S Breakwater Head (white tower, red top, 5 m in height), E Breakwater Head (white truncated tower, green top, 10 m in height). Mariners should note the E Breakwater Head Light stands approximately ½ cable NNE of the end of the breakwater. The entrance to the short channel leading to the inner basin is marked by E Breakwater Head Light and on its W side by Contre-Jetée Head Light. Behind the harbour stand conspicuous triangular shaped blocks of flats. The harbour accepts vessels up to 30 m in length and maximum draught of 4 m.

2 **Directions**. In good weather the SSE facing entrance is straightforward by day or night but becomes difficult in strong SE winds. The conspicuous blocks of flats around the harbour make identification easy. Depths in the outer basin are between 5·0 and 5·8 m.

3 **Berths**. The harbour provides 520 Mediterranean mooring berths in depths of 2 to 5 m on the inner face of the E breakwater, on the W wall of the basin and finger jetties within it.

Repairs. Limited repairs, 50 tonne capacity boat lift.

Facilities. Comprehensive small craft facilities.

Supplies. Fuel is available. Provisions within the town.

Port de Cros-de-Cagnes

3.156

1 **General information**. Port de Cros-de-Cagnes (43°39′·4N, 7°10′·3E) is a small yacht haven 1½ miles W of the mouth of Rivière Var. The harbour can be identified by a blue-grey and red pylon which stands on the N side of the entrance. Close W of the entrance lies a fish farming area marked by buoys. Another fish farm, marked by a light-buoy (E cardinal) lies 3 cables S of the entrance. The haven accepts vessels up to 6 m in length, maximum draught 1 m.

2 **Directions**. The entrance faces WNW between the heads of short breakwaters marked by beacons (green; cone topmark) and is subject to silting. In strong SE or SW winds the entrance can become dangerous.

Anchorage can be obtained in depths of 10 to 20 m, good holding ground, off the harbour. Deep water lies quite close in and mariners should take soundings before anchoring.

3 **Berths**. At the quays on the S and W sides of the basin. The N corner of the haven is reserved for fishing vessels. There are depths of between 1·0 and 1·8 m.

Facilities. Limited small craft facilities.

Supplies. Fuel and water.

Rescue. A lifeboat is stationed at Cros-de-Cagnes.

Port de Saint-Laurent-du-Var

3.157

1 **General information**. Port de Saint-Laurent-du-Var (43°39′·4N, 7°11′·0E) is a purpose built marina 6 cables W of the mouth of Rivière Var. A breakwater extending S then WSW, parallel to the coast, protects the harbour from the E and S. A light (white tower, green top, 8 m in height) is exhibited from the head of the breakwater and also marks the S side of the W facing entrance. The harbour accepts vessels up to 23 m in length and maximum draught 4 m.

2 **Directions**. A 12 storey tower block stands on the N side of the harbour and is a useful mark with which to identify the harbour. The entrance is straightforward by day or night and has depths of 3·0 to 4·7 m. During the summer buoys marking a swimming area lie N of the entrance channel.

Berths. The harbour provides 1050 Mediterranean mooring berths in depths of 2·0 to 4·5 m.

3 **Repairs**. All types of repairs can be undertaken in the boatyard at the E end of the harbour. Facilities include a 50 tonne capacity boat lift.

Facilities. Comprehensive small craft facilities.

Supplies. Fuel water and provisions available.

Chart 149 Approaches to Rade de Villefranche

Port de Villefranche-sur-Mer

3.158

1 **General information**. Port de Villefranche-sur-Mer (43°42′·0N. 7°18′·7E) consists of two basins; Darse Sud, also known locally as Nouveau Port, which lies SW of Villefranche citadel and Darse Nord, also known as Darse de la Santé, to the NE of it. The harbour is administered by Port de Nice.

Pilotage is compulsory for vessels greater than 50 m in length.

3.159

1 **Darse Sud**. The basin is sheltered from the E by Jetée Est which extends 2 cables E and NE and is marked at its head by a light (white tower, green top, 8 m in height). Vessels up to 60 m in length and 4 m draught are accepted.

Directions. The basin is approached through Rade de Villefranche and in good weather entry is straightforward by day or night. However strong SW winds can make the entrance difficult and breaking waves may develop in the approach. The entrance is 30 m wide, faces ENE and has depths of 6·4 m.

2 **Anchorage** see 3.152.

Berths. Mediterranean moorings in depths of 0·2 to 7 m on the inner face of Jetée Est and finger jetties extending from the NW side of the harbour.

Repairs. A small shipyard at S end of the basin can undertake all types of repair. Facilities include a dry dock capable of taking vessels up to 150 tons.

3 **Facilities**. Comprehensive small craft facilities.

Supplies. Fuel, water (including by lighter to vessels at anchor in Rade de Villefranche) and provisions are available.

3.160

1 **Darse Nord (Darse de la Santé)** (43°42′·2N, 7°18′·8E), NW of the citadel is sheltered from the E by Môle de la Santé (Health Office Mole), which extends ½ cable NNE from the coast. A light (white column, red top and base, 6 m in height) is exhibited from its head. The haven is shallow with depths of about 1 m. It is used by fishing vessels and boats providing ferry services to vessels anchored or moored in Rade de Villefranche and closed to yachts.

CAP FERRAT TO THE FRANCO-ITALIAN BORDER

General information

Chart 2167

Description of waterway

3.161

1 The coastal route from Cap Ferrat (43°41′N, 7°20′E) to the Franco-Italian border, which lies in the vicinity of the mouth of Rivière Saint-Louis (Fiume San Luigi) (43°47′N, 7°32′E). The anchorages and minor harbours along this part of the coast including the Principality of Monaco.

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Topography

3.162

1 Between Cap Ferrat and Monaco, 6 miles NE, the coast is mountainous and rugged. North-east of Monaco the mountains recede from the coast, which is generally less elevated although rocky and typically wooded with pines and olive trees. The concentration of buildings within the Principality of Monaco make a distinctive landmark from offshore.

Prohibited and restricted areas

3.163

1 Areas containing underwater equipment lie off Cap Ferrat and are shown on the chart. Anchoring, dredging, fishing or other underwater activity is prohibited.

Navigation is prohibited within an area, shown on the chart, which lies to seaward of the Monaco Heliport (43°43′·5N, 7°25′·2E).

2 A marine reserve lies within Anse Larvotto (43°44′·8N, 7°26′·0E). The area is marked by buoys and shown on the chart; anchoring, fishing and the navigation of propeller driven vessels are prohibited within the area.

Fish farming

3.164

1 A fish farming area, marked by buoys and shown on the chart, lies within Baie de Beaulieu (43°42′·0N, 7°20′·6E).

A ship engaged in fish farming research is moored periodically in position (43°43′·3N, 7°26′·9E) and exhibits the lights or signals for a ship at anchor. The length of the entire installation is 120 m, mariners are advised to remain at least 500 m from the vessel. A light-buoy marks the mooring when the vessel is off station.

Principal marks

3.165

1 **Landmarks:**

Èze, a remarkable village crowning a peak (43°43′·8N, 7°21′·8E).

Tête de Chien, a distinctive rock. A fort and radome stand close N of it (43°43′·9N, 7°24′·3E).

Mont de la Baitaille (43°45′N, 7°24′E).

The Principality of Monaco, the concentration of buildings appears as a distinctive white patch when seen from well offshore, (43°44′N, 7°25′E).

2 Musée Océanographique de Monaco, large distinctive building, built onto the cliffs (43°43′·9, 7°25′·6E)

Mont Agel (43°46′·3N, 7°25′·3E). A radome with red obstruction lights stands on the summit.

Cime de Baudon (Aiguille de Menton) (43°48′·6N, 7°25′·4E).

Cap Martin Signal Station (disused) (43°45′·2N, 7°29′·0E).

Cap Martin Hôtel (2 cables SE of signal station).

Directions

(continued from 3.141)

3.166

1 From a position SE of Cap Ferrat (43°40′·5N, 7°20′·0E) the coastal route continues NE passing:

SE of Presqu'île de Saint-Hospice, (43°41′·2N, 7°21′·0E). A tower and chapel stand close W of Pointe de Saint-Hospice, the E part of the peninsular. Thence:

SE of Cap Roux (43°43′·0N, 7°21′·1E), thence:

SE of Cap d'Ail, a low, bare point (43°43′·3N, 7°24′·4E), thence:

2 SE of Monaco, see 3.165, thence:

SE Cap Martin, see 3.165, thence:

SE of Menton (43°46′·5N, 7°30′·0E), thence to a position SE of the mouth of the Rivière Saint-Louis (Fiume San Luigi) (43°47′N, 7°32′E).

(Directions continue at 4.15)

Anchorages and minor harbours

Chart 149 plan of Baie de Beaulieu

Baie de Beaulieu anchorages

3.167

1 **General information**. Baie de Beaulieu is entered between Pointe de Saint-Hospice (43°41′·2N, 7°21′·0E) and Cap Roux, 1¾ miles N. The bay affords good shelter from W winds and offers anchorage in depths of about 15 m, hard mud and weed, good holding ground, specific anchorages are described at 3.168 and 3.169.

Rade de Saint-Hospice

3.168

1 **General information**. Rade de Saint-Hospice (43°41′·6N, 7°20′·8E), entered between Pointe de Saint-Hospice and Pointe de Rompa-Talon, 9 cables NW, offers the best anchorage within Baie de Beaulieu.

Anchorage can be obtained in depths of about 13 m, muddy sand and weed, very good holding ground, along the N coast of Presqu'île de Saint-Hospice, see also 3.169.

Anse de Scarletta

3.169

1 **General information**. Anse de Scarletta (43°41′·4N, 7°20′·6E) on the N coast of Presqu'île de Saint-Hospice provides good shelter from strong E or SE winds.

Anchorage can be obtained in depths of about 13 m, muddy sand and weed, very good holding ground, as shown on on the plan.

Chart 2167

Baie de Roquebrune anchorage

3.170

1 **General information**. Baie de Roquebrune is entered between Pointe de Veille (43°45′N, 7°27′E) and Cap Martin, 1¾ miles E. A prominent fort stands in the town of Roquebrune Cap-Martin, 1 mile NE of Pointe Veille.

Anchorage can be obtained, as shown on the chart, in depths of 15 to 20 m, sand and weed, in the middle of the bay, with Cap Martin disused signal station bearing between 090° and 100°.

Small craft

Port de Saint-Jean-Cap-Ferrat

3.171

1 **General information**. Port de Saint-Jean-Cap-Ferrat (43°41′·4N, 7°20′·2E) is a yacht harbour in the SW part of Rade de Saint-Hospice fronting the town of Saint-Jean-Cap-Ferrat. A mole, Jetée Abri, extends 2 cables NNW from the N coast of Presqu'île de Saint-Hospice protecting the harbour from the E and exhibits a light at its head (white tower, red top 9 m in height). The harbour consists of two basins; the old harbour, now referred to as Port Public, lies at the S end of the complex adjacent to the town and is reached through a narrow entrance. Vessels up to 30 m in length and maximum draught 4 m are accepted.

2 **Directions**. The harbour is approached through Rade de Saint-Hospice. The entrance faces N, and is 40 m wide, E winds can make the entrance difficult and mariners are advised to confirm with the Harbour Master that the harbour is accessible.

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3 **Berths**. The harbour offers 400 Mediterranean mooring berths in depths of 1·5 to 4·0 m.

Repairs. Small craft repairs, 30 tonne capacity boat lift.

Facilities. Usual marina facilities.

Supplies. Fuel, water and provisions.

Rescue. There is a lifeboat stationed here.

Port-abri de Pierre Fourmi

3.172

1 **General information**. Port-abri de Pierre Fourmi (43°42′·3N, 7°20′·0E) is a boat haven S of the town of Beaulieu-sur-Mer. The haven is formed by two breakwaters. The entrance lies between the heads of the breakwaters and faces WSW. There are 60 berths, predominantly for local boats. The maximum draught accepted is 1·5 m. Limited marina facilities.

Port de Beaulieu-sur-Mer

3.173

1 **General information**. Port de Beaulieu-sur-Mer (43°42′·5N, 7°20′·3E), on the NE side of the town, is a marina formed by breakwaters. The harbour entrance lies in the S corner of the rectangular basin and is protected from the E by a detached breakwater 1¼ cable in length. Lights are exhibited from it; N Head (white tower, red top, 5 m in height), S Head (white tower, dark green top, 4 m in height). Vessels up to 35 m in length and maximum draught 4 m are accepted.

2 **Directions**. The harbour may be approached N or S of the detached breakwater, the deepest channel is Passe Nord with depths of 4·0 to 4·5 m. Passe Sud is narrow, marked by lateral buoys and has a depth of 3 m. The entrance is straightforward but can become difficult in strong E winds. In bad weather all vessels should use Passe Nord. Mariners should note Sèche de Beaulieu, a shoal with a least depth of 3·9 m over it, 1½ cables NNE of the detached breakwater.

3 **Berths**. The harbour has 800 Mediterranean mooring berths in depths of 2·0 to 4·5 m.

Repairs. Comprehensive small craft repair facilities including 150 tonne capacity boat lift.

Facilities. Comprehensive marina facilities.

Supplies. Fuel, water, provisions available.

Port de Silva Maris

3.174

1 **General information**. Port de Silva Maris (43°43′·0N, 7°20′·3E) is a small private boat haven on the W side of Mer d'Èze, entered between Cap Roux and Pointe de Cabuel 1 mile E. The haven is protected from the SE and NE by breakwaters. A light is exhibited from the head of the SE breakwater (white column, red base and lantern, 6 m in height). The basin has depths of 1·1 to 2·0 m and can accommodate 59 vessels.

Chart 149 plan of Monaco

Port de Cap d'Ail

3.175

1 **General information**. Port de Cap l'Ail (43°43′·5N, 7°25′·0E) is a marina close SW of the Franco-Monégasque border adjacent to a substantial area of reclaimed land in the Fontvieille district of the Principality of Monaco (3.178). The harbour is protected from the SE by an angled breakwater, Digue Sud, easily identified by the square building at its head which is also marked with two lights; SW corner (green concrete pedestal, 9 m in height) NW corner (green structure, 5 m in height). The SW side of the harbour is also protected by a breakwater which extends ESE. The T-shaped head of the breakwater is also marked by a light (red framework tower, 4 m in height). High rise buildings NE of the harbour basin and a rose coloured stadium with tiled roof N of the basin are useful landmarks. A rocky bank, with depths of less than 10 m over it, fronts the coast SW of the harbour and extends up to 2 cables S of Cap d'Ail (43°43′·2N, 7°24′·4E). The headland is low and bare with a ruined battery on it, although the latter is difficult to discern.

2 **Clearing bearing.** The line of bearing 260° of Fort de Mont Alban (43°42′·1N, 7°18′·0E), clears S of the bank.

The harbour accepts vessels up to 90 m in length.

Directions. The marks described above may be used to approach the entrance. The principal light marking the entrance is Digue Sud SW corner. Mariners should identify it carefully when approaching at night; the NW corner light is synchronized with it. The entrance faces W, is 80 m wide and has depths of 20 m.

3 **Berths**. The harbour has 300 mainly Mediterranean mooring berths in depths of 5 to 25 m. Large yachts berth on quays, small vessels at the pontoon berths.

Repairs. Hull and machinery repairs, facilities include a 50 tonne boat lift.

Facilities. Limited marina facilities.

Supplies. Fuel and water available.

Chart 2167

Port de Menton

3.176

1 **General information**. Port de Menton (43°46·6N, 7°30′·7E) is a yacht harbour NE of the picturesque town. The harbour is formed by two moles extending NE from the coast. A light is exhibited from the head of Jetée Sud (white tower red top, 16 m in height). Vessels up to 33 m in length are accepted. The harbour is exposed in E winds and mariners should shelter in Port de Garavan, 5 cables NE (3.177).

2 **Directions**. The spire of the church in Menton and a square tower W of the harbour are useful marks. The harbour entrance faces NE, is 40 m wide and has depths of about 5 m. Mariners should note the harbour suffers from silting and depths may vary.

3 **Anchorages**. Anchorage can be obtained in depths of about 11 m, mud, sand and weed, good holding ground, off the SW part of Plage de Menton, 5 cables N of Cap Martin (43°45′·0N, 7°29′·3E). The anchorage is sheltered from the W and NW but becomes dangerous if the wind shifts E or S.

4 An alternative anchorage can be obtained in depths of 10 to 15 m, fine sand and weed, 2 cables E or SE of the harbour entrance. Larger vessels anchor further off in depths of 20 to 26 m and should be ready to weigh if the wind shifts E or S. Mariners should note Roche Castellar, with a least depth of 18·1 m over it, 3 cables ESE of the entrance and an outfall pipe extending SSE, both are shown on the chart.

5 **Berths**. The harbour provides 480 berths in depths of 1·0 to 5·5 m.

Facilities. Limited marina facilities.

Supplies. Fuel, water and provisions available.

Rescue. A lifeboat is stationed here.

Port de Garavan

3.177

1 **General information**. Port de Garavan (43°47′N, 7°31′E), a private marina, NE of Menton is protected from the S by by a mole extending E. A light is exhibited from its head (white and red tower, 10 m in height). Môle Nord

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extends S from the coast towards the S breakwater head forming the ENE facing entrance. A light on the head of Môle Nord (dark green and white mast, 2 m in height) marks the N side of the harbour entrance. The harbour accepts vessels up to 40 m in length, maximum draught 4 m.

2 **Directions**. S Breakwater Head Lighthouse can be used to approach the entrance. The square, white harbour control building with blue top is also a useful mark. The entrance faces NE and a short channel leads from the entrance into the harbour basin.

3 **Berths.** The harbour provides 800 berths.

Repairs. Small craft repairs at the boatyard close inside the entrance, facilities include a 100 tonne boat lift.

Facilities. Usual marina facilities.

Supplies. Fuel, water and provisions available.

Principality of Monaco

Chart 149

General information

3.178

1 The Principality of Monaco (43°44′N, 7°25′E) is largely an urban area formed by several towns which are now districts within the conurbation surrounding the harbour of Port de Monaco (Port de la Condamine). Monaco, the capital, is built on Rocher de Monaco (43°44′·0N, 7°25′·5E) a promontory on the S side of the harbour; La Condamine, the commercial district on the W side; Monte-Carlo, the residential district N of the harbour and Fontvieille the industrial district in the SW part of the principality.

Port de Monaco

3.179

1 **General information**. Port de Monaco lies between Pointe Sainte-Antoine, the E extremity of Rocher de Monaco (3.178) and Point Focinane, 3 cables NNE. It is primarily a yacht harbour capable of handling the largest examples of these vessels. There are no dry or liquid cargo handling facilities and commercial vessels are only accepted by prior arrangement with the port authority. The E side of the harbour is afforded some protection from E winds by breakwaters extending NNW and SSE from the coast. Otherwise the harbour is well sheltered. The entrance lies between the breakwater heads which exhibit lights; Jetée Sud (white eight-sided tower, red top), Jetée Nord (white eight-sided stone tower, green top, 10 m in height).

2 Vessels up to 130 m in length maximum draught 8 m are accepted. Pilotage is compulsory for vessels greater than 30 m in length, the pilot station is located on Jetée Nord. Pilots board 3 cables E of the entrance, see the relevant *Admiralty List of Radio Signals*. Small tugs are available. The port has a radio station, see the relevant *Admiralty List of Radio Signals*.

3 **Development**. Works were in progress (2002) to complete the construction of two new breakwaters which extend the harbour and provide a new basin to the E of the existing entrance.

The basin is contained within a new N breakwater extending ¾ cable SSE from Pointe Focinane and a new S breakwater extending 2 cables NE from Pointe Saint Antoine. The breakwaters provide protection from the E for both the new and existing harbour.

During the construction navigation may be restricted in the vicinity of the new breakwaters, mariners should obtain details from the Harbour Master.

3.180

1 **Directions**. The entrance is 100 m wide at the surface, 80 m wide at the seabed and has depths of 26 m. It presents little difficulty. Mariners may find the casino (green cupolas and two bell turrets) a useful mark.

Anchorage. Prohibited anchorage areas, shown on the chart enclose the approach to the harbour entrance and lie S of Pointe Saint-Antoine and NNE of Pointe Focinane. Larger vessels can obtain anchorage in depths of about 70 m, mud and sand, 5 cables E of the harbour entrance or in depths of less than 50 m, mud and sand, SSE of Anse Larvotto, an area of jetties used by bathers, (8 cables NNE of Pointe Focinane), clear of the marine reserve and the charted wreck.

2 **Prohibited areas**. Navigation is prohibited in an area enclosing the coast between Port de Cap d'Ail and Port de Fontvielle, shown on the chart.

3.181

Berths. All berths are Mediterranean moorings in depths of 2 to 20 m. Berths for the largest yachts are limited and must be arranged before arrival. Jetée Nord and Sud, the central part of the T-shaped quay on the W side and part of Quai des États-Unis on the N side of the harbour are used for the largest yachts and visiting warships. At berths where bow wires are unavailable vessels must use both anchors.

3.182

1 **Repairs**. Major hull and machinery repairs for small craft, facilities include slipways of 40 tonnes and 100 tonnes capacity. Divers available.

Facilities. Comprehensive small craft facilities. The usual facilities of a city.

Supplies. Fuel water and provisions readily available.

Communications. Helicopter service to Nice-Côte d'Azur Airport.

Rescue. There is a lifeboat stationed here.

Small craft

Port de Fontvieille

3.183

1 **General information**. Port de Fontvieille (43°43′·8N, 7°25′·4E), a small craft harbour, lies between the area of reclaimed land extending NE from Port de Cap d'Ail (3.175) and the SW side of Rocher de Monaco (3.178). Development of the harbour has incorporated the old port of Fontvieille. The harbour is well protected by breakwaters at its E end. Lights are exhibited from the head of each; Digue Sud Head (white column, red top, 5 m in height), Jetée Head (green lantern, 1 m in height). The harbour accepts vessels up to 30 m in length. Mariners should note the prohibited area (see 3.163 heliport) S of the entrance.

2 **Directions**. The landmarks of Monaco and Mont Agel (3.165) can be used to identify the harbour from offshore. Musée Océanographique de Monaco (3.165) stands close NE of the entrance and is particularly useful on approaching the harbour. The entrance faces NE, is 75 m wide, has depths of 14·8 to 17·2 m and is difficult; strong winds between E and SW make it dangerous.

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Monaco, Port de Condamine from ENE (3.178)

(Original dated 1999)

(Photograph – SHOM)

3 **Berths**. The harbour provides 220 berths in depths of 13 to 15 m. Most are allocated to local vessels.

Facilities. Limited small craft facilities.

Supplies. Fuel, water and provisions available.

Other names

3.184

1 Arens, l' (Arens, Fonds de Roche de l') (43°32′·6N, 7°09′·6E).
Argent Faux, Anse de l' (43°32′·7N, 7°07′·6E).
Biot (43°02′·8N. 7°06′·0E).
Carré, Pointe du Fort (43°35′·5N, 7°07′·8E).
Colombier, Pointe du (43°41′·0N, 7°20′·6E).
Ferion, Mont (43°52′N, 7°16′E).
Fosses, Anse des (43°41′·2N, 7°20′·5E).
Lilong, Anse de (43°41′·2N, 7°20′·2E).
2 Lilong, Pointe de (43°41′·1N, 7°20′·6E).
Mala, Pointe (43°43′·2N,7°23′·4E).
Raventurier, Le (43°33N, 7°10′E).
Saint-Jennet, Rocher (43°45′N, 7°08′E).
Saint-Laurent, Baie de (43°43′N, 7°23′E).
Sèche des Cinq Cent Francs (43°35′·3N, 7°08′·0E).
Sèche de Nice (43°41′·6N, 7°16′·9E).
Villeneuve (43°39′N, 7°08′E).
Voët, Roche (43°40′·7N, 7°19′·5E).

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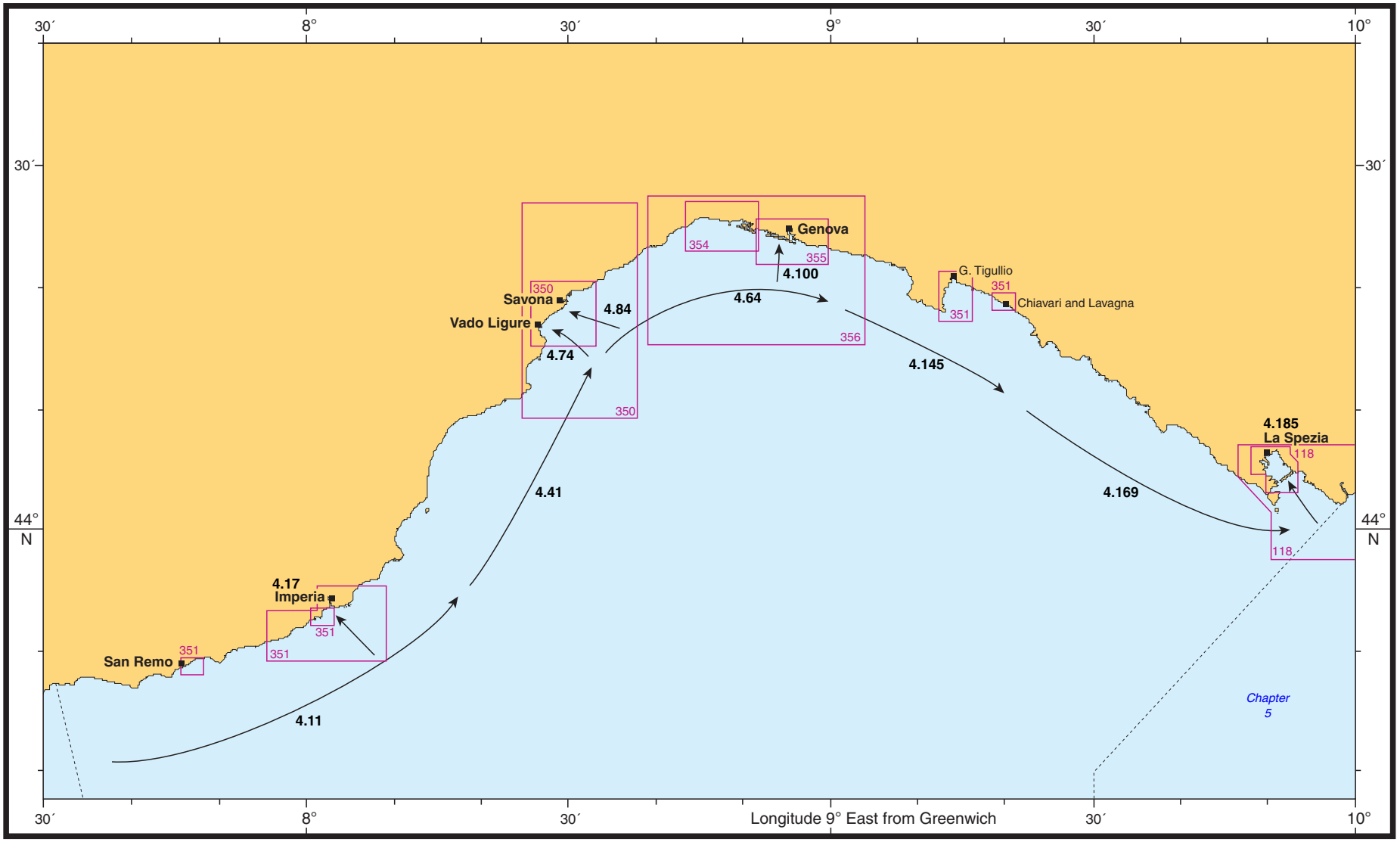

March 2004

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CHAPTER 4

NORTH WEST ITALY – GULF OF GENOA

GENERAL INFORMATION

Chart 1998

Scope of the chapter

4.1

1 This chapter describes the NW coast of Italy from the Franco-Italian border, in the vicinity of the mouth of Fiume San Luigi also known as Rivière Saint-Louis (43°47′N, 7°32′E), to Capo Corvo, the E headland of Golfo de La Spezia 107 miles E and the ports harbours and anchorages within the Gulf of Genoa. The sections are arranged as follows:

Franco-Italian border to Genova (4.7).
Genova to La Spezia (4.141).

Through routes

4.2

1 The ocean routes from the W Mediterranean and Corsican Channel (43°00′N, 9°40′E) lead to the approaches to Genova at the head of the Gulf.

Topography

4.3

1 Riviera di Ponente, the coast between the Franco-Italian border and Genova, 72 miles NE, is noted for its beauty. The Alpes Maritime continue to dominate the coast in the vicinity of the border but recede a short distance inland further NE. The major port and city of Genova occupies the head of the Gulf. Despite the proximity of the Alpes Maritimes on its W side, Riviera di Levante, between Genova and La Spezia, 40 miles SE has a wilder and more imposing aspect.

Exercise areas

4.4

1 The French Navy frequently conducts exercises between Corse (43°00′N, 9°25′E) and the French mainland. Ships submarines and aircraft involved in exercises may use pyrotechnics and carry out live gunnery, missile or torpedo firings. A submarine exercise, area used by the Italian Navy, lies on the E side of the Gulf of Genoa and is shown on the chart. Mariners are advised to keep a good lookout in these areas.

Scientific instrument area

4.5

1 An area containing scientific instruments, shown on the chart and marked by a light-buoy, lies 30 miles SE of the mouth of Fiume San Luigi (43°47′N, 7°32′E).

Regulations

4.6

1 Tankers that have carried, and those carrying petroleum, chemical or gas products in bulk are prohibited from navigating within areas shown on the chart between Arma de Taggia (43°50′N, 7°51′E) and Cervo, 13 miles NE, between Poromontorio di Portofino (44°19′N, 9°11′E) and Punta Baffe, 12 miles ESE, wthin an offshore area centred on (44°00′N, 9°38′E) and in the approaches to La Spezia, (4.185). Between Pietra Ligure (44°09′N, 8°17′E) and Varazze, 18 miles NE the regulations apply from 1st June to 30th September.

2 Vessels approaching ports enclosed by any of these areas must follow designated routes or navigate at right angles to the coast.

FRANCO-ITALIAN BORDER TO GENOVA

GENERAL INFORMATION

Chart 1998

Area covered

4.7

1 This section covers the mainland coast of Italy between the Franco-Italian border, in the vicinity of the mouth of Fiume San Luigi (43°47′N, 7°32′E), to a position S of Punta Vagno, approximately 70 miles NE. It is arranged as follows:

Franco-Italian border to Capo Mele (4.11).
Capo Mele to Capo di Vado (4.41).
Capo di Vado to Genova (4.64).
Genova (4.100).

Topography

4.8

1 The Alpes Maritimes dominate the coast in the vicinity of the border with France but soon begin to recede NW. Generally the coast between San Remo (43°49′N, 7°45′E) and Capo Mele, 20 miles NE, is rocky and backed by hills covered with vegetation. There are many coastal towns and villages, some standing on hills provide useful landmarks. To the NE of Capo Mele the coast continues low and sandy to the vicinity of Capo di Noli (44°12′N, 8°25′E). Here a change in the landscape is marked by Capo di Caprazoppa, also known as Capo di Finale, a steep, massive, rocky headland which lies 4½ miles WSW. To the NE of Capo di Caprazoppa the coast consists of hills covered with vegetation which continue to the head of the Gulf of Genoa. Between Savona (44°19′N, 8°29′E) and Arenzano, 10 miles NE, the shore is rocky and sheer in parts. East of Arenzano Genova occupies the coast and lower slopes of the hills which rise a short distance inland.

Depths

4.9

1 The coast is steep-to and free from isloated dangers to seaward of the 50 m depth contour which lies generally within 2 miles of the coast.

Fishing

4.10

1 Mariners should beware of Tunny nets, see 1.6.

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FRANCO-ITALIAN BORDER TO CAPO MELE

General information

Chart 1998

Description of waterway

4.11

1 A coastal route leads, from a position SE of the mouth of Fiume San Luigi (43°47′N, 7°32′E), 35 miles NE to a position SE of Capo Mele. An inshore route leads to the approach to the ports of Imperia (43°53′N, 8°03′E), is straightforward and not described in detail. The ocean route between the W Mediterranean and Genova lies approximately 20 miles offshore and is not described in detail. Mariners following this route may find details from the coastal route useful and should note the scientific instrument area (4.5) 25 miles S of Capo dell' Arma (43°48′·9N, 7°49′·7E).

Topography

4.12

1 Between the mouth of Fiume San Luigi and Capo Mortola, 1½ miles NE, the coast consists of low cliffs broken by small sandy beaches behind which the Alpes Maritimes rise quickly. To the ENE of Capo Mortola the coast becomes high and well cultivated however in the vicinity of the mouth of Fiume Roia (43°47′N, 7°36′E) this gives way to sandy beach which extends 3 miles ESE to Capo Sant' Ampeglio. Here the land is low and flat with an almost continuous line of buildings behind the beach. The concentration of hillside terracing and greenhouses around San Remo is distinctive.

2 The coast between San Remo and Capo Mele, 20 miles ENE, continues in a series of small bays sometimes fronted by rocky banks extending up to 2 cables offshore. Close inland the coast rises in a series of hills on which stand numerous small villages; some are conspicuous and provide useful marks. Cultivated olive trees grow on many of the hillsides; this is particularly noticeable around Imperia (43°53′N, 8°03′E).

Natural conditions

4.13

1 **Local weather**. Between Capo Mortola (43°46′·8N, 7°33′·2E) and San Remo, 9 miles ENE, the liklihood of an onshore wind is usually indicated by cloud along the mountains, a dark horizon and a swell. When Capo Berta is enveloped with cloud SE winds may be expected.

2 **Current.** Between The Franco-Italian border and Imperia the current sets SW. When Fiume di Taggia (43°50′·0N, 7°51′·5E) is in flood the rate is noticably increased.

The currents off Capo Mele (43°57′·2N, 8°10′·4E) are strong and usually set SW, away from the coast. It has been reported that they are strongest between 1 and 2 miles offshore; there is no appreciable current up to 2 cables offshore although a counter current has occasionally been noted.

Principal marks

4.14

1 **Landmark:**

Monte Bignone (dark coloured, red and white mast on summit) (43°52′·1N. 7°44′·5E).

Major lights:

Capo dell' Arma (white round tower on white building, black bands) (43°49′·0N, 7°49′·8E).

Porto Maurizio S Breakwater, 150 m from head (white tower, 11 m in height) (43°52′·5N, 8°01′·6E).

Capo Mele (white eight-sided tower, 25 m in height, two balconies and red 3-storey dwelling) (43°57′·3N, 8°10′·4E).

Directions

(continued from 4.15)

4.15

1 From a position about 10 miles SE of the mouth of Fiume San Luigi (43°47′N, 7°32′E) the coastal route continues 30 miles ENE passing, with positions from Capo dell' Arma (43°49′·0N, 7°49′8E):

SSE of Roche Fontana Light-buoy (special) (12½ miles WSW). The light-buoy marks a fresh water spring which, in calm weather, disturbs the surface of the sea. Thence:

SSE of Capo Mortola (12 miles WSW), easily identified by Villa Hambury (4.16). Rocks and shoals extend 1½ cable S of the headland, marked by a buoy (S cardinal). Thence:

SSE of Ventimiglia (9 miles WSW), thence:

2 SSE of Bordighera, the town is effectively a continuation of Ventimiglia extending towards Capo Sant' Ampeglio. Thence:

SSE of Capo Sant' Ampeglio (7½ miles WSW), which appears from E or W as a low point rising gradually to a summit covered with vegetation. Thence:

SSE of Capo Nero (4¼ miles WSW), a yellow coloured, rounded point bounded by a seawall. Villa Anfosi, a red coloured house, stands on its summit. Thence:

3 SSE of San Remo (3 miles W), thence:

SSE of Capo dell' Arma, rounded and cultivated in terraces. A small white chapel surrounded by trees stands on its summit. A light (4.14) is exhibited from the headland. A rocky bank, extending up to 1½ cables offshore, fringes Capo dell' Arma. Thence:

SSE Capo San Lorenzo (6¼ miles ENE), a low sandy point. A church with a belfry (4.16) stands close to the coast but is hidden from the W by modern buildings. Thence:

SSE of Imperia (10 miles ENE), thence:

4 SSE Capo Berta (12 miles NNE), a rounded headland which rises steeply from the coast. The lower slopes are generally bare rock whereas the upper part and summit are covered in thick vegetation. A radio mast and Torre Alpicella (4.16) stand on the headland. The remains of a rubble breakwater extend 1½ cables E from the E side of the headland. Mariners should also note the dangerous wrecks, shown on the chart, 2½ cables NNE and 4 cables SSW of the headland. Thence:

5 SSE of Diano Marina (12 miles ENE), a village extending along the coast either side of the mouth of Torrente San Pietro. Thence:

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SSE Capo Cervo (14½ miles ENE), a steep rocky headland; a parabolic aerial, painted red and white, stands on a peak 7 cables NNW of it. Thence:

To a position SSE of Capo Mele (43°57′·2N, 8°10′·4E) which is steep, rounded and exibits a light (4.14). La Madonna delle Penne, an old sanctuary, stands halfway up the N side. A signal station and radar mast stand on the summit.

Useful marks

4.16

1 Villa Hambury (a red coloured building, faced with arches, with a square tower on its W side) (43°47′·0N, 7°33′·5E).

Torre Mortola Inferiore (1¼ cables N of Villa Hambury).

Castel d'Appio (ruined, when seen from S appears as two buildings) (1½ miles NE Capo Mortola).

2 Ventimiglia Cathedral belfry, stands in the medieval town built on a hill W of the mouth of Fiume Roia (43°47′·4N, 7°36′·1E).

Ospedaletti casino (yellow, with three cupolas) (43°48′·3N, 7°43′·2E).

San Remo Cathedral (white cupola, two towers, floodlit, stands on the summit of a hill) (43°49′·2N, 7°46′·3E).

3 Conspicuous building (grey coloured) (3 cables E of San Remo Cathedral).

San Remo radio mast (red and white bands, exhibits red obstruction lights at night) (43°49′·3N, 7°47′·6E).

Bussana Nuova convent (white building, grey roof, slender belfry topped by black cupola) (5 cables NE of Capo dell' Arma) (4.14).

4 Bussana Nuova sanatorium (yellow with large verandah) (close E of Bussana Nuova convent).

Bussana Vecchia, a village (1¼ miles N of Capo dell' Arma) (4.14).

Torre dell' Arma (squat, grey tower) (1 mile NE of Capo dell' Arma, standing on a rocky promontory). A breakwater jetty extends SE from the coast close to the tower.

5 Capo San Lorenzo church belfry (43°51′·2N, 7°58′·0E), see 4.15.

Porto Maurizio Cathedral, with a large segmented dome flanked by two domed belfries (43°52′·5N, 8°01′·0E).

Monastero Santa Chiara, a building with a long row of arches, prominent from SW (1 cable S of Porto Maurizio Cathedral).

6 Castelvecchio, a hamlet within which stands a belfry (43°54′·2N, 8°01′·8E).

Torre Alpicella (slender, cylindrical, white) (43°53′·6N, 8°04′·0E). Thick vegetation makes this mark difficult to see from S or W.

Capo Berta radio mast (framework, red and white bands, 68 m in height) (43°53′·8N, 8°03′·7E). Red obstruction lights are exhibited at night.

7 Diano Marina belfry (tall, square with red dome) (43°54′·5N, 8°05′·0E).

Diano Marina hotel, close NNW of belfry.

Cervo (43°55′·5N,8°07′·0E), stands on a coastal hill around the church. A large white belfry stands near the summit, there are two smaller belfries further down the hill. A stone railway bridge with six arches crosses the beach in front of the village.

8 Rollo (43°56′·6N, 8°08′·0E), stands on a hill amongst olive trees and a belfry is prominent.

(Directions continue, for Imperia at 4.21,and for Capo Mele to Capo di Vado at 4.48)

Imperia

Chart 351 Approaches to Imperia and Imperia

General information

4.17

1 **Position.** Imperia (43°53′N, 8°02′E) is located at the mouth of Torrente Impero, 2 miles WSW of Capo Berta (4.15).

Function. The port handles general cargo, olive oil, and cereal based foodstuffs.

2 **Topography.** The municipality of Imperia consists of Porto Maurizio, formerly known as Imperia Ponente, built on a rounded hill, and Oneglia, formerly known as Imperia Levante, which stands on a plain close E of Torrente Imperio. The two distinct areas have ancient harbours. The countryside surrounding the towns is covered with olive trees.

3 **Approach and entry.** The port is approached from the S altering course WNW or ENE as necessary to enter the basins.

Port Authority. Capitaneria di Porto, Via Scarincio, I–18100, Imperia, Italy.

Limiting conditions

4.18

1 **Controlling depths.** There are depths of 7 to 10 m in the entrance to Bacino di Ponente, Port Maurizio and 7·0 to 9·6 m in the entrance to Bacino di Levante, Oneglia.

2 **Deepest and longest berths**. Bacino di Ponente; Cala Anselmi, on the NE side of the basin, is divided into two sections. The E is 200 m in length with depths of 5·0 to 7·4 m alongside and the W 90 m in length with depths of 2·3 to 6·8 m alongside. However mariners should note that berthing at this quay is normally by Mediterranean mooring.

Bacino de Levante; Calata G. B. Cuneo, on the N side of the basin has depths of 5·0 to 8·5 m, length 300 m.

3 **Maximum size of vessel handled**. Bacino di Ponente; length 110 m, maximum draught accepted 6·3 m. Bacino di Levante; maximum draught accepted 8 m.

Local weather and sea state. Porto Maurizio, Bacino di Ponente is exposed to SE, *Scirocco*, and E, *Levante*, winds which create a swell in the entrance. Oneglia, Bacino di Levante is open to S and SW winds which send a strong swell into the entrance.

Arrival information

4.19

1 **Port operations.** The port operates 24 hours.

Port radio. See the relevant *Admiralty List of Radio Signals*.

Outer anchorage. Anchorage can be obtained at designated berths in depths of about 16 m, sand, good holding ground, 9 cables ENE or 4 cables SSW of Bacino di Ponente S breakwater head. A line joining Molo Lungo head with either breakwater head of Bacino di Levante may be useful. Mariners should note this anchorage is exposed to the S and be ready to leave immediately if S winds are forecast.

2 **Pilotage** is compulsory for vessels greater than 500 grt and available daily between 0600 and 2000 local time. Pilotage is available outside these hours by request. The pilot boards 1 mile from the harbour entrances.

3 **Prohibited areas**. Navigation, anchorage and fishing are prohibited between mid-April and the end of October in areas, marked by buoys (white, red bands), which lie N of a

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line joining the heads of the inner breakwaters of Bacino di Ponente and Bacino di Levante. The areas are reserved for water-skiing during daylight hours.

Navigation, stopping and fishing are prohibited within an area marked by buoys (red flag topmark) and shown on the chart 1¼ miles E of Bacino di Levante. The area contains numerous shoals and obstructions caused by rock falls from the cliffs.

4 Anchoring and fishing are prohibited within an area, shown on the chart, protecting an underwater pipeline extending 1 mile SSE from close W of the mouth of Torente Impero; also within a circular area, shown on the chart, 1½ miles S of Porto Maurizio.

Harbour

4.20

1 **General layout**. Bacino di Ponente and Bacino di Levante are both formed by breakwaters extending from the coast. The basins lie approximately 1 mile apart.

Bacino di Ponente is protected from the NE by Molo Corto and from the S by Molo Lungo, which has a smaller breakwater, Molo Baburro, projecting 50 m N from an elbow. Lights are exhibited from the heads of these breakwaters and a spur breakwater approximately 1 cable WNW of the head of Molo Lungo. The SW part of the basin provides berths for yachts and small craft.

2 Bacino di Levante is protected from the W by Molo Corto and from the SE by Molo Lungo. Lights are exhibited from the head of both breakwaters.

Principal marks

Landmarks:

Porto Maurizio Cathedral, segmented dome flanked by two domed belfries (43°52′·5N, 8°01′·0E).

3 Porto Maurizio Prefecture, yellow, 5-storey building wih flagstaff, (43°53′·0N, 8°01′·3E).

Porto Maurizio Town Hall, grey, 4-storey building, square tower and flagstaff (43°53′·1N, 8°01′·7E).

Oneglia Cathedral Belfry (43°53′·3N, 8°02′·6E).

Major light:

Porto Maurizio S Breakwater, 150 m from head (white tower, 11 m in height) (43°52′·5N, 8°01′·7E).

Directions for entering harbour

4.21

1 **Approaches**. The approach to Imperia is straightforward and presents little difficulty.

Bacino di Ponente. From a position SE of Molo Lungo Head (43°52′·4N, 8°01′·8E) the track leads N passing:

E of Molo Lungo Head Light (red metal column on pedestal, 5 m in height), remaining at least 1½ cables clear of the breakwater. When the entrance to the basin is well open the track leads WNW passing:

2 N of Porto Maurizio Breakwater Light (4.20), thence:

N of Porto Maurizio Spur Breakwater Light (red mast, 6 m in height) (close WNW of Porto Maurizio Breakwater Light) and:

S of the breakwater extending 2½ cables from the shore S of the Porto Maurizio Town Hall, thence:

S of Molo Corto Light (green tower, 6 m in height) (3 cables NW of Molo Lungo Head), thence:

3 N of Molo Baburro Head Light (red mast, 4 m in height) (on the elbow of Molo Lungo).

Mariners should navigate to remain at least 40 m from the heads of Molo Baburro and Molo Corto.

Bacino di Levante. From a position E of Molo Lungo Head (43°52′·4N, 8°01′·8E) the track leads N passing:

W of Oneglia E Mole Head, also known as Molo Lungo, Light (green truncated tower, 6 m in height) (43°53′·0N, 8°02′·5E).

4 The track now leads NE towards the entrance, passing:

S of Oneglia W Mole Head, also known as Molo Corto, Light (red, truncated conical tower, 6 m in height) (1 cable NNE of Oneglia E Mole Head Light).

Mariners should navigate to pass through the centre of the entrance as depths are reduced in the vicinity of Molo Corto head by stone rubble used in its construction.

Berths

4.22

1 **Bacino di Ponente.** The N side of the basin, Calata Anselmi, provides the main commercial berths but see 4.18. There is a Ro-Ro ramp on the W part of the quay. Mariners should note that fishing vessels berth at a small quay on the N side of the basin and that large yachts are sometimes berthed on Molo Corto. In strong winds additional lines can be secured to mooring buoys in the NW and NE corners of the basin. The buoys can also be used for warping.

2 **Bacino di Levante** The N (Calata G. B. Cuneo) and W (Banchina di Ponente) quays provide the main commercial berths. Calata G. B. Cuneo has a Ro-Ro ramp. Fishing vessels berth at the quay on the inner face of Molo Lungo. Small craft are permitted to berth anywhere within Bacino di Levante however they must move if commercial vessels require the berth. There are mooring and warping buoys in the NW and NE corners of the basin.

Port services

4.23

1 **Repairs**. Machinery repairs only.

Other facilities. There is a hospital in Oneglia. Deratting certificates can be issued.

Supplies. Fresh water available from connections on the quays. Provisions available. Fuel available in small quantities.

Small craft

4.24

1 **Porto Maurizo.** There are 365 small craft berths. Banchina della Capitaneria, the W side of Bacino di Ponente, with depths of 2·3 m to 7·0 m is reserved for small craft. An area of pontoon berths accepts vessels up to 10 m in length. Close S of this area lies a trot of moorings for vessels up to 15 m in length. Vessels greater than 25 m in length berth on Molo Corto or Banchina Turistica Medaglie d'Oro, the quay on the S side of the basin close W of Molo Baburro. Generally only the largest yachts berth on the S quay which is 150 m in length with depths of about 5 m along its central part reducing to about 2 m towards the root of Molo Lungo.

2 A marina fronts the San Lazzaro district of Imperia, close NE of Molo Corto. The harbour is protected by a breakwater, Diga di Levante, which extends 1 cable from the coast then 1½ cables SW. The basin will provide berths at Banchina di Riva, a quay fronting the coast, and at piers extending from it. A second breakwater, 2 cables NE of Molo Corto, extends 1½ cables S from the coast and small craft berths are provided at piers extending from the coast close W of it.

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3 **Facilities**. All types of repairs. Comprehensive small craft facities are available.

4.25

1 **Oneglia.** Small craft are permitted to berth at any of the quays in Bacino di Levante however they must move if the berth is required for commercial vessels.

Minor harbour and anchorages

Chart 351 Plan of San Remo

San Remo

4.26

1 **General information**. San Remo (43°49′N, 7°47′E) is a well known winter tourist resort and now primarily a recreational and small craft harbour. The medieval part of the town, La Pigna, occupies the slopes of a steep hill with the domed Church of Madonna della Costa standing on its summit (4.16). The modern district extends along the coast with palm-lined avenues, large hotels and villas backed by hills covered with pine and oak woods.

2 The harbour, 5 cables SE of the church, is protected from the S by two moles; Molo Sud extends E from a triangular fort on the coast, Molo Foraneo extends S then W from the coast. The harbour entrance faces SE and lies between the heads of the moles, which are marked by lights; Molo Sud Head (red metal column on pedestal, 5 m in height) Molo Foraneo Head (green mast, 7 m in height). The harbour is divided into two basins, Porto Pubblico to the W and a private marina, Portosole, to the E.

3 Torrente di San Francesco enters the harbour close N of Porto Pubblico, the basin is protected from the river by a training wall which projects E from the S side of the river mouth. A light is exhibited from E end of the wall.

The harbour operates 24 hours a day June-September and between 0700–1900 local time October-May.

4 **Directions**. The harbour is approached from the SE through the channel shown on the chart. Mariners should navigate on the starboard side of the channel when entering or leaving harbour. Although the approach is straightforward a strong E wind sends a swell into the harbour and can make berthing difficult. The church previously mentioned, see 4.16, Monte Bignone (4.14) and the radio mast close NE of Portsole (4.16), are all useful marks. There are depths of about 10 m in the entrance. Mariners should navigate to remain at least 25 m off Molo Sud Head to avoid shoal water created by rubble protection of the mole. Porto Publicco is entered N of the head of a short breakwater extending NNE from Molo Sud and the E end of Torrente di San Francesco training wall. Lights are exibited from both.

5 The W facing entrance to Portosole lies 1 cable NNW of the harbour entrance between the head of a breakwater extending NE from Molo Foraneo and the S part of a broad quay extending S from the shore; the entrance is marked by lights. There is a 2 kn speed limit in the entrance to Portosole

6 **Anchorage**. Small vessels can obtain anchorage in depths of 5 to 20 m, good holding ground, within 3 cables of San Remo seafront. Mariners should note the isolated bank, with a least depth of 5 m over it, close inshore 1 mile WSW of the harbour entrance and pipelines 4 cables W and E of the harbour entrance. A dangerous wreck lies 4 cables E of the entrance; all are shown on the chart. The anchorage is untenable in S winds.

7 **Berths**. Molo Nord, on the N side of Porto Pubblico, is approximately 200 m in length with an alongside depth of 6 m. The W part of the quay is reserved for fishing vessels but visiting naval and passenger vessels may be allocated the E part.

8 Small craft berths:

Porto Pubblico; at pontoons in the W part of the basin and at quays on the inner face of Molo Sud in depths of 1·1 to 7·0 m.

Portosole; at pontoons and quays on the inner face of Molo Foraneo, the maximum size of vessel accepted 90 m length, draught 6 m. 890 berths

9 **Facilities**. There is a hospital in the town. Fresh water available on the quays. Provisions available. Small quantities of fuel available. There is a port radio station, see the relevant *Admiralty List of Radio Signals*. Comprehensive small craft facilities including repairs.

Chart 1998

Capo Mortola anchorage

4.27

1 **General information**. Anchorage can be obtained in a depth of 10 m, sand, good holding ground, E of Capo Mortola (43°47′N, 7°33′E). Villa Hambury and Castel d'Appio (4.16) are useful marks. Smaller vessels can obtain anchorage in depths of about 6 m further inshore. The anchorage provides moderate shelter from SW winds. See 4.13.

Punta Madonna della Ruota anchorage

4.28

1 **General information**. Anchorage can be obtained in a depth of 16 m, sand, 3½ cables NE of Punta Madonnadella Ruota (43°47′·4N, 7°41′·7E) however mariners should note the pipeline extending NE across the S part of the bay. The anchorage is sheltered from the W and SW.

2 **Directions**. Punta Madonna della Ruota can be identified by a red belfry, which rises above a group of trees, 1 cable W of the headland.

Ospedaletti anchorage

4.29

1 **General information**. Anchorage can be obtained in depths of about 7 m, 1¼ cables off Ospedaletti (43°48′·0N, 7°44′·7E). However mariners should beware of a pipeline extending SW from the coast approximately 3 cables SE of the casino, see 4.16. The anchorage off Punta Madonna della Ruota (4.28) is preferable.

Charts 351 plan of approaches to Imperia, 1998

Rovere anchorage

4.30

1 **General information**. Rovere (43°55′·2N, 8°06′·0E), a village, stands on a hill 1 mile NE of Diano Marina. Anchorage can be obtained, as shown on the chart, in a depth of about 13 m, sand, 4 cables off the coast SSE of the village. The village church (white belfry), Torre di Santa Maria (white, round) which stands on the coast 2½ cables E of the village and a prominent chimney within the village of Poiolo, 2½ cables N of Rovere, are useful marks.

Small craft

Chart 1998, (see 1.13)

Ventimiglia

4.31

1 **General information**. Ventimiglia (43°47′N, 7°37′E) is a a small craft and fishing haven. It is protected from the S and E by a mole extending 1¼ cables SSW from the coast at the W end of the modern district of the town which stands on a level plain. The medieval town stands on a hill W of the river mouth and the cathedral belfry is a useful mark.

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Fiume Rioa is spanned by two bridges 3 and 4 cables from its mouth, the NW bridge has five arches constructed of stone.

2 **Directions**. The SW facing entrance lies between the head of the mole and Punta della Rocca 1 cable NW. Mariners should beware of shoal water and isolated rocks awash extending from the coast on the NW side of the haven.

Anchorage can be obtained in depths of about 17 m, good holding ground, 5 cables S of the mouth of Fiume Rioa. However this anchorage becomes untenable should a S wind set in.

3 **Berths**. Small craft berth on the inner face of the breakwater.

Repairs. Small craft hull and machinery repairs.

Other facilities. There is a hospital in the town.

Supplies. All types of provisions, fuel and water are available to small craft.

Porticciolo de Bordighera

4.32

1 **General information**. Porticciolo de Bordighera (43°46′·8N, 7°40′·8E) is a small craft and yacht harbour close NE of Capo Sant' Ampeglio (43°46′·6N, 7°40′·3E). The town of Bordighera extends ESE from Ventimiglia (4.31) to Capo Sant' Ampeglio and consists of two districts; Borgata Nuova, the modern part W of Capo Sant' Ampeglio, and the old town which lies on rising ground grouped about a belfry N of the headland.

2 The harbour is protected by a main mole, Molo di Sopraflutto, which extends E and NE from the coast; lights (red mast, 4 m in height) are exhibited from its head. Mariners should note a breakwater extends a further 70 m NE from the light. A second inner mole, Molo di Sottoflutto, extends SE from the shore.

3 **Directions**. Mariners must navigate to remain at least 100 m clear of the light on Molo di Sopraflutto to avoid dangerous shoals around its head. An hotel and the belfry in the old town are useful marks.

Anchorage can be obtained in depths of about 11 m, 2¼ cables SW of Capo Sant' Ampeglio. Small vessels can anchor closer inshore in depths of about 5 m. These anchorages are untenable with S wind or sea.

4 **Berths**. The inner faces of the moles and pontoons provide small craft berths in depths of 2·5 to 5·0 m. Generally vessels berthing on the moles will be required to moor bow-on to the quay.

Work is in progress to develop the harbour to create two basins separated by the present Molo di Sottoflutto.

5 **Repairs**. All types of small craft repairs can be undertaken.

Other facilities. There is a hospital in the town.

Supplies. Provisions, fuel and water available.

Porticciolo di Capo Pino

4.33

1 **General information**. Porticciolo di Capo Pino (43°47′·8N, 7°44′·6E), on the E side of Capo Nero, is a small craft harbour protected by two moles extending ENE and SE from the coast. Lights are exhibited from the head of each mole; Outer Mole (red mast, 5 m in height), E Mole (green mast, 5 m in height).

Directions. The entrance faces E and is 26 m wide. The harbour has depths of 3·0 to 4·3 m.

2 **Berths**. The harbour provides 20 berths in a maximum depth of 2 m.

Facilities. Limited small craft facilities.

Arma di Taggia

4.34

1 **General information**. Arma di Taggia (43°49′·9N, 7°51′·6E) is a marina on the W side of the mouth of Torrente de Argentina. It consists of a basin, one wall of which also provides a quay in the river. Numerous chimneys within the town and Torre dell'Arma, an ancient, squat, square, grey-coloured tower which stands on a rocky promontory 1 mile NE of Capo dell' Arma (43°49′N, 7°50′E) are useful marks.

2 **Directions**. Depths in the approach to the marina are reduced considerably by silting. Mariners are advised that local knowledge is essential for safe navigation. The river mouth is protected by two pairs of short breakwaters. Lights are exhibited from the heads of the outer breakwaters.

Anchorage can be obtained in a depth of 13 m, sand, good holding ground, 2¾ cables SE of Torre dell' Arma. However mariners should note the shoal spit which extends 3½ cables S of the tower.

3 **Berths.** The marina provides 130 berths within the basin, maximum length of vessel accepted 9 m, and a further 150 berths in the river.

Facilities. There is a hospital in the town. Comprehensive small craft facilities including repairs.

Inshore anchorage, Riva Ligure – Santo Stefano

4.35

1 **General information**. Anchorage can be obtained in depths of about 12 m, 3½ cables offshore between Riva Ligure (43°50′·3N, 7°52′·7E) and Santo Stefano, 8 cables E. Mariners should note the pipeline, shown on the chart, which lies S of the anchorage. Rio Santa Caterina enters the sea close E of Riva Ligure and has a rocky shoal at its mouth.

San Lorenzo al Mare

4.36

1 **General information**. San Lorenzo al Mare (43°51′·7N, 7°58′·0E) is a boat haven protected from the S and E by the curved Molo di Sopraflutto and a short breakwater extending ESE from the shore. The harbour entrance faces NNE between the heads of the moles. There are depths of less than 0·5 m within the haven. Berths are at finger jetties extending from the shore. The village of San Lorenzo consists of two groups of houses. A church with a belfry stands close to the shore on Capo San Lorenzo (4.15).

Marina Degli Aregai

4.37

1 **General information**. Marina Degli Aregai (43°50′N, 7°55′E) is a large, purpose built marina close E of Santo Stefano al Mare. The harbour is formed by an outer mole, which extends ENE, and a smaller inner mole extending SSE. The entrance faces ENE and lies between the heads of the moles from which lights are exhibited; Outer Mole Head (red support), Inner Mole Head (green support). A broad quay divides the harbour into two basins. The harbour control tower and administration block stand on this quay and are a useful mark. There are depths of about 12 m in the entrance.

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2 **Directions**. The approach and entrance are straightforward. The prevailing wind is the onshore Levante.

Berths. Maximum length of vessel accepted 26 m. The marina provides 974 berths at pontoon jetties, there are depths of 3 to 12 m within the basins.

Facilities. There is a hospital in Santo Stefano al Mare. Comprehensive small craft facilities including repairs.

Chart 351 Approaches to Imperia

Diano Marina

4.38

1 **General information.** Diano Marina (43°54′·5N, 8°05′·1E) is a small craft and fishing harbour fronting the SW part of the town which lies either side of Torrente di San Pietro. Diano Marina can be identified by the tall square belfry, with a small red dome, which stands in its centre. The area contains several villages, each grouped about a church, which stand on the tops of wooded hills. Of these Diano Castello, 1½ miles NW, with a white church and large convent close S of it, is the most noticeable.

2 The harbour is formed by two moles; Molo di Ponente, which extends SE from the coast on the W side of the basin, and E of it Molo di Levante which is angled and forms the NE and E sides of the harbour. Lights are exhibited between 1st June and 30th September from the heads of the moles; Molo di Ponente (red mast, 5 m in height), Molo di Levante (green mast 5 m in height). The harbour is subject to considerable silting and the maximum draught accepted is 1 m.

3 **Anchorage** can be obtained a depth of 15 m, sand, 4 cables off Diano Marina. The belfry in Diano Castello bearing 309° and the largest belfry in Cervo (43°55′·5N, 8°07′·9E) (4.16) are useful marks. Smaller vessels can obtain anchorage closer inshore in a depth of about 6 m. Mariners should note the dangerous wreck 2 cables NNE of Capo Berta (43°53′·8N, 8°05′·0E) and the site of an historic wreck, protected by an area within which anchoring and fishing are prohibited, 1½ miles ENE of Capo Berta. Both are shown on the chart.

4 **Berths**. At the quays on the inner faces of the moles and during summer months at pontoons extending from the shore on the NW side of the harbour.

Facilities. Usual small craft marina facilities including minor hull and machinery repairs. Fuel and provisions available.

Chart 1998

Marina di Andora

4.39

1 **General information**. Marina di Andora (43°57′·0N, 8°09′·4E) is a yacht harbour close E of the modern resort town of the same name. The harbour is formed by an outer breakwater, Diga Foranea, which extends SSE then E, and Nuovo Molo Suttoflutto which extends S from the coast. The entrance faces ENE between the heads of the breakwaters which are of rubble construction and marked by lights; Diga Foranea (red mast, 3 m in height), Nuovo Molo Suttoflutto (mast, 6 m in height). There are depths in the entrance of 4 to 5 m, vessels up to 18 m in length are accepted. Strong SW winds can make the entrance difficult. Work is in hand (2000) to further improve the harbour however mariners should beware of prohibited areas and shoals, caused by these works, marked by red buoys and light-buoys.

2 **Anchorage** can be obtained in depths of about 13 m, sand, good holding ground, 7 cables SW of the marina off the village of Rollo (43°56′·5N, 8°08′·1E). Small craft may also obtain anchorage off the harbour, WSW of Capo Mele. Mariners should note the dangerous wrecks shown on the chart.

3 **Berths.** The harbour basin is divided by Vecchio Molo di Sottoflutto, the old inner mole. The W basin is the original part of the harbour and lined with quays, further berths are provided at piers and pontoons extending into the basins and at the quay on the inner face of Diga Foranea. The harbour has 800 berths in a maximum depth of 2 m.

4 **Facilities**. Comprehensive small craft facilities including repairs.

Other names

4.40

1 Alegai, Torre, (43°50′·5N, 7°54′·9E).
Antonio, Sant' (43° 51′·3N, 7°56′·4E).
Bordighera (43°46′·7N, 7°40′·E).
Borgo Prino (43°52′·2N, 8°00′·4E).
Chiappe, Punta (43°52′·3N, 8°01′·0E).
Cipressa, (43°51′·0N, 7°55′·8E).
Civezza (43°52′·8N, 7°57′·1E).
2 Coldirodi (43°48′·8N, 7°43′·9E).
Costarainera (43°51′·3N, 7°56′·5E).
Marmi, Torre (43°50′·7N, 7°56′·4E).
Martino, Punta San (43°49′·1N, 7°47′·8E).
Poggi (43°52′·3N, 7°59′·0E).
Poggio, Torre del (43°51′·2N, 7°57′·0E).
Pompeiana, (43°51′·2N, 7°53′·3E).
Prarola, Torre di (43°51′·9N, 7°59′·5E).
3 Roccia, Punta della (43°47′·3N, 7°35′·7E).
Scoglio Tondo, a rock, (43°47′·3N, 7°35′·9E).
Stefano, Punta Santo (43°50′·3N, 7°54′·3E).
Taggia, Fiumara de (43°50′·0N, 7°51·6E).
Terzorio (43°51′·1N, 7°53′·9E).

CAPO MELE TO TO CAPO DI VADO

General information

Chart 1998

Description of waterway

4.41

1 The coastal route continues from a position SE of Capo Mele (43°57′·2N, 8°10′·4E) 23 miles NE to a position SE of Capo di Vado. Inshore routes approaching ports and for small craft leading to a number of small craft harbours or marinas and inshore of Isolotto Gallinara (44°01′·5N, 8°13′·5E) and Islotto di Beregeggi (44°14′·0N, 8°26′·7E) are not described in detail.

The ocean route between the W Mediterranean and Genova lies between 5 and 10 miles SE of Capo Mele and is not described however mariners may find details provided for the coastal route useful.

Topography

4.42

1 The coast extends NE in a series of wide bays separated by prominent headlands. The the coast is high and rocky in the vicinity of Capo Mele but becomes a low sandy beach between Scoglio Tontonara (43°58′·2N, 8°09′·7E) and Capo San Croce 3 miles NE. The lower slopes of Mont Bignone form the coast close NE of Capo San Croce creating a sucession of rocky points separated by beaches. Mountains continue to back the coast between Capo Lena (44°02′·5N, 8°13′·6E) and Capo Noli, 12¼ miles NE; of these Monte Carmo, 8 miles N of Capo Lena, is the highest. The shore of this wide bay is low-lying, broken by several streams and a near continuous development of modern buildings stand on it; numerous villages and small towns stand on the slopes of

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the hills behind it. Between Capo Noli and Capo di Vado (44°15′·5N, 8°27′·4E) the bay is steep-to and within it lies Isolotto de Beregeggi.

Restricted areas

4.43

1 Vessels carrying or that have been carrying petroleum gas or chemical products in bulk are prohibited from navigating within an area, shown on the chart, which extends NE, up to 7 miles offshore from the vicinity of Pietra Ligure (44°09′N, 8°17′E) between 1st June and 30th September. Vessels approaching or departing from the terminals at Vado (4.74) may only navigate within the area at right angles to the coast.

Prohibited areas

4.44

1 Anchoring and fishing are prohibited in an area which lies 3 cables E of Alassio Pier (44°00′·2N, 8°10′·4E) and extends 8 cables NE towards Capo San Croce (4.48).

Anchoring fishing and diving are prohibited in an area, shown on the chart, 1 mile ENE of Capo Lena (44°02′·5N, 8°13′·6E) which contains an historic wreck.

Anchoring is prohibited in the vicinity of a water pipeline and submarine cables which lie between Isolotto Gallinara (44°01′·5N, 8°13′·5E) and the mainland.

2 Diving is prohibited within 500 m of the coast of Isolotto Gallinara. Navigation and all maritime activities are prohibited within 50 m of the S coast of the island due to the danger of landslip and rock falls.

Anchoring, stopping and fishing are prohibited between the most W pair of platforms lying close offshore from the village of Ceriale (44°05′·2N, 8°13′·5E).

3 Anchoring, fishing and any submarine or seabed activity are prohibited in an area centred on (44°14′·1N, 8°27′·1E), shown on the chart, which contains expolsives.

Anchoring is prohibited in the vicinity of an outfall extending 8 cables ESE from Capo di Vado (44°15′·4N, 8°27′·4E).

Marine farms and fish havens

4.45

1 Anchoring, stopping and fishing are prohibited in an area, shown on the chart, which lies up to 1 mile offshore between the villages of Borghetto Santo Spirito (44°06′·8N, 8°14′·5E) and Loano, 1 mile NE. The area contains an obstruction which is part of a marine farm.

Anchoring, stopping and fishing are prohibited in an area, shown on the chart, which lies up to 1 mile E of the village of Sportano (44°13′·5N, 8°25′·0E); the area is a fish haven.

2 Navigation, anchoring and fishing are prohibited within the fish haven extending up to 6 cables offshore from Punta San Antonio (44°13′·9N, 8°25′·7E).

Natural conditions

4.46

1 **Local weather**. High cloud over Capo Mele indicates fair weather whereas low cloud over the headland is a precursor to strong winds and rain. In the vicinity Capo Lena the development of heavy cumulus cloud with grey strata to the S indicates strong S winds are likely. Generally winds from the SE are light to moderate but raise a sea. Mariners should beware of strong offshore gusts, particularly in winter, caused by the downslope effect of the mountains.

Current. See 4.13.

Principal marks

4.47

1 **Landmark:**

Sancturario della Madonna della Guardia (44°01′·2N, 8°08′·7E), a large square building standing on the crest of a ridge 1½ miles NW of Alassio.

Major lights:

Capo Mele (43°57′·3N, 8°10′·4E) (4.14).

Capo di Vado (white eight-sided tower and dwelling, 34 m in height) (44°15′·4N, 8°27′·2E).

Directions

(continued from 4.15)

4.48

1 From a position about 10 miles SE of Capo Mele (43°57′·2N, 8°10′·4E) the coastal route continues NE passing:

SE of Alassio (44°00′·4N, 8°10′·3E), a coastal resort, thence:

SE of Capo Santa Croce (44°01′·0N, 8°11′·7E) a steep spur of Monte Bignone which ends in a rocky, yellow coloured point. A small grey chapel and two blocks of flats stand on the point. Thence:

2 SE of Isolotto Gallinara (44°01′·5N, 8°13′·5E). The island has a rocky coast and is covered in vegetation. A house with a tower stands on the summit and is surrounded by a wall; a small belfry stands NE of the house. Thence:

3 SE of Capo Lena (44°02′·5N, 8°13′·6E) which lies at the SE end of a wide plain formed from the deposit carried by Fiume Centa. Mariners are advised to give the headland a wide berth, especially following heavy rain and strong winds, because of the shifting banks off the river mouth. Thence:

SE of Loano (44°07′·5N, 8°15′·0E), a fishing port, thence:

4 SE of Capo di Caprazoppa, also known as Capo Finale, (44°09′·7N, 8°20′·2E), a rocky headland which rises vertically from the sea. A square tower, partly demolished, with a red villa nearby, stands on its summit. Thence:

SE of Punto San Donato (44°10′·4N, 8°22′·1E), steep and rocky, on which stands Torre di San Donato, thence:

5 SE of Punta Crena (44°10′·9N, 8°24′·5E), thence:

SE of Capo di Noli (44°11′·8N, 8°25′·5E), the extremity of a high, steep, rocky promontory, yellow-grey in colour where it is not covered in vegetation. A ruined chapel and, slightly higher on the slope, a slender crenellated tower, stand near the E extremity of the point. Thence:

SE of Isolotto di Beregeggi (44°14′·0N, 8°26′·7E) with a ruined fort on its summit. The island can be difficult to distinguish from the S or SE. Thence:

6 To a position SE of Capo di Vado (44°15′·5N, 8°27′·4E) which has a number of stone quarries on its E side giving it a whitish appearance. A light is exhibited from Capo di Vado (4.47); the lighthouse is prominent. Fort di San Stefano, ruined, stands on the summit of the headland.

Useful marks

4.49

1 Capo Mele Signal Station, a small light coloured building and flagstaff, from which storm signals are exhibited, stands on the summit of the headland (43°57′·2N, 8°10′·4E).

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Ceriale, a tall chimney stands close S of the village (44°05′·2N, 8°13′·5E).

2 Ceriale, six jetties each 60 m in length and 160 m apart with a near circular platform at the outer end, extend from the shore. The most N is submerged and marked by a beacon.

Castello Borelli (46°06′·1N, 8°14′·1E) stands prominently on the E slope of Monte Piccaro.

Loano Church, dark cupola surmounted by a gilded statue (44°07′·8N, 8°15′·5E).

3 Monte Caparazoppa, the mountain is prominent with large red coloured patches on its S slopes and a large stone quarry on its SE side. There is a large light coloured area below the quarry (44°10′·0N, 8°19′·3E).

4 Monte Capo di Noli (44°11′·6N, 8°25′·2E).

Spotorno, a group of 5 conspicuous blocks of flats (44°13′·6N, 8°25′·0E).

Torre di Ere, an ancient square tower on the summit of a hill 1¾ cables NE of Punta di Miaolo (44°14′·2N, 8°26′·5E).

(Directions continue at 4.71)

Side channels

Inshore of Isolotto Gallinara

4.50

1 **General information**. The channel between Isolotto Gallinara (44°01′·5N, 8°13′·5E) and the mainland is free from isolated dangers and has depths of 10 to 15 m however a bank with shoaler water extends towards the N part of the island, up to 7 cables S of Capo Lena (1 mile N of Isolotto Gallinara); the deepest water lies 1½ cables off the N point of the island. A pipeline is laid between the NW side of Isolotto Gallinara and the mainland; anchorage in its vicinity is prohibited (4.44). There is a small boat haven (4.60).

Chart 350

Inshore of Isolotto di Bergeggi

4.51

1 **General information**. The channel between Isolotto di Bergeggi (44°14′·0N, 8°26′·7E) and Punta del Miaolo, the wooded headland 1¼ cables NW, has depths of about 10 m and is clear of isloated dangers. Torre di Ere, an ancient square tower, stands on the summit of a hill 1¾ cables NE of Punta del Miaolo and is a useful mark. However mariners should note the fish haven, which lies close SW of the channel, within which navigation is prohibited (4.45).

Minor harbours and anchorages

Chart 1988

Alassio Pier and anchorage

4.52

1 **General information**. Alassio (44°00′N, 8°10′E) is a popular resort which extends along the beach. Within the town are three churches; the belfries of the most N and most E are prominent. Sanctuario della Madonna della Guardia, (4.47), stands NW of the town. A concrete pier on piles extends about 160 m SE from the beach abreast Chiesa Maggiore, the E church within the town.

2 **Berth**. In good weather small craft can berth at the pier which has a T-shaped head approximately 20 m in length; lights (red masts, 4 m in height) are exhibited from the most seaward corners. There are depths of about 3 m alongside the outer face of the pierhead.

3 **Anchorage**. With local knowledge anchorage can be obtained in a depth of 27 m, sand, good holding ground, about 4 cables SE of the pier. Smaller vessels can obtain anchorage closer inshore in a depth of about 7 m. Mariners should note the prohibited anchorage area which lies NE of the anchorage (4.44). The alignment (311°) of Sancturaio della Madonna della Guardia with Chiesa Maggiore and the alignment (038°) of Capo Santa Croce (4.49) with Capo Lena (4.48), are useful marks.

Repairs. Small craft machinery and hull repairs available. There is a slipway of 5 tonnes capacity.

Other facilities Comprehensive small craft facilities. There is a hospital in the town.

Albenga anchorage

4.53

1 **General information**. Mariners with local knowledge navigating small vessels can obtain anchorage in depths of about 6 m close off the beach abreast the town of Albenga (44°03′N, 8°13′E). The prohibited anchorage area close E, see 4.44, should be noted. The town contains several high, square red coloured towers and a cathedral with a spire. Fort Centa, small, square and disused, stands amongst some large modern buildings close to the shore. A prominent red building resembling a castle stands on high ground close W of the town.

Finalpia anchorage

4.54

1 **General information**. Anchorage can be obtained in depths of about 22 m, sand, off the town of Finalpia, which is the E part of Finale Ligure (44°10′·4N, 8°21′·5E), with Punto San Donato (4.48), bearing 040° distant 7 cables.

Pietra Ligure

4.55

1 **General information** Pietra Ligure (44°09′·0N, 8°17′·3) contains a small shipyard, the cranes and buildings associated with it can be used to identify the town. A church with twin belfries stands in the NE part of the town and is also a useful mark.

The town and shipyard stand on the banks of Torrente Maremola. A concrete pier, 40 m in length, extends from the shipyard. A second pier extends 60 m SSE from the W side of the river mouth, a light is exhibited from its head (red mast, green bands, 5 m in height).

2 **Berths**. The larger pier on the W side of the river mouth is unsuitable for berthing. The small pier, for shipyard barges and small craft, has a depth alongside of about 4 m. A mooring buoy lies close off the shipyard.

Chart 350 Approaches to Savona and Vado

Noli anchorage

4.56

1 **General information**. Il Grugno (44°12′N, 8°25′E), is a bay between Capo di Noli and Noli, 5 cables NW. The head of the bay is steep-to and anchorage can be obtained in depths of about 18 m, 1 cable off the shore. The anchorage provides good shelter from W winds. Noli is an ancient walled town with three square, red coloured towers the most W of which has a clock on the seaward side. La Rocca, an old round tower, stands on the summit of an isolated pointed hill close N of the town.

Spotorno anchorage

4.57

1 **General information**. Anchorage can be obtained in a depth of 18 m, 2¼ cables offshore from Spotorno (44°13′·6N, 8°25′·0E), with the church belfry bearing 325°. Torrente Cercallo enters the sea close S of the town. Mariners with local knowledge navigating small vessels can

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obtain anchorage in depths of about 5 m approximately 1 cable offshore using the same mark. However all mariners should beware of a dangerous wreck about 1 cable offshore, 2 cables ESE of the belfry.

Small craft

Chart 1998

Laigueglia anchorage

4.58

1 **General information**. With local knowledge anchorage for small craft can be obtained, in depths of about 7 m, 1½ cables close NE of the village of Laiguelia (43°58′·7N, 8°09′·3E). Within the village stands a church with twin belfries and white facade; only the upper part is visible from seaward. A tower stands at the N end of the village and a stone jetty lies close N of the church; in calm weather, landing is possible on its SW side. A light (red mast, 7 m in height) is exhibited from the jetty head.

Luca Ferrari

4.59

1 **General information**. Luca Ferrari (44°01′·3N, 8°11′·7E) is the small craft and yacht harbour of Alassio (4.52) which lies on the N side of Capo Santa Croce (4.49). The harbour is formed by an angled mole, Diga Foranea, which extends 2½ cables NNE from the headland, and an inner mole, Molo di Sottoflutto Esterna, which extends E from the coast. The moles exhibit lights; Diga Foranea (red mast, 8 m in height), Molo di Sottoflutto Esterna (green mast, 8 m in height). The head of Diga Foranea is painted in red and white bands on its external face and yellow and black bands on its inner face. The harbour has depths of 1 to 5 m but is subject to silting.

2 **Directions**. The harbour entrance faces NNW and is 80 m wide however shoals extend up to 50 m from the head of Diga Foranea. East winds send a swell into the harbour. A narrow valley between two hills W of the harbour can concentrate N and NW winds across the the entrance; mariners should beware of being set onto the head of Diga Foranea or the shoal water surrounding it.

3 **Berths**. The harbour provides 400 small craft berths in depths of 1 to 5 m. The NW part of the harbour is reserved for fishing vessels.

Isolotto Gallinara boat haven

4.60

1 **General information**. Islotto Gallinara boat haven (44°01′·5N, 8°13′·6E), on the NW coast of the island, is formed by two rubble faced moles, both about 60 m in length. The entrance faces NW, is 18 m wide and marked by lights; E Mole Head (red mast, 4 m in height), W Mole Head (green mast, 4 m in height). The harbour has depths of 3 to 5 m. The E mole has berths with depths of 1·6 to 2·0 m and a quay opposite the entrance has depths of 2·5 to 3·0 m alongside. Mariners should note the prohibited areas associated with Isolotto Gallinara, see 4.44.

Loano–Portobello

4.61

1 **General information**. Loano-Portobello (44°08′·0N, 8°15′·9E) is a small craft and fishing harbour which lies on the NE side of the town. Mariners should note the fish haven which lies off Loano, see 4.45. The town can be identified by the large dark cupola of the parish church and Monastero di Monte Carmelo (4.49). The harbour is formed by two curved, rubble faced moles; The S and SW side of the basin is protected by Nuovo Molo di Sopraflutto, about 800 m in length extending from the old outer mole. Vecchio Molo di Sopraflutto, which is now a jetty, divides the S part of the harbour. Nuovo Molo di Sottoflutto extends SE from the coast protecting the NE part of the basin. The harbour entrance faces NNE between the heads of the new outer moles, from which lights are exhibited; Outer Mole Head (red mast, 7 m in height), Inner Mole Head (green mast, 8 m in height). The maximum draught accepted is 2·5 m. There is a speed limit of 3 kn within the harbour.

2 **Directions**. The entrance is 140 m wide. Winds from the SE and SW, even of moderate strength, create a swell which prevents entry or departure.

Berths. There are 475 berths; all are Mediterranean moorings.

Repairs. Small craft hull and machinery repairs available.

Other facilities. There is a hospital in the town. Comprehensive small craft facilities.

Porto di Finale Ligure

4.62

1 **General information**. Porto di Finale Ligure (44°10′·5N, 8°22′·4E) is a small craft and yacht harbour on th NE side of Punta San Donato (4.48). Finale Ligure, a muncipality comprising of Finalmarina, Finalpia and Finalborgo lies WSW of the harbour. An outer mole, Molo di Sopraflutto, extends 2 cables NE from Punta San Donato; the inner mole, Molo di Sottoflutto, extends SE from the coast towards the head of Molo di Sopraflutto. The NE facing entrance lies between them. Lights are exhibited from the heads of both moles; outer (red mast, 6 m in height), inner (green mast, 6 m in height).

2 **Directions**. The approach and entrance are straightforward however mariners should note Banco Stelle, with a least depth of 10 m over it, 5 cables E of Punta San Donato and beware of shoals, with depths of about 1 m over them, which develop off the mouth of Torrente Porra inshore of the 5 m depth contour. There are depths of 4 to 5 m in the harbour entrance.

3 **Berths**. The harbour provides 600 berths with depths of 1·3 to 5·0 m. Some of the quay in the SW part of the harbour is reserved for fishing vessels.

Repairs. Small craft repairs can be undertaken.

Other facilities. There is a hospital in the town. Usual small craft facilities.

Other names

4.63

1 Bergeggi, Punta (44°15′·1N, 8°27′·1E).
Borgio (44°09′·5N, 8°17′·7E).
Bergeggi (44°14′·8N, 8°26′·6E).
Elena, Monte Santa (44°14′·8N, 8°26′·0E).
Perti, Rocco di, (44°10′·7N, 8°13′·6E).
Porra, Torrente (44°10′·1N, 8°20′·4E).
Predani, Punta (44°14′·4N, 8°26′·8E).

2 Sciusa, Torrente (44°10′·5N, 8°21′·2E).
Varatello, Torrente di (44°09′·3N, 8°18′·2E).
Varigotti (44°11′·0N, 8°23′·5E).

CAPO DI VADO TO GENOVA

General information

Charts 1998, 350

Description of waterway

4.64

1 The coastal route continues from a position SE of Capo di Vado (44°15′·4N, 8°27′·3E) 10 miles NE to a position S of Capo Arenzano (44°23′·7N, 8°41′·0E) then leads a further

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10 miles E to a position S of Punta Vagno (44°23′·5N, 8°57′·1E). Inshore routes leading to the major port of Genova and, where appropriate, to secondary ports on this part of the coast are described but not the approaches to small craft harbours. The ocean route between the W Mediterranean and Genova leads to or from the vessel traffic schemes associated with the entrances to the port; the traffic schemes extend approximately 5 miles to seaward. The ocean route is not described in detail.

Topography

4.65

1 The generally rocky coastline also has areas of sandy beach, often found in the vicinity of river mouths. Development along the coast is now more evident, particularly in the vicinity of the important ports of Vado Ligure and Savona where the cities contain industrial buildings and the port facilities are conspicuous. Behind the fairly low lying and often sheer coastal area the coast rises steadily towards ranges of mountains and hills, some of which provide landmarks; a number of landmarks both natural and man-made, also stand on the slopes of these hills. The city of Genoa stands at the head of the Gulf, extends W to the vicinity of Voltri (44°25′N, 8°45′E) and as far E as Nervi (44°23′N, 9°04′E). Genoa is Italy's most important port and the location of a major international airport.

Prohibited areas

4.66

1 Navigation by tankers or vessels carrying oil products, chemicals or gas in bulk is prohibited during the summer within an area extending up to 6 miles offshore between Pietra Ligure (44°09′N, 8°17′E) and Varazzo, 18 miles NE, see 4.6, the area is shown on the chart.

An historic wreck, shown on the chart, lies within an area 7 cables E of Punta dell' Olmo (44°20′·7N, 8°33′·9E), stopping, anchoring, fishing and all submarine activity are prohibited within it.

Hazards

4.67

1 During May, June and July night fishing with lamps takes place up to 2 miles offshore in the vicinity of Varazze (44°21′·5N, 8°34′·0E).

Spoil ground

4.68

1 A spoil ground and fish haven lies 4 cables S of Punta dell'Olmo (44°20′·7N, 8°33′·9E). The area is shown on Chart 350.

Natural conditions

4.69

1 **Local weather**. The prevailing wind on this part of the coast is NW and known as the Grecale. Grey cloud covering the mountain peaks inland of Savona (44°18′N, 8°28′E) precedes N winds. This effect is known locally as Garo. A storm from the SE is usually preceded by a higher than predicted HW at Savona. This may occur up to 24 hours in advance of the storm when conditions locally are good with calm to light winds. During the winter months strong offshore squalls can descend quickly and without warning from the mountains. During strong NW winds throughout the region the weather in the Varazze area can be calm or the wind only light.

2 **Current** sets SW along this coast at about 1 kn, exceptionally a rate of 2 kn may be experienced.

Principal marks

4.70

1 **Landmarks:**

Forte di Vado, stands on a slope facing the sea (44°15′·6N, 8°27′·0E).

ENEL power station, two chimneys painted in red and white bands, 220 m in height (44°16′·5N, 8°25′·9E).

Santuario della Madonna degli Angeli, halfway up the slope of a hill, has a low squat belfry (44°18′·9N, 8°27′·9E).

Leon Pancaldo Tower, Savona, conspicuous tall building (44°18′·6N, 8°29′·1E).

2 Savona, conspicuous grain silos (44°18′·8N, 8°29′·8E).

Varazze, La Crocetta, a small church with spire standing on the summit of a hill (44°21′·7N, 8°33′·1E).

Madonna del Gazzo, a prominent sanctuary standing on the summit of a hill, exhibits red obstruction lights (44°26′·5N, 8°51′·0E).

3 Conspicuous radio relay mast, red and white bands, 70 m in height, standing on the heights of Granarolo (44°25′·9N, 8°54′·7E).

Forte Castelliccio with a massive hexagonal tower and two radio masts nearby, (44°25′·7N, 8°56′·1E); one of several forts standing on the heights around the city.

4 Monte Fasce, a conspicuous white cross stands at the W end of its summit. Red obstruction lights are exhibited from the summit, (44°24′·6N, 9°02′·0E).

Major lights:

Capo di Vado (44°15′·4N, 8°27′·2E) (4.47).

Directions

(continued from 4.48)

4.71

1 From a position SE of Capo di Vado (44°15′·4N, 8°27′·3E) the coastal route continues NE passing, with positions from Punta dell' Olmo (44°20′·7N, 8°33′·9E):

SE of Rada di Vado (6 miles SW), thence:

SE of Madonna del Monte, an isolated grey monastery with cupola and belfry (44°17′·6N, 8°26′·3E), thence:

SE of Savona (4 miles SW) (4.84), thence:

2 SE of Capo d'Albisola, steep and rocky (2 miles SW), thence:

SE of Punta di Celle (1¼ miles SW), the point of the headland is a steep rocky mass on which stands a pine grove; a yellow coloured villa stands within it. Thence:

SE of Bric Ca di Bregalla (about 2 miles WNW), a hill with a round red coloured tower at its summit, thence:

3 SE of Celle Ligure, (1 mile WSW), thence:

SE of Punta dell' Olmo, numerous large, light-coloured buildings stand close N of the point and a beacon (white pyramidal) stands on it. Thence:

SE of Punta dell' Aspera (Punta di Varazze), covered with trees above which rises a red castellated tower (2½ cables NE), thence:

4 SE of Punta della Mola, (1½ miles NE) on which stands Torre di Mola, thence:

SE of Punta d'Invrea (3 miles NE), a complex of red coloured dwellings stand on it, a castle, light grey in colour with a low squat crenellated tower stands close N. A light-beacon (ODAS, radar reflector) lies about 1½ miles NE of the headland. Thence:

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5 To a position about 10 miles S of Capo Arenzano. The headland rises steeply in a bare slope to a flat summit on which stand several large buildings. Mariners should note the wreck of the tanker *Haven*, with a depth of 29 m over it, lies approximately 1½ miles SSE of the headland.

4.72

1 The coastal route then leads E, remaining S of the vessel traffic schemes and outer anchorages associated with the Port of Genova, passing, with positions from La Lanterna Light (44°24′·3N, 8°54′·3E):

S of Voltri (7 miles WNW), at the W end of Porto di Genova, thence:

S of La Lanterna Light (4.124), thence:

To a position about 10 miles S of Punta Vagno (44°24′·5N, 8°57′·0E).

Useful marks

4.73

Fortino di San Lorenzo, low and dark (44°16′·1N 8°26′·4E).

Vado Ligure Cathedral, slender belfry (44°16′·1N, 8°26′·1E).

Zinola church belfry, red and white bands, conical cupola (44°16′·9, 8°26′·7E).

1 Legino church belfry, grey cupola, yellow belfry (44°17′·7N, 8°27′·2E).

Varazze church belfry, in the centre of the town (44°21′·5N, 8°34′·5E).

Varazze, Cantieri Baglieto, the sheds and buildings of the shipyard are conspicuous.

Abissola Marina railway bridge; the prominent metal bridge crosses Torrente Sansobbia in the E part of the town (44°17′·0N, 8°39′·4E).

2 Celle Ligure belfry, painted in black and white stripes, green cupola (44°20′·5N, 8°32′·9E).

Torre di Mola (43°21′·6E), 8°35′·6E).

Monte Grosso, covered in dark vegetation. A chapel, stands on the summit (44°22′·3N, 8°35′·7E).

3 Arenzano, a church, light yellow, grey campanile with red top. The church stands on the slope of a hill behind the town (44°24′·4N, 8°40′·9E).

Crevari church, yellow belfry (44°25′·4N, 8°44′·1E).

(Directions continue, for Vado Ligure at 4.78, Savona at 4.88, Genova at 4.125 and Punta Vagno to Punta Baffe at 4.151)

Vado Ligure

Chart 350

General information

4.74

1 **Position.** Vado Ligure (44°16′N, 8°26′E) stands at the mouth of Torrente Segno in the SW part of Rada di Vado.

Function. Bulk handling of mineral oils, coal and cereals at the piers extending into Rada di Vado. General cargo, container traffic, fruit, vegetables and motor vehicles at the basin close N of Capo di Vado, known as Porto di Capo di Vado.

2 **Topography**. Rada di Vado lies between Capo di Vado (44°15′·4N, 8°27′·3E) and, 2½ miles NE, Fornaci, a suburb of Savona (4.84). The shore of the bay is lined with buildings behind which stand a range of mountains.

Approach and entry. All berths are approached through Rada di Vado.

3 **Port Authority**. Vado Ligure is administered by Savona Port Authority; Autorita Portuale di Savona, Via Gramsci 14 I–17100 Savona.

Limiting conditions

4.75

1 **Deepest and longest berth**. Molo di Sopraflutto, inner face; length 700 m, depths alongside range from 6·8 m to 14·8 m; maximum draught accepted 12·5 m.

Maximum size of vessel handled. 260 000 grt, maximum draught 21·2 m, at the Campo Boe (S.A.R.P.O.M.-Quiliano) Oil Terminal buoys.

2 **Local weather and sea state**. Although sheltered from the W Rada di Vado is exposed to the Tramonta or N wind; very strong offshore squalls can descend from the mountains during the winter. With strong N winds berthing and unberthing at the N and W quays within the port basin becomes difficult. Winds between NW and NE create a sea within the basin which makes lying alongside difficult for small craft. Winds between SW and SE can create a sea across the entrance to the basin making entry or departure difficult. Generally SE winds are not strong.

Arrival information

4.76

1 **Port operations** 24 hours.

Port radio. An information service (Avvisatore Marittimo) provides vessel movement and meteorological information 0600–2400 daily, see *Admiralty List of Radio Signals*.

Prohibited anchorage. Anchoring is prohibited within an area, shown on the chart, enclosing Rada di Vado and in the vicinity of submarine pipelines extending offshore from Capo di Vado and Fornaci, also shown on the chart.

2 **Outer anchorage area**. Tankers awaiting a berth can obtain anchorage in depths of 20 to 100 m, good holding ground, within the designated area approximately 2 miles NE of Capo di Vado.

Outer anchorage berths. The Campo Boe Oil Terminal (44°16′·7N, 8°27′·6E) has two waiting anchor berths 1¼ miles E and 2 miles ENE of it. The anchorages are shown on the chart.

3 **Pilotage and tugs**. Pilotage is compulsory for all vessels greater than 500 grt, available 24 hours a day and provided by Savona Pilots. The pilot boards 2 miles SSE of Molo di Sopraflutto. Tugs are available from Savona.

4 **Regulations**. There is a speed limit of 6 kn for conventional vessels within Vado Ligure. High-speed ferries are limited to 10 kn entering or leaving the port, however the following rules also apply; the port must be approached on a steady course between 300°–340°, when speed must be reduced to 10 kn between a position 090° 2·2 miles from Molo di Sopraflutto Light (44°16′·0N, 8°27′·2E) and a position 067° 1·1 miles from the light. High speed ferries departing the port are permitted to increase speed once E of the line of Molo di Sopraflutto and must maintain a steady course between 120°–160°.

Harbour

4.77

1 **General layout**. The harbour comprises; five piers extending into Rada di Vado, the Campo Boe Oil Terminal moorings and 1 mile N a further pier extending SE from the coast at Fornaci. In the S part of the harbour the quays are protected by Molo Soproflutto, close N of Capo di Vado. Within the harbour basin are modern container, reefer and Ro-Ro facilities.

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2 **Hazards**. High speed ferries, see Regulations at 4.76.

Principal marks

Landmarks:

See 4.70.

Major light:

Capo di Vado (44°15·4N, 8°27′·2E) (4.47).

Directions for entering harbour

4.78

1 **Approaches**. The approach to Rada di Vado is straightforward however mariners should note several areas, shown on the chart, where anchoring, stopping or fishing are prohibited. Also that they are likely to encounter numerous vessels at anchor off the coast between Capo di Vado and Capo d'Albisola (4.71), 5 miles NE; care is necessary when approaching in poor visibility.

4.79

1 **Rada di Vado.** In good conditions the pier berths are easily identified, at night lights are exhibited from the piers; some exhibit occasional leading lights to assist approaching the berths, see below. In winter strong N winds frequently prevent berthing or unberthing. Mariners should note that the alongside berths at these piers also incorporate mooring buoys not shown on the chart.

2 **Pontile San Raffaele lights in line**. The alignment (208°) of Pontile San Raffaele lights in line may assist an approach to the pier:

Front light, Pontile San Raffaele Head (white mast, red bands).

Rear light, (red mast, black bands, 20 m in height, 850 m from front light).

3 **Pontile A.G.I.P. lights in line.** The alignment (264°) of Pontile A.G.I.P. lights in line may be used to assist an approach to the pier:

Front light, Pontile A.G.I.P. Head (red mast, 3 m in height).

Rear light (green mast, 20 m in height, 650 m from front light).

4 **Pontile I.I.P. Leading lights.** The alignment (322°) of Pontile I.I.P. Leading lights may assist an approach to the pier:

Front light, Pontile I.I.P. Head (green mast, 6 m in height).

Rear light (red and white tower, 15 m in height, 500 m from front light).

5 **Campo Boe Oil Terminal Mooring**. Berthing is conducted during daylight hours only and requires full tug assistance. The mooring exhibits a light (yellow mast, 4 m in height).

4.80

1 **Porto di Capo di Vado.** From a position E of Molo di Sopraflutto (44°16′·0N, 8°27′·2E) the track leads WNW and S passing:

N of Molo di Sopraflutto Head Light (red mast, 5 m in height), thence:

As required to approach the quays.

Mariners should note the contents of 4.75 (local weather and sea state).

Useful marks

4.81

1 Vado Ligure grain silos (44°15′·9N, 8°26′·4E).

See also 4.73.

Basins and berths

4.82

1 **Rada di Vado**

Berth	*Cargo*	*Limits*
S. Raffaele (S)	mineral/cereal discharge	50 000 grt, max draught 12·6 m
S. Raffaele (N)	mineral/cereal loading	30 000 grt, max draught 9·4 m
Esso	petroleum products	max draught accepted 10 m when moored bow-on to pier head or 7·8 m if berthed alongside.
A.G.I.P	petroleum products	7 000 grt, max draught accepted 11·9 m if moored bow-on to pier head or 6·4 m if berthed alongside
E.N.E.L.	the pier carries seawater intake pipelines	
I.I.P.	petroleum products	max draught accepted 9 m. Moor bow-on to head of pier only.
Campo Boe	crude oil	260 000 grt, max draught 21·3 m.
E.R.G	petroleum products	max draught accepted 9 m. Moor bow-on to pier head only.

2 **Porto di Capo di Vado**. The W side of the basin, Banchina Principale, is the container terminal, providing 3 berths with a maximum depth alongside of 11·8 m. Ro-Ro facilities are provided at Banchina Sud. Large motor vehicle carriers, passenger vessels or vessels awaiting repairs may be allocated berths on the inner face of Molo Sopraflutto (4.75). Banchina Nord also handles motor vehicle carriers but is primarily the refrigerated cargo terminal; maximum depth alongside 11·8 m.

Port services

4.83

1 **Repairs**. Minor repairs undertaken.

Other facilities. The harbour has a pollution control capability.

Supplies. Fuel available by lighter. Fresh water by lighter and from jetty connections. Provisions available.

Communications. Local boat services for vessels at anchor.

Savona

General information

4.84

1 **Position.** The Port of Savona (44°19′N, 8°30′E) lies to the E of the industrial city of Savona.

Function. The port handles oil products, coal, phosphates, cereals, laminates, fertilisers and motor vehicles.

2 **Topography**. The city of Savona has extended NW from the coast to occupy the slopes of a range of hills close inland. The city has also developed along the coast, mainly SW, to absorb Fornaci and Legino, suburbs which lie N of

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Rada di Vado. Reclamation and harbour engineering works have extended the Port of Savona NE to provide deep water berths capable of handling large vessels including bulk and vehicle carriers.

3 **Approach and entry**. Savona is approached from the E through Rada di Albisola. The port is entered NW or SE of Molo Frangiflutti (44°18′·9N, 8°30′·0E).

Port Authority. Autorità Portuale di Savona, Via Gramsci 14, I–17100 Savona.

Limiting conditions

4.85

1 **Deepest and longest berth**. Nuovo Molo Frangiflutti (elbow to head), length 1500 m, depth 16 m, maximum draught accepted 14·8 m.

Maximum size of vessel handled. Maximum draught accepted 14·8 m.

2 **Local weather and sea state**. With S winds Molo Nuovo Frangiflutti creates reflex waves within 1 mile of the entrance to the port basins. These conditions can make manouevring in the outer harbour difficult. See also 4.69.

Arrival information

4.86

1 **Port operations** 24 hours a day.

Port radio. The port operates an information service, also covering Vado Ligure, which provides vessel movement details and meteorolgical information 0600–2400 daily, see *Admiralty List of Radio Signals*.

2 **Prohibited anchorages**. Anchorage is prohibited within areas shown on the chart within 1 mile radius centred on Nuovo Molo Frangiflutti Light (44°18′·4N, 8°30′·3E). Also within areas protecting submarine pipelines extending from the coast at Punta San Erasmo, Capo d'Albisola and Punta di Celle; respectively 7 cables SW, 1¼ miles and 2 miles NE of Nuovo Molo Frangiflutti Light.

3 **Outer anchorage areas**. Cargo vessels can obtain anchorage in depths of 15·7 to 68·0 m, good holding ground, within Anchorage Area No 2, which lies approximately 1 mile S of Savona. Alternatively, between 1st October-31st May, cargo vessels may obtain anchorage in depths of 34 to 65 m, good holding ground, within Anchorage Area No 1, 2 miles NE of the harbour. Mariners should note that tankers and vessels with dangerous cargoes are prohibited from using these anchorages; the areas are shown on the chart.

4 **Outer anchorage berths**. Two deep water anchorage berths for cargo vessels lie 1¼ miles offshore, SE of Savona, in depths of 54 to 80 m; both are shown on the chart.

Pilotage and tugs. Pilotage is compulsory for all vessels over 500 grt. The Pilot boards 1 mile from the outer breakwater. There are 8 tugs available (2000 to 3500 hp).

Regulations. There is a speed limit of 6 kn within the Port of Savona.

5 Sailing vessels are permitted to navigate under sail within the port to and from their berth only.

The movement and operation of all tankers within the Port of Savona are strictly controlled, including the testing and trial of ship's equipments. In addition there are strict controls on transhipping and lighterage involving oil or oil products.

All mariners are advised to consult the harbour authorities with regard to harbour regulations.

Harbour

4.87

1 **General layout**. The harbour is formed by Nuovo Molo Frangiflutti which extends NE from Punta Santa Erasmo (44°18′·4N, 8°29′·6E) and Molo di Sottoflutto, a short breakwater extending from Punta Garbasso 6 cables NNE of Punta Santa Erasmo. The harbour entrance is divided by Molo Frangflutti, creating Darsena Alto Fondale, a deep water basin to the SE of it, and the entrance to the older part of the port comprising Calata Paolo Boselli, Darsena Nuovo and Darsena Vecchia, the original harbour. Ore and mineral handling berths, small craft berths, port service vessel berths and shipyards occupy the NW side of the port.

2 **Hazards**. Mariners should note high speed ferries operate from Vado Ligure, see 4.76, Regulations.

Principal marks

Landmarks:

Santuario della Madonna degli Angeli, halfway up the slope of a hill, has a low squat belfry (44°18′·9N, 8°27′·9E).

Priamar Fort, the battlements are conspicuous (44°18′·2N, 8°29′·0E).

3 Conspicuous chimney, S of the port (44°18′·3N, 8°29′·2E).

Leon Pancaldo Tower, (44°18′·6N, 8°29′·1E) (4.70).

Cereal Silos, conspicuous (44°18′·8N, 8°29′·8E) (4.70).

Directions for entering harbour

4.88

1 **Approaches**. The moles are low and not easily distinguished; the landmarks already described and Molo Nuovo Frangiflutti Head Light (red metal pillar on pedestal, 5 m in height) are more useful when approaching the harbour. At night, if approaching from the S, the railway station at Albisola Marina is nearly always illuminated and can be useful; the light on Molo Frangiflutti is obscured by the reclaimed area SW of Darsena Alto Fondale.

2 **Entrance channel**. From a position NE of Molo Nuovo Frangiflutti Head Light (44°18′·4N, 8°30′·3E) the track leads SW passing;

N of Molo Nuovo Frangiflutti Head Light, thence:

S of Molo Frangiflutti Head Light (red metal column on pedestal, 5 m in height) to enter Darsena Alto Fondale.

3 Alternatively, from a position NE of Molo Frangiflutti Head Light, the track leads SW into the NW part of the harbour, passing;

NW of Molo Frangiflutti Head Light, thence:

SE of Molo Sottoflutto Head Light (green metal column on pedestal, 5 m in height).

Mariners must navigate to remain at least 35 m clear of the head of Molo Frangiflutti to avoid the foundations of the breakwater.

Useful mark

4.89

1 Molo Miramar Head Light (green mast, 8 m in height) (44°14′·8N, 8°29′·5E).

Basins and berths

4.90

1 **Darsena Alto Fondale**. Container traffic and bulk cellulose is handled on the NW side of the basin. The remainder of the quays are used primarily for Ro-Ro cargoes and vehicles.

Calata Paolo Boselli. Cereals in bulk or bagged, the NE part of the quay is 400 m in length, vessels of up to 10·3 m draught are accepted at the berths adjacent to the grain silos.

2 **Darsena Nuova.** General cargo, accepts vessels of maximum draught 7·3 m; Calata Orientale has a Ro-Ro ramp. The NW quay forms part of the cellulose terminal.

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Pontile Funivie. An L-shaped quay NNW of the mouth of Darsena Nuova equipped for rapid bulk handling of coal which is transported by an overhead cableway to a nearby depot; maximum draught accepted 9·7 m. Mooring buoys are laid off each end of the quay.

Port services
4.91

1 **Repairs**. All types of repairs can be obtained.

Other facilities. There are the usual facilities of a city including a hospital. Deratting can be undertaken.

Supplies. Fuel can be supplied by barge or bowser. Fresh water is available from jetty connections or barge. All types of provisions available.

Communications. Nearest airport Genova, 18 miles NE.

Small craft
4.92

1 **Berths**. There are small craft berths at quays or pontoons in the vicinity of Molo Miramar, on the NW side of the port, and within the basin N of Pontile Funavie. Porto Vecchio, which lies SW of Pontile Funavie, has developed as the main small craft berthing area. Within it Darsena Vecchio provides Mediterranean mooring berths, in depths of 2·7 m to 8 m, at pontoons extending from its NE side and at the quays facing the remainder of the basin. Mariners should note the entrance to this basin is spanned by a footbridge.

2 **Facilities**. Comprehensive small craft facilities available including repairs.

Anchorages

Varazze anchorage
4.93

1 **General information**. Anchorage can be obtained in depths of about 11 m, sand and mud, off Varazze (44°21′·5N, 8°34′·5E) which extends along a sandy beach on either side of the mouth of Torente Tierro. However mariners should note anchoring is prohibited within areas protecting submarine pipelines extending from the coast and the historic wreck further offshore; all are shown on the chart.

2 La Crocetta (44°21′·7N, 8°33′·1E) (4.70), Colina di Cantalupo, 8 cables N of the harbour, with a white chapel at its summit, and a church with a red belfry half-way up its slope are good landmarks. The following are useful marks: Collegio Don Bosco (within the town); a yellow four storeyed building (standing behind the town); Cantieri Baglieto sheds (close N of the harbour); Castell Casati, a small red villa with crenellated tower (SW of the root of Molo Supraflutto).

Chart 1998

Cogoleto anchorage
4.94

1 **General information**. Cogoleto (44°23′·3N, 8°38′·5E), a village 4½ miles NE of Varazze, is easily identified by a long line of buildings. Torrente Leirone enters the sea 7½ cables E of the village. A short pier, with depths of about 1 m alongside, extends from the seafront. Anchorage can be obtained, with local knowledge, 2¼ cables off the E end of the village in a depth of about 9 m. A spit with a depth of 4 m over it extends about 2 cables to seaward of the W end of the village.

Chart 356

Arenzano anchorage
4.95

1 **General information**. Arenzano (44°24′·1N, 8°41′·3E) occupies Capo Arenzano; the old part of the town lies approximately 5 cables N of the headland. Anchorage can be obtained 2½ cables off the town in depths of about 13 m, sand and weed. The anchorage provides some shelter from W and SW winds.

Small craft

Chart 350

Cala Cravieu
4.96

1 **General information**. Cala Cravieu is a small craft and yacht harbour W of Celle Ligure (44°20′·5N, 8°33′·0E). The harbour is protected by a rubble breakwater 200 m in length.

Varazze small craft harbour
4.97

1 **General information**. Varazze small craft and yacht harbour (44°21′·1N, 8°34′·0E) lies close N of Punta dell' Aspera (Punta di Varazze), SW of the town. The harbour is protected from the E by Molo Supaflutto, also known as Molo Foraneo, 1½ cables in length. A much smaller breakwater, Molo di Sottoflutto, extends E towards the head of the main breakwater. Lights are exhibited from the heads of both breakwaters; Molo Supaflutto (red mast, 5 m in height), Molo di Sottoflutto (green post, 3 m in height). The harbour is well sheltered from all directions.

2 **Directions**. Vessels entering or leaving the harbour should remain clear of Molo di Sopraflutto Head to avoid shoal water caused by a sand bar developing around it. The extent of the shoal is indicated by a buoy (red, cylindrical). Mariners should also note an unmarked shoal, with a depth of about 1 m over it, lies 5 cables ENE of the harbour entrance about 1 cable offshore.

3 **Berths**. The harbour provides 290 berths, in depths of 2 to 4 m, at pontoons, a jetty and at quays on the inner faces of the moles.

Repairs. All types of repairs can be undertaken.

Other Facilities. Comprehensive small craft facilities. There is a hospital within the town. Fuel, water and provisions available.

Arenzano boat haven
4.98

1 **General information**. Arenzano boat haven lies on the NE side of Capo Arenzano (44°23′·7N, 8°41′·0E). The haven is formed by two moles; Molo di Sopraflutto extends ENE from the coast then 1 cable N, Molo di Sottoflutto extends E from the coast towards the head of the outer mole. Lights are exhibited from the heads of both moles; Molo di Sopraflutto (red mast, 6 m in height), Molo di Sottoflutto (green mast, 10 m in height). A church (grey belfry and red spire), standing on a hill to the back of the town, the parish church, standing among trees in the W part of the town, and the tall motorway viaduct behind the town are all useful marks.

2 **Directions**. The entrance faces NNW, is 80 m wide and is partially obstructed by a sand and gravel bank extending from the head of Molo di Sopraflutto, the extent of the bank is indicated by a light-buoy (red, port hand). The maximum draught accepted is 1·8 m.

Berths at the quays lining Molo di Sopraflutto and the W side of the basin and at pontoons.

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3 **Repairs**. All types of small craft repairs can be undertaken.

Other facilities. Comprehensive small craft facilities including fuel, water and provisions.

Other name

4.99

1 Quiliano, Torrente (44°16′·8N, 8°26′·7E).

GENOVA

General information

Charts 356, 354 and 355

Position

4.100

1 Porto di Genova (44°24′N, 8°45′E) lies at the head of the Gulf of Genoa fronting, for 8 miles, the historic and important administrative and industrial city of Genova.

Function

4.101

1 Genova is the principal port of Italy and amongst the most important in the Mediterranean. The port handles containers, raw materials, bulk cargoes, including oil (crude and products) and chemicals, frozen foods, perishable goods, manufactured goods, Ro-Ro and general cargoes. In addition it has developed as an important cruise liner port and is a major ferry port. Genova also provides facilities for small craft and yachts.

Topography

4.102

1 A port was first established in pre-Roman times and occupied a natural harbour which is now Bacino Porto Vecchio (44°24′·5N, 8°55′·0E). Although an important port throughout its history development beyond the natural harbour only began in the 17th century. The most significant enlargement began in the late 19th century which started the expansion W along the coast. The city has also grown considerably, absorbing several coastal towns and creating an unbroken line of building stretching between Voltri (44°26′N, 8°45′E) and Nervi 18 miles E. The city has also extended inland covering the foothills of the mountains which stand behind it. The coast here is steep-to providing deep water approaches to the harbour entrances.

Port limits

4.103

1 Capitaneria del Porto di Genova has jurisdiction to 3 miles offshore from the vicinity of Varazze (44°21′·5N, 8°34′·5E) to Moneglia (44°14′·4N, 9°29′·2E), including the traffic separation schemes and anchorages of the Port of Genova.

Approach and entry

4.104

1 All entrances are approached from the S through a traffic separation scheme; the lanes lead through the outer anchorage areas and berths. The separation scheme is shown on the charts.

Traffic

4.105

1 In 2000 the port was used by 7303 ships with a total deadweight of 104 622 565 tons.

Port Authority

4.106

1 Autorità Portuale di Genova, Palazzo San Gorgio, Via della Mercanzia 2, I–16123 Genova.

Limiting conditions

Controlling depths

4.107

1 **Porto di Voltri**. The entrance has a least depth of 22·5 m.

Porto Petroli. The approach channel to the basin has a least depth of 15 m.

Multedo Isola SPM and SBM. The Isola SPM platform stands in a depth of 50 m. The SBM is moored in a depth of 64·2 m.

Bocca di Ponente has a least depth of 15·2 m, maximum draught accepted 8·6 m.

2 **Bocca di Levante** has a least depth of 15·8 m.

Controlling mastead heights

4.108

1 Access to channels, basins and berths adjacent to Cristoforo Colombo Airport is subject to masthead height restrictions, see also 4.120 for regulations:

Basin/berth	*Maximum masthead height*
Canale di Calma	10 m
Bacino Polcevera W side	26 m
Bacino Polcevera E side	31 m
Ponte Ronco W	37 m
Ponte Ronco E	46 m
Ponte Canepa	46 m
Ponte Libia	52 m

Control Zone

4.109

1 To control traffic and establish priorities between vessels entering or leaving the port and aircraft landing or taking off from Christoforo Columbo Airport a Control Zone has been established in the area bounded by:

44°25′·7N, 8°45′·2E.
44°22′·9N, 8°43′·7E.
44°20′·6N, 8°55′·0E.
44°23′·4N, 8°56′·3E.

2 Within the Control Zone:

Vessels entering harbour have priority over aircraft.

Aircraft have priority over vessels proceeding to sea except when the departing vessel has passed point T1 and entered the Approach Channel, see below.

In addition to the Control Zone two waypoints have been established:

T1: 44°25′·2N, 8°49′·5E.
T2: 44°24′·7N, 8°48′·2E.

3 The waters between T1 and T2 are the Porto Petroli (Multedo Oil Harbour) Approach Channel. See also 4.120

Deepest and longest berths

4.110

1 **Alongside berth.** Porto do Voltri; length 1200 m, depth alongside 15 m.

2 **Mooring**. Multedo SBM, depth 64·2 m.

Tidal levels

4.111

1 The average Spring Tide produces a high water of 0·34 m compared with 0·24 m at Neaps.

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Abnormal water levels
4.112

1 South winds, especially the *Scirocco* (SE) raise levels above normal. This phenomenon will be noticed before the arrival of strong S winds and indicates heavy weather offshore.

Maximum size of vessel handled
4.113

1 500 000 grt at the Multedo Isola SPM. Post Panamax vessels are accepted at Voltri Container Terminal.

Local weather and sea state
4.114

1 Occasionally the *Libeccio* (SW wind) can be very strong causing a heavy sea to develop making anchorages and entrances to the port dangerous. The *Libeccio* can also increase the W going current outside the harbour from its mean rate of ¾ kn to about 2 kn. The downslope effect of the mountains behind Voltri can, during the winter, make the *Tramontana* (N wind) violent up to 2 miles offshore.

2 Abnormal water levels within the port (4.112), indicate strong winds offshore. The *Scirocco* (SE wind) or *Libeccio* (SW wind) can respectively create heavy weather beyond Promontorio di Portofino (44°17′·8N, 9°13′·1E) or Capo Mele (43°57′·2N, 8°10′·4E) whilst at Genova, despite a low barometer reading, there are light winds or calm.

Arrival information

Port operations
4.115

1 The port operates 0700–1900 local time.

Port radio
4.116

1 There is a coastal radio station remotely controlled from Rome. The Port of Genova Signal Station provides 24 hour VHF coverage which includes traffic movement and meteorological information. See the relevant *Admiralty List of Radio Signals* for details.

Notice of ETA required
4.117

1 All vessels carrying dangerous or polluting goods must report to the Harbour Master 36 hours in advance of entering Italian territorial waters. These vessels must then make and maintain VHF contact once within VHF range of the port.

Outer anchorages
4.118

1 **Prohibited anchorages**. Anchoring, stopping and fishing are prohibited within the traffic separation schemes associated with the harbour entrances and within the numbered zones of the roadstead, some of which contain submarine cables or pipelines. Mariners should note that only vessels involved in berthing or unberthing at the Multedo Isola SPM platform are permitted within Zone 2; all areas are shown on the charts. There are further prohibitions according to type and size of vessel, see below and 4.120.

2 **Anchorages**. Anchorage areas and berths are established in Genova roads and shown on the charts:

Anchorage area	*Type of vessel/limitation*
Alfa	Vessels to/from Porto di Voltri.
Bravo	Small tankers to/from Multedo Oil Terminal.
Charlie	Vessels to/from Porto di Voltri/Sampierdarena.
Delta	Vessels to/from Porto Vecchio/Sampierdarena.
Echo	Vessels greater than 40 000 grt.
Foxtrot	Vessels greater than 40 000 grt.
Golf	Vessels greater than 40 000 grt.
Hotel	Vessels 20 000 to 40 000 grt.
Lima	Vessels 20 000 to 40 000 grt.

Pilotage and tugs
4.119

1 **Pilotage** is compulsory for all vessels greater than 500 grt entering, leaving or moving within the port. Pilots will also assist vessels obtaining anchorage and are available 24 hours a day. The pilot will board approximately 1 mile from the appropriate entrance.

Tugs are available 24 hours a day.

Regulations
4.120

1 **General information**. Mariners are advised to confirm the details of all Harbour Regulations with the Port Authority.

Use of the traffic lanes associated with each entrance is mandatory. Vessels are required to report inbound and outbound on pasing the seaward end of the respective separation zone, see the relevant *Admiralty List of Radio Signals* for details.

2 Vessels with a masthead height exceeding 48 m must report to the port operations room within the Harbour Masters Office and to the Harbour Pilots before entering the Control Zone (4.109) or before preparing to move within it.

When transiting the Approach Channel to Porto Petroli all tankers, regardless of masthead height, and all other vessels with a masthead height greater than 14 m must report as above.

3 Vessels transiting the Approach Channel to Porto Petroli are prohibited from stopping between the head of the airport and the rubble breakwater opposite. All vessels using the Prà-Voltri canal di Calma must remain close to Porto di Voltri, Diga Foranea, maintaining a distance of 50 to 150 m from it.

Speed limit. There is a speed limit of 6 kn throughout the harbour.

4 **Tankers and vessels carrying dangerous cargoes** are permitted to anchor within Area Bravo or one of the lettered anchor berths for 48 hours only. Normally a vessel within this category, unable to reach a working berth within the period, will be required to depart the anchorage and await instructions outside Italian territorial waters. However in exceptional circumstances the Port Authority may permit an extension to the period at anchor. Mariners should note the arrival report for each vessel, required by the Port Captain, is subsequently used to plan vessel movements.

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5 Vessels carrying hydrocarbons or other dangerous cargoes are not permitted to conduct transfer or transhipment at anchor.

Departure procedures for all vessels. All vessels departing the port are expected to clear the roads without delay. Authority to remain within the roadstead must be obtained from the Port Captain.

6 **Vessels berthed in the vicinity of Cristoforo Colombo Airport**. Masthead height restrictions apply, see 4.108. In addition a red flag by day and red obstruction lights at night must be exhibited from the masthead.

Unprogrammed arrivals. Vessels seeking a berth at Genova without prior arrangement are to proceed to the Reporting Zone, shown on the chart, approximately 5 miles SSW of La Lanterna (44°24′·3N, 8°54′·3E). On entering the zone mariners are to make a VHF arrival report to the harbour signal station and await instructions.

7 **Traffic separation**. Vessels must be navigated to remain on the starboard side of the approach channels to each entrance of the port. Approach channels must be crossed at right angles with sufficient speed to clear them quickly.

Small craft transit lane. Small craft wanting to pass through Genova Roads should use the inshore transit lane which extends 500 m to seaward of the moles and breakwaters protecting the S side of the port.

Harbour

General layout

4.121

1 The harbour is protected from the S by a series of breakwaters. Porto di Voltri, a large, modern container terminal, occupies the most W part of the port. Close E of it Porto Petroli and Porto Cantieri Ansaldo, the naval dockyard, provide part of the industrial backdrop to Cristoforo Columbo Airport. Torrente Polcevera marks the E boundary of the airport; Bacino di Sampierdarena extends ESE from it, for approximately 1 mile, fronting the industrial district of Sampierdarena. In addition to general cargo, areas of this basin have been developed for the specialised handling of fruit, frozen foods and Ro-Ro traffic. Bacino di Lanterna, once a flying boat station, links Bacino di Sampierdarena with Avamporto and handles, primarily, bulk cargoes. A further specialised container and Ro-Ro terminal occupies the W side of Avamporto; Genova's internationally important shipyards occupy the E side of this basin. Bacino delle Grazie gives access to Bacino Porto Vecchio, the site of the original port, which now provides ferry and liner terminals.

Traffic signals

4.122

1 The following visual signals regulate entry to the port:

Day	*Night*	*Meaning*
no signal	no signal	Enter
● ● ● *(Balls)*	● ● ●	Entry prohibited

Traffic signals (4.122)

Natural conditions

4.123

1 **Wind and sea state**. Strong SE or SW winds, see 4.114, can create a slight sea within the port.

Current. A W-going current of up to 1 kn can be induced in the E part of the port by strong or prolonged winds.

Principal marks

4.124

1 **Landmarks:**

Santurio della Madonna delle Grazie, red-coloured steeple, stands in a park (44°26′·1N, 8°44′·6E).

Voltri detached mole W end light (white round tower, green top) (44°24′·9N, 8°46′·2E).

Madonna del Gazzo (44°26′·5N, 8°51′·0E) (4.70).

Torre Ovest, also known as World Trade Center (44°24′·6N, 8°54′·1E).

2 La Lanterna Lighthouse (square tower with balconies on dwelling, 76 m in height) (44°24′·2N, 8°54′·3E).

Torre Nord, also known as Il Matitone, a conspicuous high rise building, pyramidal spire, stands on an octagonal base, faced with large windows (4 cables NNE of La Lanterna).

Conspicuous radio relay mast (44°25′·9N, 8°54′·7E) (4.70).

3 Forte Castelliccio (44°25′·7N, 8°56′·1E) (4.70).

Punta Vagno Lighthouse (white round tower, 9 m in height) (44°23′5N, 8°57′·2E).

Monte Fasce (44°24′·6N, 9°02′·0E) (4.70).

Major lights:

4 La Lanterna, as above.

Molo Duca di Galliera East Head Light (red framework tower, 15 m in height) (44°23′·3N, 8°56′·3E).

Punta Vagno, as above.

Directions for entering harbour

Approaches

4.125

1 **General information**. The Port of Genova has four entrances:

Accesso di Voltri-Prà (44°25′·1N, 8°46′·5E).

Accesso di Multedo (Porto Petroli) (44°24′·8N, 8°48′·6E).

Accesso di Polcevera (44°24′·2N, 8°52′·8E).

Accesso di Levante (44°23′·6N, 8°56′·3E).

All are approached through designated channels, shown on the charts, which are part of a traffic separation scheme.

Entrance channels

4.126

1 **Accesso Voltri-Prà**. From the traffic separation scheme roundabout about 4 miles SE of Capo Arenzano (44°23′·7N, 8°41′·2E) the entrance channel, shown on the chart, leads N and NE passing, with positions relative to Punta della Chiappa (44°25′·1N, 8°43′6E):

SE of Arenzano boat haven mole (4.98), from which a light is exhibited (2 miles SW), thence:

SE of Chiesa del Bambino di Praga, a church (grey belfry, red spire) (2 miles WSW), thence:

2 SE of Punta della Chiappa, a pink three-storey building stands on the headland and Scoglio Nave, a low dark rock, close offshore. Thence:

SE of Punta del Molino (7 cables NE), thence:

W of Voltri detached mole W end lighthouse (white round tower, green top) (2 miles E).

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3 The track then leads ESE into the entrance passing:
N of the W end of the detached mole, thence:
N of the wavescreen head, which also exhibits a light (green post) (1½ cables E of the W end light), thence:
S of the Inner Mole Head, from which a light is exhibited (red column, 5 m in height) (NE of the wavescreen light) to enter Porto di Voltri.

4 **Accesso Multedo**. From the traffic separation scheme roundabout, about 4 miles SE of Capo Arenzano (44°23′·7N, 8°41′·2E), the entrance channel leads 6 miles NE to the pilot boarding place (44°25′·5N, 8°47′·8E), 3 cables S of Voltri detached mole elbow), passing:
W of Multedo SPM which exhibits a light (yellow structure, 8 m in height) (44°23′·7N, 8°49′·9E), thence:

5 W of Multedo SBM, a round, squat platform with a central tower from which an arm extends. A light is exhibited (yellow post on central tower, 23 m in height) (44°24′·2N, 8°48′·5E).
The track then leads ENE passing:
E of Voltri detached mole elbow (44°24′·8N, 8°47′·8E), from which a light is exhibited (white metal pillar), thence:

6 W of Diga Aeroporto W end (44°24′·9N, 8°49′·1E), which exhibits a light (white tower on pedestal, 5 m in height), thence:
NW of No 31 light-beacon (spar, starboard hand, radar reflector).
The channel, marked by floating light-beacons, leads generally ENE, clearing the NW end of the runways of Cristoforo Colombo Airport, then leads ESE into the entrance to Porto Petroli passing:

7 N of No 38 light-beacon (spar, starboard hand, radar reflector), thence:
S of Molo di Multedo Head, from which a light is exhibited (red column, 5 m in height).

8 **Accesso di Polcevera**, also known as Bocca di Ponente and Imboccatura di Cornigliano. The entrance is approached from ESE passing:
N of the E end Diga di Cornigliano (44°24′·0N, 8°52′·9E), from which a light is exhibited (white column on pedestal, 5 m in height), thence:
S of Diga Foranea W end Jetty Head, a short spur extending SSW from the main breakwater which exhibits a light (green column, 5 m in height), thence:

9 S of a floating light-beacon (spar, starboard hand) then adjust course to approach the berths within Bacino del Polcevera.
Vessels of less than 8·6 m draught may use this entrance to reach Bacino di Sampierdarena. Mariners should also note that masthead height restrictions apply to this part of the port, see 4.108.

10 **Accesso di Levante** is the principal entrance to the port. From a position about 4 miles SSE of Punta Vagno Light (44°23′5N, 8°57′·2E) (4.124), the entrance channel, shown on the chart, leads NNW to a position ESE of Molo Duca di Galliera East Head (44°23′·3N, 8°56′·3E) (4.124). The track then leads ENE, passing:

11 S of Punto Vagno Light, thence:
N of Molo Duca di Galliera East Head Light, thence;
S of Darsena Fiera Molo di Sottoflutto East Head Light (metal column on green hut, 7 m in height) (3 cables NNW of Molo Duca di Galliera East Head Light), thence:

12 N of the short spur on Molo Duca di Galliera, 4 cables ENE of its East Head. The spur exhibits a light (red metal framework tower, 6 m in height). When entering and particularly on leaving harbour, mariners should pass at least 20 m clear of Molo Duce di Galliera East Head to avoid the blocks protecting the foot of the breakwater.

Useful marks

4.127

1 Cornigliano, a row of 6 tall chimneys of the Italsider steelworks and two large tanks are conspicuous.
Coronata church, white belfry (44°25′·7N, 8°52′·7E).
Chiesa del Belvedere, light-coloured belfry, small green dome (44°25′·1N, 8°53′·7E).
Fiera Internazionale (44°24′N, 8°56′E), the pavilions of the international exhibition centre on the N side of Bocca di Levante.

Basins and berths

Anchorages and moorings

4.128

1 There are no designated anchorages within the port however anchors can be used to assist berthing, clear of submarine cables or pipelines. Generally holding ground is good throughout the port.
There are numerous mooring buoys throughout the port; generally they are for use by tugs or lighters.

Alongside berths

4.129

1 **Porto di Voltri** lies at the W end of the port and is the principal container terminal. The main quay, 1400 m in length with an alongside depth of 15 m, is capable of simultaneous handling of 3 large container vessels as well as 3 Ro-Ro vessels at the purpose built berths on the W end of the main quay.

2 **Porto Petroli**, also known as the Multedo Oil Terminal, lies N of Cristoforo Colombo Airport, is one of the largest terminals in the Mediterranean and connected by pipeline to refineries in northern Italy and Europe. The complex provides berths for up to 4 small chemical product tankers on the W face of Molo di Multedo; larger vessels can berth either side of the four piers extending SSE from the N side of the basin. Pier Delta (W) is the largest berth; length 330 m, maximum draught accepted 15·2 m. All piers are capable of handling crude oil, products, water ballast, clean and dirty water and supply compressed air, fresh water and fuel.

3 **Canale di Calma** lies between the outer breakwater and Cristoforo Colombo Airport, connecting the outer harbour of Porto Petroli with Bacino del Polcevera. Generally navigation or stopping within the channel is prohibited however the Port Captain may authorise use of the channel for vessels of maximum masthead height 10 m. Vessels obtaining approval to transit the channel at night must exhibit an all-round, red masthead light visible from overhead. Vessels must remain on the S side of the channel.

4 **Bacino del Polcevera,** also known as Bacino di Cornigliano, handles bulk coal and ore. Banchina Italsider is the largest berth; length 500 m, depth alongside 13·5 m. Mariners should note masthead height restrictions (4.108) and draught limitation of Accesso Polcevera (4.126). However due to recent (2001) storm damage to Bachina Italsider the area around it is dangerous to navigation.

5 **Bacieno di Sampierdarena** extends from Bacino del Polcevera 1 mile ESE and is used for mixed cargo including

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containers. There are depths of 8·4 to 13·8 m alongside the quays which project SSE into the basin. Ponte Eritrea (E), Calata Massaua and Ponte Etiopia handle Ro-Ro traffic. Vessels entering or leaving this basin by the W entrance, between Diga Foranea and Ponte Nino Ronco are restricted to a maximum draught of 10 m.

6 **Bacino della Lanterna** lies between Ponte Etiopia and Calata Canzio, close SE of La Lanterna (4.124). Calata G. Bettolo is the largest berth; length 434 m depth alongside 10 m. Ro-Ro traffic is handled here and at Calata I. Inglese.

7 **Bacino del Porto Vecchio**, the innermost basin of the port, lies between Ponte Caracciolo and Molo Vecchio. The W side of the basin provides ferry terminal berths and facilities. Ponte dell Mille and the Stazione Maritime, on the N side of the basin is a 4 berth cruise liner terminal. South-east of the liner terminal is a small craft and tourist harbour within which the sailing vessel *Italia* is berthed.

8 **Bacino delle Grazie** connects Bacino del Porto Vecchio with Avamporto. The E side of the basin is occupied by basins, drydocks and facilities of the shipyard. Calata Sanità, W of the shipyard, is a specialised container terminal and the longest and deepest berth in this part of the port; length 500 m, depth alongside 14 m.

9 **Avamporto** extends from Bocca di Levante to a line between Pontile O.A.R.N., on the W side of the shipyard, and the S corner of Calata Olii Minerali. Tankers are often laid up, berthed stern-to Calata Olii Minerali, which has an alongside depth of 9 m.

Port services

Repairs

4.130

1 All types of major repairs can be undertaken. The port is equipped with several dry docks, largest; length 277 m, breadth 40 m, depth on blocks 12·7 m.

Other facilities

4.131

1 There are the usual facilities of a major port and important city including; compass adjustment, deratting, hospitals and salvage services.

Supplies

4.132

1 Fuel, water and provisions are available.

Communications

4.133

1 Cristoforo Colombus Airport is served by most international airlines.

Rescue

4.134

1 The port has its own fire-fighters and fire-fighting vessels. A helicopter is kept on stand-by at Cristoforo Colombus Airport for the rapid transfer of fire-fighters and equipment.

Small craft

Sestri Ponente

4.135

1 **General information**. Sestri Ponente Marina (44°25′·2N, 8°50′·9E) lies at the E end of Porto Petroli. The maximum size of vessel accepted is length 40 m.

Directions. Vessels proceeding to and from the marina must navigate between the beacons marking the S limit of the deep water area of Porto Petroli and the N side of the airport runway. There is a speed limit of 3 kn within the marina.

2 **Berths**. The marina provides 1200 berths in depths of 2·7 m to 15·0 m.

Facilities. Comprehensive small craft facilities are available.

Marina Porto Antico

4.136

1 **General information**. Marina Porto Antico (44°24′·7N, 8°55′·5) lies on the E side of Bacino Porto Vecchio between Pontile Morosini and Ponte Spinola. The maximum size of vessel accepted is length 40 m.

Directions. The marina is approached through Bocca di Levante, Avamporto and Bacino delle Grazie.

Berths. The marina provides 280 pontoon berths in depths of 5·0 m to 7·5 m.

Facilities. Comprehensive small craft facilities are available.

Marina Molo Vecchio

4.137

1 **General information**. Marina Molo Vecchio (44°24′·6N, 8°55′·3E) occupies the S side of Ponte Spinola and Calata Magazzini Generali, in the SE part of Bacino Porto Vecchio. The maximum size of vessel accepted is length 150 m.

Directions. See 4.136.

Berths. The marina provides 160 berths in depths of 6 m to 11 m.

Facilities. Comprehensive small craft facilities are available.

Porticciolo Duca Degli Abruzzi

4.138

1 **General information**. Porticciolo Duca Degli Abruzzi (44°24′·0N, 8°55′·9E) lies on the E side of Avamporto. The maximum size of vessel accepted is length 25 m.

Directions. The marina is approached through Bocca di Levante.

Berths. The marina provides 200 pontoon berths in depths of 4 to 15 m.

Facilities. Comprehensive small craft facilities are available.

Marina Fiera di Genova

4.139

1 **General information**. Marina Fiera di Genova (44°23′·7N, 8°56′·2E) lies on the N side of Bocca di Levante. The maximum size of vessel accepted is length 25 m.

Berths. The marina provides 305 berths in depths of 4·5 m to 8·0 m.

Facilities. No fuel available.

Other names

4.140

1 Appennino Ligure (44°30′N, 9°00′E).
Begato, Forte (44°25′N, 8°55′E).
Cerusa, Torrente (44°25′·7N, 8°44′·6E).
Figogna, Monte (44°29′·3N, 8°51′·8E).
Leiro, Torrente (44°25′·7N, 8°45′·1E).
Nave, Scoglio (44°25′·0N, 8°43′·6E).

2 Ratti, Forte (44°25′N, 8°58′E).
Richelieu, Forte (44°25′N, 9°02′E).
Sperone, Forte (44°25′·5N, 8°55′·5E).

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GENOVA TO LA SPEZIA

GENERAL INFORMATION

Chart 1998

Area covered

4.141

1 This section covers the mainland coast from Nervi (44°23′N, 9°02′E) to Golfo di La Spezia (44°03′N, 9°54′E). It is arranged as follows:

Punta Vagno to Punta Baffe (4.145).
Punta Baffe to La Spezia (4.169).
La Spezia (4.185).

Topography

4.142

1 This part of the Italian coast, known as the Riveria di Levante, is characterised by its generally high, rugged nature and more mountainous interior.

Depths

4.143

1 The coast is generally steep-to and free from isloated dangers to seaward of the 50 m depth contour which lies within 2 miles of the coast between Genoa and Capo di Monte Negro (44°05′·5N, 9°44′·4E). South-east of this headland depths of less than 50 m lie up to 7 miles from the coast.

Restricted areas

4.144

1 Tankers carrying or that have carried petroleum, chemical or gas products are prohibited from navigating within an area extending approximately 6 miles offshore between Punta Carrega (44°18′·5N, 9°10′·8E) and Punta Baffe, 12 miles SE. However between October and April tankers of 650 grt or less are permitted to close the coast to 3 miles within this area. The area is shown on the chart.

2 Anchoring, fishing or any other seabed operations are prohibited within an area, shown on the chart, approximately 7½ miles SW of Capo di Monte Negro (44°05′·5N, 9°44′·3E). The area contains unexploded ordnance.

3 Tankers carrying or that have carried dangerous liquid or gaseous cargoes in bulk are prohibited from navigating within an area extending up to 6 miles from the coast, which lies in the jurisdiction of the Maritime Navigation Office (Circomare) of La Spezia. Tankers proceeding to or from La Spezia must follow the designated routes (4.202).

PUNTA VAGNO TO PUNTA BAFFE

General information

Chart 1998

Description of waterway

4.145

1 A coastal route leads ESE, from a position approximately 10 miles S of Punta Vagno (44°23′·5E, 8°57′·2E), to a position approximately 7 miles SSW of Punta Baffe (44°14′·2N, 9°26′·5E). The ocean route between Genova and the Corsican Channel (43°00′N, 9°40′E) lies further offshore and is not described.

Topography

4.146

1 The coast extends ESE, away from the City of Genova and the head of the gulf, in two wide bays separated by Promontorio di Portofino (44°20′N, 9°11′E) which is steep, mountainous and the most prominent projection from the NW coast of Italy. Golfo Paradiso, the bay close W of this remarkable headland affords little shelter whereas Golfo del Tigullio (Golfo Marconi), regarded as the most picturesque of the Italian Rivieras, offers good shelter in some of its harbours. Generally the coast is high, rocky and indented by numerous smaller bays and coves, some of whch have developed as yacht harbours or boat havens. Hills and mountains rise a short distance inland, often divided by deep valleys covered in the dark vegetation of olive or pine trees. Despite the rugged landscape there are numerous towns and villages and the viaducts supporting the coastal motorway or other roads are often distinctive features.

Fishing and marine farms

4.147

1 Tunny nets extend up to 2½ cables SW of San Rocco (44°20′·2N, 9°09′·5E). The limits of the nets are marked by buoys.

A marine farm in approximate position (44°20′N, 9°08′E) can be identified by six barges located within its boundary.

Marine nature reserve

4.148

1 A marine nature reserve has been established around Promontorio di Portofino (44°20′N, 9°10′E). The seaward corners of the reserve are marked by light-buoys (yellow, X-topmark). There is a speed limit of 10 kn, or 20 kn for ferries and vessels in public service, within 500 m of the perimeter of the reserve. The reserve is divided into three zones within which different prohibitions or restrictions apply.

2 **Zone A** lies inshore of a line between the headlands of Cala dell'Oro (44°18′·9N, 9°09′·8E). The following are prohibited; removal of or damage to material or wildlife, navigation, anchoring, berthing, fishing and swimming.

Zone B lies between Punta della Chiappa (44°19′·3N, 9°08′·7E) and Punta di Portofino 3½ miles ESE, excluding Zone A and the access channel for Sena di San Fruttuoso (4.162). Within Zone B the following are prohibited; removal of or damage to material or wildlife, anchoring and unauthorised berthing, fishing with breathing apparatus.

3 The following restrictions apply; small vessels are only permitted to approach the coast to reach approved berths or moorings and must do so at 90° to it, there is a speed limit of 5 kn for all vessels. Swimming, recreational fishing and fishing by authorised local commercial fishermen are permitted.

Special mooring buoys have been laid within the zone for small craft used by divers. The buoys are moored in a depth of approximately 20 m with the scope of the mooring reduced to keep the buoy at a depth of approximately 5 m.

4 **Zone C,** the W coast of Promontorio di Portofino between Punta della Chiappa (44°19′·3N, 9°08′·7E) and Punta Canette, 1½ miles N and the E coast of the promontory between Punta di Portofino (44°17′·9N, 9°13′·1E) and Punta Pedale, 1½ miles N but excluding the roads and access channels to Porto di Portofino. Within Zone C unauthorised anchoring and berthing are prohibited. The following restrictions apply; small craft can only navigate at 90° to the coast within the zone to approach an authorised anchorage or berth, there is a speed limit of 5 kn for all vessels within the zone, commercial and recreational fishing and diving are permitted.

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Natural conditions

4.149

1 **Weather**. An exceptionally clear atmosphere and light cloud scattered high above the mountains around Rapallo (44°21′N, 9°14′E) and Chiavari (44°19′N, 9°19′E) indicate fresh NE winds, particularly during the winter, which last for an average of three days. When the NNW wind, known locally as Provenza, is strong a change of weather should be expected and usually indicates SE winds. During the summer S winds prevail and are rarely strong. Rain usually accompanies a SW wind.

2 **Currents**. In the vicinity of Camogli (44°21′N, 9°09′E) the current sets W but close inshore sets E; this is particularly noticeable off Punta Chiappa (44°19′·3N, 9°08′·7E) during fresh SW winds which incease the rate. SE of Promontorio di Portofino, about 2 miles from the coast, between Chiavari and Sestri Levante, the current sets WNW but closer to the coast sets ESE.

Principal marks

4.150

1 **Landmarks:**

Monte Giugo, easily distinguished, its slopes are covered with numerous dewellings, (44°23′·3N, 9°03′·5E).

Monte Santa Croce, a light coloured church stands on its summit, the belfry of Pieve Ligure, yellow with white cornices, is clearly visible on the SE slope, (44°22′·9N, 9°05′·5E).

2 Monte Tocco, a disused signal station, painted in black and white squares, stands on its summit, (44°19′·3N, 9°19′·5E).

Monte di Portofino, the highest point of Promontorio di Portofino, (44°19′·6N, 9°10′·1E).

Santa Margherita Ligure, the town is easily distinguished and well lit at night, (44°20′N, 9°13′E).

3 Santuario di Nostre Signore di Montallegro, belfry with dome and facade with spires, (44°22′·2N, 9°15′·5E).

Monte Anchetta (44°20′·7N, 9°17′·2E).

Punta Baffe, tower (44°14′·6N, 9°26′·6E).

4 **Major light**:

Punta di Portofino Light (turret, 12 m in height, at SE corner of white house) (44°17′·9N, 9°13′·1E).

Directions

(continued from 4.71)

4.151

1 From a position about 10 miles S of Punta Vagno (44°24′·5N, 8°57′·0E) the coastal route leads ESE passing, with positions relative to Punta della Chiappa (44°19′·3N, 9°08′·9E):

S of Monte Moro (6½ miles NW), close inland of Quinto al Mare, two radio masts which exhibit red obstruction lights stand close S of the summit. Thence:

2 S of Monte Giugo (5½ miles NW) (4.150), thence:

S of Monte Santa Croce (4½ miles NNW) (4.150), thence:

S of Punta della Chiappa, a low, bare, dark headland extending 1¼ cables SW from the coast, on which stands a measured distance beacon (black and white bands). Mariners should note the extensive restricted area, see 4.144, which lies ESE of the headland. Thence:

3 S of Punta di Portofino (3¼ miles ESE), a bare rocky mass on which stands a white pillar. A light is exhibited from the point (4.150). The point is the SE extremity of a short peninsula which also forms the head of Portofino harbour. Thence:

4 S of Chiavari (4½ miles ENE) (4.165), thence:

S of Punta Manara, a bold, cliff-faced headland at the SW end of a spur extending from Monte Castello (4.152).

5 The track continues ESE to a position approximately 7 miles S of Punta Baffe (44°14′·3N, 9°26′·5E). The high, rocky headland is a spur of Monte Moneglia which stands 1¼ miles NE.

Useful marks

4.152

1 Boccadasse belfry, square with cupola stands on W side of the cove, (44°23′·4N, 8°58′·5E).

Priaruggia, bronze statue, (1 mile E of Boccadasse).

Quinto al Mare (44°23′·0N, 9°01′·4E), the town contains a chapel with a yellow belfry, a large building with a chimney close E and a church with grey cupola on its belfry; all are prominent.

2 Nervi, Collegio Emiliani, a prominent yellow building with small belfry and cupola stands on the W side of the harbour (44°23′·0N, 9°02′·0E).

Nervi, yellow church with black cupola, (3 cables ENE of the harbour).

Nervi, square tower with rough plaster finish and a point at each corner stands close to the coast, (4 cables E of the harbour).

3 Seno di San Fruttuoso, the square tower of Castello Doria and the cupola of the Abbazia dei Doria monastery stand above an inlet which can be reached via steps cut into the cliff face. The crypt of the monastery contains the remains of the famous Italian admirals of the Doria family (44°19′·0N, 9°10′·6E).

4 Santuario di Nostro Signore di Caravaggio, a low light coloured building with a chapel, stands on a peak, (44°22′·4N, 9°10′·8E).

San Giacomo Church, white facade and tall belfry, (44°19′·9N, 9°12′·7E).

Convento di Cervara, a long white building isolated amongst vegetation N of Paraggi, (44°18′·8N, 9°12′·8E).

5 Rapallo Cathedral belfry, domed, painted red and yelow, (44°20′·9N, 9°13′·8E).

Chiesa Sant'Ambrogio, white with white belfry, (44°20′·7N, 9°15′·2E).

The chapel of Madonna della Grazie, a white painted, prominent, long, low building with a tower (44°19′·5N, 9°18′·1E).

6 Chiavari, Colonia Marina (Faro) white tower 40 m in height, standing in the NW part of the town, (44°19′·2N, 9°18′·6E).

Monte Esoli, rises above the town of Camogli. A measured distance beacon (white with vertical black stripe) stands on the ridge rising to Ruta (44°21′N, 9°19′E) a village overlooking Camogli.

7 Lavagna, Cala dei Genovesi yacht harbour control tower (44°18′·4N, 9°20′·5E).

Lavagna, Chiesa di Santa Stefano, white facade, black cupola and twin belfries (44°18′·6N, 9°20′·9E).

Lavagna, high rise buildings. Two high rise buildings (45 m and 63 m in height) stand within the town.

Santa Giulia belfry (44°18′·1N, 9°22′·4E).

Cavi di Lavagna, belfry (44°17′·5N, 9°22′·7E).

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8 Torre Marconi, massive and round stands on the summit of Punta di Sestri, a low narrow isthmus. The tower is only visible from S and W, (44°16′N, 9°23′·3E).

Monte Castello, a building stands on its summit. A spur extending SSW from the peak forms Punta Manara, on which stands the remains of an old signal station (44°15′·4N, 9°24′·5E).

9 Tirreno naval boatyard crane (44°15′·5N, 9°25′·4E).

(Directions continue at 4.174)

Minor harbours and anchorages

Camogli
4.153

1 **General information**. Camogli (44°21′·1N, 9°08′·9E) is an ancient shipbuilding town which stands at the foot of Monte Esoli (4.150). The Santuario di Nostro Signore di Caravaggio, the former Casa Raggio (4.152) and masts standing between Monte di Portofino and Monte di Ruta may be useful when approaching the harbour. A marine farm, see 4.147, lies 1 mile SSW of the harbour.

2 Camogli harbour is formed by a mole extending 1 cable NW from the coast along a rocky spit creating a narrow basin which is suitable only for small craft and fishing vessels. A pier used for fuelling extends 20 m from the coast, towards the head of the mole, forming the entrance to the harbour. Lights are exhibited from the head of the mole (white tower, 5 m in height) and the fuelling pier (red mast green bands, 4 m in height). The entrance has depths of 2·0 m to 5·9 m. Depths within the harbour vary considerably between 2 and 4 m. A number of concrete blocks scattered on the seabed of the entrance make navigation dangerous for vessels with a draught of 2·4 m or greater. Other vessels should navigate with extreme caution at low water or when a slight sea has developed.

3 **Directions**. The entrance faces NNW; mariners should navigate to round the head of the mole at a distance of not less than 50 m, to remain in a depth of not less than 3 m, and to pass midway between the mole and fuelling pier. Navigation within 30 m of the mole is dangerous due to a number of obstructions. In strong W or SW winds the entrance becomes dangerous and the outer harbour untenable.

4 **Anchorage**. In good weather and with local knowledge anchorage can be obtained in a depth of 17 m, sand, 1¾ cables SW of the harbour mole head. Small vessels can obtain anchorage in a depth of about 10 m on the alignment of the mole. With bad weather from the SW local small craft usually anchor off Punta della Chiappa (4.151).

5 **Berths**. The main berthing area is within the inner basin created by a short spur extending NE from the outer mole.

Repairs. All types of small craft repairs can be undertaken at the boatyard on the NE side of the harbour, which also has a slipway.

Other facilities. Comprehensive small craft facilities.

Supplies. Fuel, water and provisions available.

Chart 351, Plan of Golfo Tigullio

Rada della Cervara anchorage
4.154

1 **General information**. Anchorage can be obtained in depths of 20 to 30 m, mud, good holding ground S of Punta del Pedale (44°19′·2N, 9°12′·9E). Mariners should note the limit of the marine nature reserve (4.148), which encloses much of the bay, and the sewer outfall which extends ESE close N of the anchorage. A convent (long white building) standing close to Punta della Cevara (44°18′·7N, 9°12′·9E) is a good landmark. Scogli La Sedia, a remakable rock stands close off the headland.

Santa Margherita Ligure
4.155

1 **General information**. Santa Margherita Ligure (44°20′N, 9°13′E) is primarily a yacht and fishing vessel harbour but commercial vessels may seek shelter here as it is the only sizeable harbour between Genova and La Spezia. The harbour lies in the SW corner of the bay fronting the Corte district of the city, which appears to be separated from Santa Margherita by ridge on which stands the church of San Giacomo (4.152). The town extends onto the slopes of the hills surrounding the bay and contains numerous large buildings; at night the town is well lit and conspicuous. The Imperial Hotel, close E of the head of the bay and Villa Pareto-Spinola, the lower part painted red, upper part painted yellow with a square tower, 1 cable W of Punta Pagana (44°20′·1N, 9°13′·6E) are useful marks.

2 A mole, from which a light is exhibited (red metal column on pedestal, 5 m in height), extends NE from the coast and provides some protection from the SE however S winds, including the *Scirocco* (SE) and *Libeccio* (SW), cause a heavy swell within the harbour. Mariners are advised to leave the quays before these conditions develop; moorings or anchor cables should be strengthened. The harbour accepts vessels up to 79 m in length and 4·6 m draught.

3 **Anchorage** can be obtained in depths of about 15 m, sand, moderate holding ground approximately 1 cable NE of the mole head. Larger vessels may obtain anchorage approximately 4 cables ESE of the mole head; smaller vessels can obtain anchorage in depths of about 9 m close NE of the harour entrance. Anchorage at Santa Margherita is more sheltered than off Rapallo (4.164).

4 **Berths**. The inner side of the mole, the NW side of the harbour and much of the head of the harbour are faced with quays; all berths are Mediterranean moorings and allocated by the Harbour Master. In good weather mariners are advised to keep the stern 10 m from the quay and increase this distance to 20 m should conditions deteriorate.

5 **Repairs**. Limited repair facilities including a slipway of 100 tonnes capacity.

Other facilities. There is a hospital.

Supplies. Fresh water is available from jetty connections at the berths on the NW side and head of the harbour. Small amounts of fuel are available. Provisions are available.

Zoagli anchorage
4.156

1 **General information**. Zoagli (44°20′·1N, 9°16′·0E) is a village stretched along the rocky shores of a cove close NW of Punta Stella.

2 **Anchorage**. Mariners with local knowledge can obtain temporary anchorage for small vessels in depths of 9 m, mud, good holding ground, 1 cable off the village. A large railway viaduct with seven arches crosses Torrente Stella at the head of the cove and the belfry of Semorile 1 mile NNE are useful marks. There is a short, steep gravel beach at the head of the cove with a landing place at its W end.

Sestri Levante
4.157

1 **General information**. Sestri Levante (44°16′·5N, 9°23′·6E) lies partly on Promontorio di Sestri, a round wooded promontory joined to the mainland by a narrow isthmus, and partly on the small plain at the mouth of Torrente Gromolo. A series of five rubble breakwaters have been constructed along the shore between the W part of the

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town and the mouth of the river. The harbour, which is difficult to see from the NW against the rocky background, is formed by an angled mole, approximately 250 m in length, which extends NNW then N from Punta di Sestri, the NW extremity of Promontorio di Sestri.

2 Torrente Gromolo causes silting of the harbour and mariners should confirm depths with the Harbour Master. A light (green mast, 8 m in height) is exhibited from the head of the mole. The harbour is sheltered from from the S and E; in winter strong winds between WSW and WNW create very difficult conditions for vessels moored at the mole and mariners should proceed to anchor in the bay. Ospizio Marino, painted in black and white stripes with a small square tower, on the SE extremity of Promontorio di Sestri, and a conspicuous chimney E of the town are useful marks.

3 **Anchorage** can be obtained in depths of about 13 m, mud, 1 cable NNW of the mole head. Small vessels can obtain anchorage in depths of about 9 m E of the mole, remaining clear of vessels moored to it.

Berths. Small craft with a maximum draught of 3 m can berth alongside the mole. All other vessels must berth at the mole using Mediterranean mooring, keeping the stern at least 4 m clear of it to avoid the rocky escarpment close alongside.

4 An iron framework and reinforced concrete pier extends 45 m NE from near the root of the mole, with depths of about 6·5 m alongsde its head, is operated by the local sailing club and the Italian Yacht Club. A further smaller pier, 2 cables E, on which stands a small crane, is operated by the Motonautica Society. Other jetties are reserved for passenger launches or other tourist vessels.

5 **Repairs**. Limited repairs can be undertaken.

Other facilities. There is a hospital in the town.

Supplies. Fuel, water and fresh provisions available.

Small craft

Chart 356

Nervi

4.158

1 **General information**. Nervi small craft haven (44°23′0N, 9°02′·0E) lies in a cove at the W end of the town. The haven is formed by a mole extending 100 m from the W shore; a light is exhibited from its head (red mast, 5 m in height). The S facing entrance is 15 m wide, vessels up to 8 m in length are accepted. The haven cannot be entered once a sea has developed. The basin has depths of 0·2 to 3·6 m but is subject to silting caused by Torrente di Nervi which enters the NE side of the haven. Anchorage in the vicinity of Nervi is prohibited.

Chart 1998 (see 1.13)

Bogliasco anchorage

4.159

1 **General information**. With local knowledge temporary anchorage can be obtained in depths of 9 m, 1½ cables offshore, S of a viaduct in the middle of the town (44°22′·7N, 9°04′·1E). Mariners should note a pipeline extends 5 cables SSW from the coast, 1 cable E of the church which stands on the W bank of the stream flowing through the town.

Sori anchorage

4.160

1 **General information**. With local knowledge anchorage can be obtained off Sori (44°22′·3N, 9°06′·3E) in depths of about 15 m, weed; further offshore, in depths of 20 m or more, the bottom becomes rocky. The bottom is rocky and unfit for anchorage between Torre del Punta Legano, a dark square tower standing amongst pine trees 2½ cables SSW of Pieve Ligure (44°22′·5N, 9°05′·7E), which is not easily identified, and the W part of Sori. Mariners may find the church within Pieve Ligure (yellow, square belfry, white cornices) a useful mark. Unlike the anchorage off Bogliasco (4.159) this anchorage is afforded some protection from the SE by Promontorio di Portofino.

Punta Santa Anna anchorage

4.161

1 **General information**. With local knowledge anchorage can be obtained SE of Punta Santa Anna (44°21′·6N, 9°08′·2E), in depths of about 6 m, sand. However mariners should beware of the submarine pipeline extending 7 cables SSW from the point. The anchorage is sheltered from the SE. The ancient town of Recco stands at the head of the bay, E of Punta Santa Anna. A detached breakwater, protecting the head of the bay, lies 30 m offshore. Torrente Recco enters the bay close W of the town.

Seno di San Fruttuoso

4.162

1 **General information**. Seno di San Fruttuso (44°19′·0N, 9°10′·5E) is an inlet on the S coast of Promontorio di Portofino approached via an access channel which passes through the marine nature reserve. At the head of the inlet stand Abbazia dei Doria and Castello Doria (4.152).

Anchorage for small vessels can be obtained in a depth of about 4 m, sand, near the head of the inlet. However local knowledge is necessary and the berth is only tenable in calm weather or N winds.

2 **Berths**. Two small quays, with depths of about 2 m alongside, lie on the W side of the inlet and are used by visiting passenger launches.

Chart 351, Plan of Golfo Tigullio

Portofino

4.163

1 **General information**. Portofino (44°18′·2N, 9°12′·8E) is a tourist and small craft harbour, and one of the best havens on the Riviera di Levante, sheltered from all directions except the NE. Strong winds from this direction, known locally as the Gregale, make the entrance dangerous and the harbour untenable. Strong winds from the SW cause a troublesome swell in the harbour. Mariners should note the sewer outfall which crosses the approach channel and the dangerous wreck which lies close N of it.

2 **Directions**. The town of Portofino is not visible from seaward but Punta di Portofino Light (4.150), and Chiesa di Giorgio (square, yellow coloured with domed belfry), 300 m W of it, are useful marks. Approached through an access channel, shown on the plan, which leads through the Portofino marine nature reserve, see 4.148, the harbour is entered between Punta del Coppo (3½ cables NW of Punta di Portofino) and the coast 1 cable NW. The entrance is marked by lights; Punta del Coppo (red metal column on pedestal, 5 m in height), N side (bracket on building). There are depths of 10 to 20 m in the entrance. The largest vessel accepted is length 40 m.

3 **Berths** are allocated by the Harbour Master. The head of the harbour is almost entirely lined with quays. L'Isolotto, a rock close off the S shore of the harbour is connected to it by a short mole The best berth is under the lee of Punta del Coppo, bows NE with the stern secured to L'Isolotto. In calm weather vessels with a draught of 2·5 m or less can moor between L'Isolotto and the jetty about 120 m W.

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4 **Facilities**. Limited small craft facilities.
Supplies. Fresh water and provisions are available.

Rapallo
4.164

1 **General information**. Rapallo (44°20′·7N, 9°14′·0E) is a small craft and yacht harbour, fronting the popular all-year tourist resort, which lies at the head of a small bay at the head of Golfo Tigullio; Rio Boate and Rivo Tuia flow into the harbour. The Excelsior Hotel and Casino, standing amongst trees close W of the harbour, the belfry of the cathedral, painted red and yellow, within the town, an ancient square fort with tower close off the coast in the NE part of the harbour.

2 Moles extending from the W coast of the bay create two basins, the N is the public harbour, the S is known as Carlo Riva. The S and E sides of Carlo Riva are formed by Molo Foraneo, which extends 2 cables E from a point on the shore abreast the Excelsior Casino, then continues 1½ cables NNW and is known as Molo Est. A light is exhibited from the elbow (white tower, 5 m in height). Molo Langano separates the two basins; Pennello Boate is the mole protecting the N side of the public harbour. The heads of the moles form the entrances of the basins and are marked with lights. The harbour accepts vessels of up to 35 m in length.

3 **Anchorage** can be obtained in depths of 12 to 18 m, mud, good holding ground off Rapallo. However the anchorage is very exposed and only suitable in good weather. Mariners should note an extensive area of foul ground 1 mile ESE and the sewer outfall extending SSE from the harbour, both are shown on the chart. Mariners with local knowledge may obtain anchorage in the N part of the harbour.

4 **Berths**. The public port provides 350 small craft berths in depths of 2 to 4 m. The largest vessel accepted in this basin is length 10 m.

Quays and piers also front the town on the E side of the bay. Depths of alongside vary between 1·3 and 3·2 m; local knowledge is required.

5 **Repairs**. All types of small crraft repairs are undertaken, there is a slipway.

Other facilities. The town has a hospital. Comprehensive small craft facilities.

Supplies. Fuel, water and provisions are available.

Chart 351, Plan of Chiavari and Lavagna

Chiavari
4.165

1 **General information**. Chiavari (44°19′N, 9°19′E) is a small craft and fishing harbour fronting the industrial town and bathing resort which lies NW of Fiume Entella. The conspicuous black dome of the cathedral standing in the centre of the town, the dome of Convento delle Monache, close E of the harbour and the belfry of Chiesa Santa Antonio, N of the mouth of Fiume Entella, are all useful marks.

2 The S side of the harbour basin is formed by Molo Foraneo, which extends WNW from an area of reclaimed land; a light is exhibited at its head (green column on pedestal, 5 m in height). The W side of the basin is protected by Molo Suttoflutto, extending SSW from the coast towards a short spur, approximately halfway along Molo Foraneo, creating the harbour entrance which is marked by lights. The approach to the harbour is dredged periodically and the maximum draught accepted is 3·4 m.

3 **Directions**. The entrance faces WNW. Mariners must remain at least 20 m off the head of Molo Foraneo and 10 m off the short breakwaters forming the harbour entrance to avoid obstructions.

Anchorage. Mariners with local knowledge may obtain anchorage off Chiavari but the berth is dangerous with winds from SE to SW.

4 **Berths**. The harbour provides berths at pontoons or moorings in depths of 2·5 to 4·7 m.

Lavagna, Cala dei Genovesi
4.166

1 **General information**. Cala dei Genovesi (44°18′·5N, 9°20′·5E) is a large, purpose built marina fronting the town of Lavagna, SE of Fiume Entella. The SW side of the marina basin is formed by Molo Foraneo, which extends 6 cables ESE from the SE side of the mouth of Fiume Entella. A light (red metal column on pedestal, 5 m in height) is exhibited from its head. A short inner mole extends SSW from the coast towards Molo Foraneo creating the SE side of the basin. The harbour entrance faces ESE between the head of the Inner Mole and a short NE spur on Molo Foraneo and is marked by lights; Inner Mole Head (green mast, 4 m in height), Molo Foraneo spur (red mast, 4 m in height). The entrance has depths of 6·8 m.

2 **Directions**. Mariners must navigate to remain 60 m clear of Molo Foraneo Head to avoid the submerged section of the breakwater.

Berths. The marina provides 1500 berths at pontoons and quays in depths of 2·3 to 5·8 m.

Other facilities. Comprehensive small craft facilities.

Supplies. Fuel, water and provisions available.

Chart 1998

Riva Trigoso, anchorage and shipyard
4.167

1 **General information**. Riva Trigoso (44°15′·6N, 9°25′·5E) consists of two hamlets, Riva and Trigoso, which extend along the head of a bay close E of Poromontorio di Sestri. Torrente Petronio flows between the hamlets; the Tirreno naval shipyard occupies the mouth of the river. The white belfry of the village church, tall chimney at the E end of the village and the shipyard crane are useful marks.

2 **Anchorage** can be obtained in depths of about 10 m, sand, good holding ground, off the beach fronting the village. Mariners should note a sewer outfall extending S from the W side of the village; anchoring, fishing and diving are prohibited within 100 m of it.

Berths. The shipyard has an iron pier with depths of 1·8 m alongside its head.

Repairs. Small craft repairs are undertaken.

Other names
4.168

1 Bogliasco (44°22′·7N, 9°04′·1E).
Caieca, Punta (44°18′·3N, 9°12′·9E).
Cevara, Castello di (44°18′·6N, 9°12′·8E).
Legno, Torre del Punta (44°22′·3N, 9°05′·2E).
Megli (44°21′·8N, 9°08′·2E).
Pagana, Seno di (44°20′·2N, 9°13′·6E).

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2 Paraggi, Seno di, (44°18′·5N, 9°12′·7E).
Polanesi (1 mile ESE Sori).
Rovereto (44°20′·0N, 9°17′·1E).
San Michele di Pagana (44°20′·4N, 9°13′·6E).
San Michele, Porto (44°20′·4N, 9°13′·5E).
San Pentaleo (44°20′·4N, 9°15′·6E).
San Rocco (44°20′·2N, 9°09′·5E).

PUNTA BAFFE TO LA SPEZIA APPROACHES

General information

Charts 1998, 118

Description of waterway

4.169

1 The coastal route leads, from a position 7 miles SSW of Punta Baffe (44°14′·3N, 9°26′·5E), about 24 miles SE, to a position about 5 miles S of Isola del Tino (44°01′·5N, 9°51′·0E).

Topography

4.170

1 The high, rugged nature of the coast continues with many headlands formed by spurs from the mountains close inland. Sheer cliffs are a regular feature; in some areas they are susceptible to rock falls and present a danger to small craft navigating close inshore. Where valleys descend to the shore villages and towns have developed; many support a small fishing fleet operating from the beach. There are no harbours capable of sheltering commercial vessels and few havens for small craft.

2 Between Punta Baffe and Punta Mesco, 10 miles SE, the coast is steep-to with the 50 m depth contour lying 1 mile off the coast; SE of Punta Mesco the contour opens to about 3 miles offshore. However mariners should beware of a number dangerous wrecks, shown on the chart, which lie inshore of the 100 m depth contour and an isolated danger, with a least depth of 18 m over it, 3 miles SSW of Punta Mesco.

Hazards

4.171

1 **Exercise areas**. Submarines exercise frequently in an area, shown on the chart, approximately 15 miles SW of La Spezia (44°04′·0N, 9°52′·0E). Mariners should keep a good lookout for them whilst transiting this area.

Landslips. The following areas are susceptible to landslips resulting in prohibited or restricted access:

The coast in the vicinity of Framura (44°12′·4N, 9°33′·0E), navigation, stopping or anchoring within 1½ cables of the coast is prohibited.

2 Punta del Mesco (44°08′·0N, 9°38′·0E) to Monterosso al Mare, 8 cables NNE, navigation within 30 m of the shore is prohibited.

Close E of Capo di Monte Negro (44°05′·6N, 9°44′·3E), entry prohibited.

Isola Palmaria (44°02′·5N, 9°50′·6E), navigation or stopping within 50 m of the coast is prohibited.

Prohibited areas

4.172

1 Anchoring and trawling are prohibited in an area, shown on the chart, extending up to 7 cables SSW of Punta del Mesco.

Anchoring, fishing and any seabed operations are prohibited in an area containing unexploded ordnance, shown on the chart, approximately 7½ miles SW of Capo di Monte Negro (44°05′·6N, 9°44′·3E).

2 Entry is prohibited to an area of radius 100 m centred on 44°04′·7N, 9°46′·1E which contains scientific instruments.

Isola Palmaria (44°02′·5N, 9°50′·6E); unauthorised landing on the island is prohibited. When approved the authorised landing place is the pier within Seno di Terrizzo on the N coast.

Principal marks

4.173

1 **Landmarks:**

Monte Vè, also known as Monte Focone, several distinctive houses stand on its NW slope, (44°09′·1N, 9°37′·4E).

Framura clock tower, with a small round turret (44°12′·7N, 9°33′·3E).

Major light:

Isola del Tino (white round tower on castle, 24 m in height) (44°01′·6N, 9°51′·0E).

Directions

(continued from 4.151)

4.174

1 From a position about 7 miles S of Punta Baffe (44°14′·3N, 9°26′·5E) the coastal route leads SE passing, with positions relative to Punta del Mesco (44°08′N, 9°38′E):

SW of Punta Moneglia (9¼ miles NW), a high, steep, rocky spur of Monte Moneglia 1¼ miles NNW. Thence:

2 SW of Punta della Madonna (4¼ miles NW), the W part of a high rounded headland. A chapel with an arched porch stands on the point. Thence:

SW of Punta di Monte Grosso, on which stands a small rose coloured church, (3 cables SW of Punta della Madonna). Thence:

SW of Punta Picetto (2 miles NNW), thence:

3 SW of Punta del Mesco, covered with thick vegetation and faced with bare, rugged cliffs. A disused signal station and the dark ruins of a convent stand nearby and a rocky islet lies close off the W side of the headland. Thence:

SW of Capo di Monte Negro (5 miles ESE), thence;

SW of Punta della Castellana (9 miles ESE), a sheer headland, 510 m in height, on which stands a fort. Thence:

4 SW of Punta San Pietro (10 miles SE), on which stands a prominent old church overlooked by the ruins of a large square fort. Thence:

SW of Isola Palmeria (10½ miles SE), the W side of the island is particularly steep with a number of caves and grottoes. A signal station, white with grey framework mast stands on the summit of the island.

5 The track continues SE to a position approximately 7 miles S of Isola del Tino (44°01′·6N, 9°51′·0E). The W side of the island consists of sheer, light-coloured cliffs whereas the E side is covered with dark trees. A light is exhibited from the island (4.173).

Useful marks

4.175

1 Monte Pu, rounded with heavily wooded slopes and a bare, light coloured summit (44°17′·8N, 9°30′·5E).

Reggimonti, stands on a ridge and contains a red church with a light coloured belfry and clock (44°11′·9N, 9°34′·5E).

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2 Coneglia belfry, white, pointed, (44°07′·3N, 9°42′·5E).
Santuario della Madonna di Monte Negro, white, domed belfry (44°05′·7N, 9°44′·7E), standing on Capo di Monte Negro.
Scoglio Ferale, conical rock with a white cross on its summit and red square pillar at its foot. The rock is connected to the coast by a ridge of rocks and appears darker than the coast behind (44°04′·2N, 9°46′·9E).

3 Campiglia, Chiesa di Santa Caterina belfry, slender, grey-coloured and square, prominent on a flat ridge (44°04′·4N, 9°47′·8E).

(Directions continue, for La Spezia at 4.209 and for the coastal route at 5.12)

Side channels

Passagio di Portovenere
4.176

1 Passagio di Portovenere separates Punta San Pietro (44°02′·9N, 9°50′·0E) from Isola Palmaria. The passage is ½ cable wide at its narrowest part and and obstructed by a shallow bar at its E end. The channel is navigable only in good weather by small vessels with a draught of less than 2·5 m at a speed of less than 5 kn. Anchorage within the passage is prohibited.

Between Isola Palmaria and Isola del Tino
4.177

1 The passage separating Isola Palmeria (44°02′·5N, 9°50′·6E) and Isola del Tino is 2½ cables wide and has depths of about 27 m in the fairway and the shores are steep-to. The passage is easily navigated however after strong winds the current within it is appreciable. There is a speed limit of 6 kn.

Anchorages

Moneglia anchorage
4.178

1 **General information**. Moneglia (44°14′·4N, 9°29′·3E), a village, lies on the NE side of a small bay. Within the village stand two churches; in the SE part Chiesa Maggiore di Santa Croce (slender prominent belfry), in the NW part a smaller, less prominent church with black and white bands on its belfry. A breakwater 190 m in length lies approximately 20 m off the beach.

2 **Anchorage**. With local knowledge anchorage can be obtained in depths of about 7 m, sand, SW of the smaller church. Scoglio Pietra Stella, a rocky patch awash in places, lies 1 cable offshore on the alignment of Santa Croce belfry and the central arch of the E viaduct which stands above the village. Small vessels may be able to find some shelter from SW winds in the lee of Punta Moneglia (44°14′·0N, 9°28′·3E). Mariners should note the dangerous wreck which lies 2½ cables SSE of the headland.

Bonassola anchorage
4.179

1 **General information**. Bonassola (44°10′·8N, 9°34′·9E) stands between two streams at the head of a small bay entered between Punta di Monte Grosso and Punta Levanto, 5 cables ESE. A tall railway embankment crosses the beach in front of the village. A belfry and, close E of it, a fort with a clock tower are visible over the W end of the embankment. San Giorgio, another village, stands 5 cables N, close below it is a church with a red belfry.

2 **Anchorage**. With local knowledge anchorage can be obtained in depths of about 10 m, good holding ground, in the N part of the bay on the alignment (013°) of San Giorgio church and the railway bridge crossing the stream W of Bonassola. In good weather anchorage can be obtained in depths of 8 m closer to the shore. In moderate SE winds smaller vessels can obtain some shelter from the SE shore of the bay in depths of 10 m. Mariners should note the dangerous wreck 1 mile offshore which contains explosives.

Levanto anchorage
4.180

1 **General information**. Levanto (44°10′·1N, 9°36′·5E) is an ancient town, fronted by a beach and surrounded by an amphitheatre of hills. La Torre, a grey crenellated polygonal building standing on a rocky height, and the rose-coloured Municipal Casino are useful marks.

2 **Anchorage** can be obtained within the bay in depths of 5·5 to 9·0 m, between 1 and 2½ cables from the shore. With local knowledge anchorage can be obtained off the town, taking care to avoid Secca della Peria, a rocky shoal with a least depth of 1 m over it, 6½ cables SE of Punta Levanto (44°10′·5N, 9°35′·0E). There are depths of 10·0 to 16·5 m between the shoal and the coast. Small vessels can obtain temporary anchorage in line with a dark rocky point, on which stands a two storeyed house, projecting NW from the S extremity of the beach fronting the town.

Monterosso al Mare
4.181

1 **General information**. The district between Punta del Mesco (44°08′N, 9°38′E) and Capo di Monte Negro, 5 miles SE, is known as Le Cinq Terre and is noted for its wine production. Monterosso al Mare (44°08′·7N, 9°39′·0E) stands on a rocky spur dividing a wide sandy beach at the head of a bay entered between Punta del Mesco and Punta Corone, 1¼ miles ESE. At the W end of the village stand two grey crenellated towers, one round the other square. A convent, (large white building) stands further E. Two small craft harbours front the village.

2 **Anchorage** can be obtained in a depth of 20 m off the W part of the beach.

Small craft. Porticciolo di Ponente lies 5 cables NE of the disused signal station on Punta del Mesco see 4.175, and is formed by two unmarked moles. The entrance faces SE with depths of about 3 m. The quays have depths of 1 to 2 m alongside.

3 Porticciolo di Levante consists of several quays built on the E side of the small promontory 9 cables ENE of the disused signal station. A rubble-faced mole provides some protection from the SW. There are depths of about 1 m alongside the quays.

Small craft

Levanto small craft haven
4.182

1 **General information**. A small craft haven has been built W of the town (44°10′·1N, 9°36′·5E). The harbour is protected by a mole, the entrance faces E and the basin has depths of 2·5 m.

Vernazza
4.183

1 **General information**. Vernazza (44°08′N, 9°41′E) small craft harbour lies on the E side of a cove entered N of a rocky point. The cove has depths of 2 to 4 m to within a short distance of its head. The village is difficult to identify from seaward however the church belfry stands on the E

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shore of the harbour. A mole extends 30 m WNW from the point and the remains of a rubble breakwater extend a further 30 m NNW from its head. An external quay extends 20 m W from the point. The harbour affords little protection and is completely exposed to weather from seaward.

2 **Directions**. Mariners should remain at least 20 m off the ruined breakwater to avoid the shoal water surounding it.

Berths. The quays provide 100 small craft berths in depths of 1·0 to 2·5 m.

Other names

4.184

1 Anzo (44°12′·0N, 9°33′·4E).
Canetto, Seno di (44°05′·3N, 9°45′·4E).
Ciamia, Scoglio (44°12′·0N, 9°33′·4E).
Cannetto, Seno di (44°05′·3N, 9°45′·5E).
Deiva Marina (44°13′·0, 9°31′·2E).
Deiva, Punta (44°12′·4N, 9°31′·7E).
Lemeglio (44°13′·8N, 9°30′·0E).
Manorola, (44°06′·3N, 9°43′·8E).
Monteleone, Torre (44°14′·3N, 9°29′·3E).
Persico, Punta del (44°04′N, 9°48′E).
Riomaggiore (44°05′·9N, 9°44′·4E).
Villafranca, Fortino (44°14′·3N, 9°29′·3E).

LA SPEZIA

General information

Chart 118

Position

4.185

1 La Spezia (44°04′N, 9°52′E) lies at the head of Golfo di La Spezia.

Function

4.186

1 La Spezia is the principal base of the Italian Navy and an important commercial port handling containers, general and bulk cargoes including oil and oil products, raw materials and manufactured goods. In addition it has important shipbuilding and engineering industries.

Topography

4.187

1 A high, rocky promontory extending SSE from the mainland and the islands of Palmaria and Tino form and protect the W side of the gulf. Further protection is provided by the picturesque mountains rising close inland to the N and E. The bay is wide, steep-to and clear of isolated dangers. The port is further protected by a breakwater, Diga Foranea, which lies between Punta Santa Maria (44°04′·0N, 9°51′·1E) and Punta Santa Teresa 1½ miles NE.

Port limits

4.188

1 The following limits are used by the Italian authorities;

Rada del Porto di La Spezia, the part of the Gulf of La Spezia NW of a line joining Isola del Tino (44°01′·6N, 9°51′·2E) and Punta di Maralunga (44°04′·0N, 9°54′·4E). The Outer Roads lie between this line and Diga Foranea; the Inner Roads lie between the Diga Foranea and The Port of La Spezia.

2 **Porto di La Spezia**, comprises the facilities within the boundary walls, buildings and waters defined as internal between the root of Molo Italia, in approximate position (44°06′·3N, 9°49′·8E), and Punta Calandriello (44°04′·9N, 9°52′·8E).

Porto Militare occupies the W part of the Inner Roads within Diga di Cadimare, Diga Est and Molo Lagora, known locally as Diga degli Abruzzi.

3 **Porto Commerciale**, contained by the boundary walls buildings and internal waters enclosed by Molo Italia (44°06′·3N, 9°49′·8E) and Molo dei Pagliari, also known as Pontile Pagliari, (44°06′·1N, 9°51′·4E).

4 **Porto Industriale**, comprising the facilities within the boundary walls of the harbour, working areas and internal waters contained by a line between Molo dei Pagliari (44°06′·1N, 9°51′·4E) and Punta Calandriello (44°04′·9N, 9°52′·8E) but excluding the Military Zones of Mariperman (around Molo dei Pagliari and Punta San Bartolomeo (44°05′·4N, 9°51′·8E), an oil terminal of the Italian Air Force.

Approach and entry

4.189

1 La Spezia is approached from the SE through Golfo di La Spezia which lies between Isola del Tino (44°01′·6N, 9°51′·0E) and Capo Corvo (44°02′·2E, 9°57′·9E). Vessels entering or leaving La Spezia are to follow one of the recommended tracks, shown on the chart, see 4.202.

Traffic

4.190

1 In 2000 the port was used by 2143 ships with a total deadweight 37 625 817 tons.

Port Authority

4.191

1 La Spezia Port Authority, Capitaneria di Porto, Via Italia 4, La Spezia.

Limiting conditions

Controlling depths

4.192

1 The W approach channel leading to the commercial port is dredged to 13·9 m.

Deepest and longest berths

4.193

1 Molo Fornelli W side; length 520 m, depth alongside 13 m.

Molo Fornelli E side; length 467 m, depth alongside 14 m.

Tidal levels

4.194

1 The average Spring Tide produces a high water of 0·42 m compared with 0·30 m at Neaps.

Maximum size of vessel handled

4.195

1 See 4.233 for Porto Commerciale and 4.241 for Porto Industriale.

Local weather and sea state

4.196

1 **Wind**. The prevailing winds in Golfo di la Spezia are S during the summer and N or NE during the winter. Occasionally a strong SE wind accompanied by rain will be experienced in the winter; cloud covering the summit of Punta Castellana (44°04′N, 9°49′E) precedes it. With a prolonged period of W winds offshore strong gusts descend from the mountains on the W shore of the gulf.

2 The gulf is subject to land and sea breezes. The E wind will begin at about 1000 (local time), gradually becoming more southerly but then in the early afternoon veers sharply

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SE to align with the gulf. Throughout the afternoon the wind becomes more W and dies away shortly before sunset.

3 **Current** within the gulf sets N along the W shore at a rate of less than 1 kn.

Arrival information

Port operations
4.197

1 The port operates 0700–2300 Jun-Sep and 0700–1900 Sep-Jun. Vessels are normally berthed by day or night except at the Arco Petrolifer oil terminal mooring.

Port radio
4.198

1 There is a port radio station see the relevant *Admiralty List of Radio Signals* for details.

Notice of ETA required
4.199

1 Vessels should send ETA 72 hours, 48 hours and 24 hours in advance.

Outer anchorages
4.200

1 There are fourteen numbered anchor berths in the Outer Roads in depths of 12 to 17 m, all are shown on the chart; the berths are allocated by the Harbour Master. Restrictions apply to some berths.

Anchor berth	*Remarks*
E1	Within pilotage area.
E2	
E3	Within pilotage area. Maximum LOA 130 m. Maximum length of stay 48 hours with advance approval.
E4	Within pilotage area. Maximum length of stay 48 hours with advance approval.
E5	
E6	
E7	
E8	
E9	Reserved for vessels carrying/which have carried dangerous liquid or gaseous bulk cargoes
E10	
E11	
E12	
E13	
E14	

Pilotage and tugs
4.201

1 **Pilotage** is compulsory for vessels greater than 500 grt and available 24 hours a day. The pilot boards NE of Torre Scuola (44°03′·1N, 9°51′·5E), or at the anchorage or berth when necessary. When leaving or shifting berth the pilot should be contacted 1 hour in advance.

Tugs are available 0700–2300.

Regulations concerning entry
4.202

1 **Approach channels**. Approach and departure channels have been established for La Spezia and are shown on the chart. Use of the channels is compulsory and governed by vessel displacement and draught as follows:

Channel	*Purpose*	*Vessel*
Rotta di Ponente (West Route)	Departure	All
Rotta di Mezzo (Centre Route)	Approach	All greater than 500 grt or draught greater than 5 m
Rotta di Levante (East Route)	Approach from or depart to the S	All up to 500 grt and less than 5 m draught

2 **Speed limits.** The following speed limits apply, for definitions of the areas see 4.188.

Area	*vessel less than 350 grt*	*vessel greater than 350 grt*
Outer Roads	12 kn	6 kn
Inner Roads	12 kn	6 kn
Port	6 kn	6 kn

3 **Vessels carrying dangerous liquid or gaseous cargoes** must approach La Spezia using the Centre Route (Rotta di Mezzo) and depart depart using the West Route (Rotta di Ponente); both are shown on the charts.

Right of way. Vessels towing have precedence over all others. Vessels leaving Rada del Porto di La Spezia have priority over vessels entering. Small craft must keep clear of military and commercial vessels.

4 **Prohibited areas**. Two floating light-beacons moored in positions (44°02′·8N, 9°55′·2E) and (44°02′·1N, 9°56′·6E) are connected to exercise mines; mooring to or boarding the beacons is prohibited.

Seno della Castagna (44°03′·8N, 9°51′·0E) is a prohibited area and closed to all non-military vessels.

5 Seno di Varigano, 2 cables NW of Seno della Castagna; entry is prohibited unless authorised by the military authorities.

Commercial shipping and small craft are prohibited from approaching Porto Militare or entering the basins of the naval dockyard unless authorised.

6 Navigation inshore of a line, shown on the chart, enclosing Seno di Panigaglia (44°04′·6N, 9°50′·0E) is prohibited except for naval, police or customs vessels, vessels berthing at Pontile S.N.A.M. or providing services to the terminal.

Entry to an inlet between Punta di Maramozza (44°04′·0N, 9°54′·8E) and Punta di Maralunga, 2½ cables W, is prohibited.

Harbour

General layout
4.203

1 The port is protected from the SE by Diga Foranea. The naval dockyard and other military facilities line much of the W part of the harbour, notable exceptions are the merchant ship anchorage within Seno delle Grazie and the gas carrier terminal within Seno di Panigaglia. The basins and berths of the commercial port occupy the N shore. The E side of the harbour is more industrial with shipyards, bulk handling berths, including oil, and the piers belonging to utilities companies.

Seaplane operating area
4.204

1 Seaplanes may operate in the vicinity of Seno di Cadimare (44°05′·0N, 9°49′·5E) which fronts an Italian

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Naval Air station, however naval aircraft are authorised to use all the waters of the gulf.

Hazards

4.205

1 **Naval and military activity including exercises**. As the principal Italian naval base La Spezia has a high concentration of military activity involving warships, submarines, aircraft and support craft. Generally military craft have priority over commercial vessels and the movement of merchant ships may be affected by trials or training activity in declared areas or by other naval and military requirements.

2 **Oil trans-shipment area**. The transfer of mineral oil to smaller vessels and lighters for delivery to facilities at La Spezia is permitted S of Isola del Tino in position (44°00′N, 9°51′E). Warning of these operations is provided in local Notices to Mariners. Vessels are required to remain 1000 m from those conducting transfers and reduce speed to avoid creating an excessive wake.

3 **Shellfish beds**. Vessels not involved in servicing the shellfish beds must remain at least 10 m from them and proceed at no more than 3 kn within their vicinity. Passage between the beds, stopping and any maritime activity, including sub-aqua swimming are prohibited unless expressly authorised by the harbour authorities. The areas affected are shown on the chart.

Measured distance

4.206

1 A measured distance of 2193·3 m lies SE of Diga Foranea:

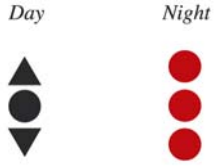
The W and E limits are defined by the alignment of two pairs of wooden staffs, 6 m in height, fixed on small masonry pillars near the W and E ends of the breakwater.

2 Running track; the line of bearing 055° on the tower of Castello San Terenzo (44°04′·9N, 9°53′·8E); the line of bearing 235° on the alignment of a belfry within Portovenere (44°03′·0N, 9°50′·0E) and an unnamed headland, on which stands a tree, 1 cable S of Punta della Castagna.

Traffic signals

4.207

1 **Rotta di Mezzo**. The activation of Exercise Area T803 which extends from Punta della Castagna (44°03′·7N, 9°51′·2E) for 15 miles between the bearings 135° and 155° may temporarily prohibit navigation while live gunnery firings take place. The following signals, exhibited from Palmaria Signal Station (44°02′·4N, 9°50′·4E) and a framework mast on Punta della Castagna, indicate navigation within the area is prohibited:



Palmaria Signal Station – Traffic signals (4.207)

2 Warnings are also broadcast from coast radio stations.

Principal marks

4.208

1 **Landmarks:**

Monte Rochetta (44°04′·2N, 9°56′·3E), a radio mast (red obstruction lights), 56 m in height stands on the NW side of the summit.

Tank (44°06′·3N, 9°52′·1E).

2 **Major Light:**

Pegazzano Light (44°06′·1N, 9°48′·3E) (red and white chequered, 5-sided stone tower, 13 m in height). The light is only visible within the sector 302°–310°.

Directions for entering harbour

(continued from 4.174)

Approaches

4.209

1 **Rotta di Mezza**. The outer end of the Centre Route is marked by a light-buoy (white pillar) (43°54′·7N, 10°07′·2E), the route leads 15 miles NW to the dredged W entrance channel passing:

SW of Marina di Carrera (44°02′N, 10°03′E), thence;

SW of the merchant vessel anchorage, 1½ miles SW of Marina di Carrera, thence:

2 SW of Capo Corvo (44°02′·2E, 9°57′·9E), thence

NE of Isola del Tino (44°01′·6N, 9°51′·0E), thence;

NE of Punta della Mariella, a rock fringed point on the E coast of Isola Palmaria, (44°02′·6, 9°51′·3E). A mooring buoy lies 2 cables S of the point. Four buoys marking a degaussing range are moored 3 cables SSE of it. Thence:

3 ENE of Torre Scuola (44°03′·1N, 9°51′·6E), a partly demolished square tower standing on a rock fringed islet. A light (white metal framework, 2 m in height) is exhibited from the SE corner of the tower. A triangulation beacon also stands on the tower and is prominent.

The Centre Route joins the dredged entrance channel 3 cables NE of Torre Scuola.

4 **Rotta di Levante**. From a position 2 miles ESE of Capo Corvo (44°02′·2E, 9°57′·9E) the East Route leads WNW then NW passing:

S of Montemarcello, a village 5 cables N of Capo Corvo, thence:

S of Scoglio Corvaccino (44°02′·2N, 9°57′·8E), one of several rocks fringing the headland. The rock is marked by a beacon (red and yellow bands, 2 m in height), thence:

5 SW of Monte Murlo (44°03′·3N, 9°57′·5E), a light coloured, two-storey building stands on its summit. Thence, with positons from Punta di Maralunga (44°04′·1N, 9°54′·4E):

SW of Tellaro (1¼ miles SE), village standing on a rocky point. A sewer outfall extends from the point; a buoy (special) marking its mid-point lies on the NW side of the channel. Thence:

6 SW of Punta Maralunga, thence:

SW of the castle at Lerici (2½ cables NNE), thence

SW of Lerici Mole Head (3 cables N), from which a light is exhibited (green mast, 6 m in height), thence:

SW of San Terenzo (1 mile NNW), a castle stands on the short peninsula S of the town, thence:

SW of Punta Galera (1 mile NW). The track then leads into Passo di Levante passing:

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7 SW of Punta Santa Teresa (1¼ miles NW), from which a light is exhibited (green masonry tower, 4 m in height) and:

NE of Diga Foranea E Head, which exhibits a light (red masonry tower, 8 m in height). A short spur extends 100 m ESE from the breakwater head and is also marked by a light (red metal column on pedestal, 5 m in height).

Entrance channels

4.210

1 **Passo di Ponente**. From a position 3 cables NE of Torre Scuola (44°03′·1N, 9°51′·6E) a dredged channel leads NW towards the W entrance passing, with positions from Torre Scuola:

NE of a shoal (2 cables N), with a depth of 9·2 m over it, thence:

NW of Punta della Castagne (7 cables NNW), thence:

2 NW of Punta Santa Maria (1 mile NNW), which is marked by a light (red stone tower, 7 m in height) and:

SW of Diga Foranea W Head (1 mile N), from which a light is exhibited (green stone tower, 9 m in height).

3 **Passo di Levante**. Vessels permitted to use Passo di Levante can be navigated as required, once clear of the entrance, to approach their berth. Mariners should note the shellfish beds close WSW of the entrance, numerous mooring buoys and the restricted area 7 cables NW.

(Directions continue, for Porto Militare at 4.228, Porto Commerciale at 4.235)

Basins and berths

Prohibited anchorage

4.211

1 Anchorage is prohibited within 100 m of the shore or the pierheads of Porto Industriale between 6 cables and 1 mile NW of the NE end of Diga Foranea due to submarine cables.

Anchorages

4.212

1 **Inner roads**. There are ten numbered anchor berths in depths of 5·8 m to 12·0 m, all are shown on the chart; the berths are allocated by the Harbour Master. Pilotage is compulsory for vessels instructed to anchor in the vicinity of submarine telephone cables serving mooring buoys in the central part of Rada di La Spezia. Vessels occupying these berths are also prohibited from swinging for compass deviation checks. Other restrictions apply to some berths:

Anchor berth	*Remarks*
I 1	Reserved for naval vessels.
I 2	May be allocated for short periods to vessels waiting to berth at Pontile S.N.A.M.
I 3	Reserved for naval vessels.
I 4	
I 5	
I 6	
I 7	
I 8	
I 9	
I10	

2 **Seno delle Grazie** (44°04′·6N, 9°50′·4E) is entered between Punta Del Varignano and Punta del Pezzino, 3¾ cables NNW. Anchorage can be obtained in depths of 7 to 13 m within the bay, which is one of the safest and most convenient within the gulf. However winds from the SE or NW are strong and E winds cause an appreciable swell. Most of the SE shore is lined with quays reserved for naval use, merchant vessels must remain 100 m clear. La Grazie, the village at the head of the bay, is fronted by a wooden pier and slipway of 300 tons capacity. Mariners should beware of the marine farm close SW of Punta del Pezzino.

Mooring buoys

4.213

1 There are numerous mooring buoys within Rada di La Spezia, most are marked with a letter and number and reserved for naval use; the Captain of the Port may approve use by merchant vessels. Large vessels conducting compass adjustment use the buoy moored 4 cables NNE of the SW end of the breakwater; several other buoys are moored in this area.

Alongside berths

4.214

1 Alongside berths are available within:

Porto Militare (4.229).

Porto Commerciale (4.237).

Porto Industriale (4.243).

Seno di Panigaglia. The bay lies between Punta del Pezzino (44°04′·4N, 9°50′·6E) and Punta del Fezzano, 5½ cables WNW. Pontile S.N.A.M, the specialised berth for gas carriers, has an alongside depth of 10 m on its S side.

2 **Seno del Fezzano** lies between Punta del Fezzano (44°04′·7N, 9°49′·8E) and Punta di Cadimare, 2¾ cables NW. The shores are almost entirely lined with quays with depths of 2·6 to 3·3 m alongside. There is also a timber built unloading pier. A dark baroque style belfry stands in the village.

Port services

Repairs

4.215

1 All types of repairs can be undertaken. There are six dry docks within the naval dockyard, a floating dock with lifting capacity of 40 000 tons and numerous slipways within the shipyards of Rada di La Spezia.

Other facilities

4.216

1 There are naval and civilian hospitals and the usual facilities of a city. Deratting and compass adjustment can be undertaken.

Supplies

4.217

1 Fuel is supplied at some berths or by barge. Water is available at most berths or by barge. All types of provisions are available.

Communications

4.218

1 The nearest airports are Pisa, 35 miles SE or Genova 45 miles WNW.

Harbour regulations

4.219

1 The following are extracts from the port regulations:

Merchant vessels are only permitted to remain in Golfo di La Spezia to conduct commercial operations,

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repairs or refitting at the discretion of the Commandante Militare or the Capitano di Porto.

Salvage of any material from the seabed of Golfo di La Spezia is prohibited without prior permission from the Capitano di Porto.

2 Boats belonging to merchant vessels may land at Banchina Revel of Molo Italia.

It is forbidden to swing a vessel for compass adjustment in any area in which anchoring is prohibited and at anchor berths in the Inner Roads, see 4.212.

Porto Militare

General information

4.220

1 **Position and Function.** Porto Militaire (44°05′·5N, 9°49′·5E) is the main operating base of the Italian Navy providing berths for operational warships and comprehensive maintenance and repair facilities.

4.221

1 **Approach and entry**. The naval base is approached through Rada di La Spezia and entered through Passo Principale, which lies on the SE side of Darsena Duca degli Abruzzi.

Limiting conditions

4.222

1 **Controlling depth**. Passo Principale has a least depth of 10·9 m.

4.223

1 **Deepest and longest berth**. Molo Lagura, on the NW side of Darsena Duca degli Abruzzi; length 550 m, depth 6·0 to 8·4 m. Within Arsenale Marina Militare, the naval dockyard, Calata Mancina Idraulica on the SW side of the inner basin; length 360 m, depth 6·1 to 7·5 m.

Arrival information

4.224

1 **Port operations**. Traffic movements to, from and within Porto Militare are controlled by the naval authorities.

4.225

Regulations concerning entry. There is a speed limit of 6 kn throughout Porto Militare.

1 Vessels approaching the entrance to Darsena Duca degli Abruzzi through Passo Principale must be on the leading line, see 4.228 when 300 m from the entrance to be able to sight any vessel leaving. Vessels entering must give way to vessels leaving.

2 Vessels proceeding to the inner basins must establish the "panne", a wooden boom controlled by chain cables and used to close the entrance, is open, see 4.227. The entrance is normally kept open between 0600–2000 daily.

Harbour

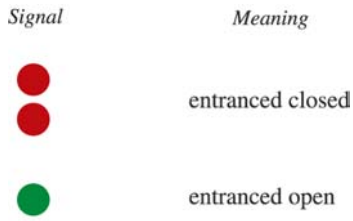
4.226

1 **General layout**. Darsena Duca degli Arbruzzi, protected by Diga di Cadimare, Diga Est and Molo Lagora, known locally as Diga degli Arbruzzi, provides access to Arsenale Marina Militaire, the naval dockyard, occupying two basins on its NW side. Close S of the entrance to the naval dockyard Porticciolo di San Vito provides access to a canal leading to small craft basins.

4.227

1 **Traffic signals**. International Code Flag B, flown from the mast on the SW side of the entrance to Arsenale Marina Militare, indicates entering or leaving the dockyard is prohibited because of vessels manoeuvring within it.

The entrance to Prima Darsena can be closed by a boom, its position is signalled by coloured lights:



Traffic signals (4.227)

Directions

(continued from 4.209)

4.228

1 **Passo Principale**. The naval dockyard is entered through Darsena Duca degli Abruzzi, 1½ miles NNW of Passo di Ponente; the basin is approached and entered through Passo Principale (44°05′·3N, 9°50′·0E) which has a least depth of 11·6 m in the basin entrance.

Leading lights. From a position in the main dredged channel, 7½ cables NNW of Passo di Ponente, the alignment (306°) of the following leading lights leads through the entrance to Darsena Duca degli Abruzzi:

2 Front light, sectored (W305½°–396½°) (white truncated pyramid framework tower with black stripe, on building) (44°05′·8N, 9°48′·9E). The white sector leads through the centre of the channel.

Rear, Pegazzano Light (red and white checquered 5 sided tower) (5½ cables from front).

Passo Secondario, between Molo Lagora and Diga Est, on the NE side of Darsena Duca degli Abruzzi, is 50 m wide and has depths of 7·7 m.

3 **Arsenale Marina Militare**. Prima Darsena is entered from the NW corner of Darsena Duca degli Abruzzi. The leading line indicating Passo Principale also leads into Prima Darsena. Mariners should beware of the unequal water pressures created within the basin by vessels entering or leaving the basin; close attention must be paid to lateral movement which may at times be considerable.

A short channel, spanned by a swing bridge, leads N into Seconda Darsena.

4 **Leading lights**. The alignment (354°) of Seconda Darsena Leading Lights leads through the centre of the channel:

Front light (V on beacon) (44°06′·1N, 9°49′·0E).

Rear light (V on beacon) (120 m from front light).

Basins and berths

4.229

1 **Molo Varicella 1** has a landing area for naval helicopters.

Molo Varicella 2 is reserved for research vessels.

Porticciolo di San Vito small craft harbour, with depths of 2 to 7 m, provides access to two further basins via a canal 10 m wide. The canal is spanned by two bridges; a swing bridge carrying a railway line and a footbridge moved on rollers. There are depths of 2 to 3 m within the canal and basins.

2 **Calata di San Vito**, also known as Calata del Guardiaporto, has two small quays extending from it and is used by smaller vessels, usually berthed by Mediterranean mooring.

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Prima Darsena provides access to the naval dockyard.

Seconda Darsena is lined with maintenance berths and provides access to the dry docks. Use of the dry docks by merchant vessels can be authorised by the naval authorities.

3 **Banchina Scali** forms the NW side of Darsena Duca degli Arbruzzi. Vessels are normally berthed here using Mediterranean mooring.

Small craft

4.230

1 **Porticciolo Lagora** (44°05′·9N, 9°49′·5E) is a small rectangular basin on the N side of the root of Molo Lagora which gives access to Canale Lagora; it is entirely reserved for naval small craft. There are depths of about 3 m in the middle of the basin and about 2 m alongside the quays. Vessels entering must give way to those leaving.

2 **Porticciolo della Sezione Motevelica** (Porticciola delle Torpediniere) close N of the entrance to Porticciola Lagora, is protected on its SE side by Molo Mirabello (44°06′·4N, 9°49′·6E) from which a light (red tower, 4 m in height) is exibited. The basin, with depths of about 4 m in the middle, decreasing to about 3·4 m alongside the quays, is reserved for naval small craft. There is a 3 kn speed limit inshore of a line extending from Molo Mirabello to the elbow of Molo Italia, 2½ cables NE.

3 **Banchina Revel** (44°06′·1N, 9°49′·5E) is the principal landing place for the city. Naval small craft have priority at the SE part of the quay. When not required by naval vessels other small craft may berth there.

Porto Commerciale

General information

4.231

1 **Position and Function**. Porto Commerciale (44°06′·2N, 9°50′·5E) handles containers, general cargoes, coal, oil, LPG, cereals and foodstuffs, bulk cargoes including cement, ferry services and some cruise liner traffic.

4.232

1 **Approach and entry**. The commercial port is approached through a dredged channel which leads N, through the Inner Roads of Rada di La Spezia, to the dredged turning basin S of the container terminal (44°06′·5N, 9°50′·7E).

Limiting conditions

4.233

1 **Maximum size of vessel handled.** Porto Commerciale accepts vessels up to 14 m draught.

Harbour

4.234

1 **General layout**. Porto Commerciale comprises a series of basins, open to the S, which extend 1 mile E from the city and occupy the head of Rada del Porto di La Spezia. The basins between Molo Italia (44°06′·2N, 9°50′·0E) and Sporgente Fornelli, 5 cables E, are known collectively as Porto Mercantile.

Directions for entering harbour

(continued from 4.209)

4.235

1 A channel, dredged depth 13·9 m, also known as Canale della Petroliere, leads 2 miles NNW from Passo di Ponente, through the Inner Roads, to the turning basin of the commerical port; the channel is marked by light-beacons (lateral) 1 mile NNW of Passo di Ponente. A separate channel, also marked by light-beacons, leads N from a position E of Porto Militare to Vecchio Bacino.

2 A branch channel, dredged depth 12·8 m, approximately 1½ miles NNW of Passo di Ponente, leads 5 cables NE, to the Arcola Petrolifer oil terminal mooring.

4.236

1 **Useful mark:**

Pagliari, factory chimneys, the tallest of two is prominent (44°06′·1N, 9°51′·5E).

Basins and berths

4.237

1 **Vecchio Bacino,** the W basin of Porto Commerciale, provides berths and handling facilities for general and bulk cargoes including cereals, fertilisers, cement, vegetable oils coal and minerals. There are also container handling facilities. Calata Malaspina is primarily used for Ro-Ro traffic.

2 **Pontile Industria Italiana Petrolifera (I.I.P.)** extends SE from the head of Molo Garibaldi (44°06′·3N, 9°50′3·E) into the dredged turning area. The berth accepts vessels up to 230 m in length. Mariners should beware of a shoal, with a depth of 4·6 m over it, immediately SE of this berth. A second shorter pier extends SW and accepts vessels up to 8 m in draught.

3 **Nuovo Primo Bacino** lies between Molo Garibaldi and Sporgente Fornelli. The W and N quays of the basin are part of the multi-purpose area of the port.

Sporgente Fornelli is the primary container terminal of the port providing the deepest and longest berths capable of handling the largest container vessels.

4 **Banchina Messina,** 2 cables E of the root of Sporgente Fornelli, is a specialised container handling berth.

Terminal del Golfo lies 3 cables E of the head of Sporgente Fornelli. The terminal complex is equipped for Ro-Ro and container cargoes as well as passenger vessels.

5 **Pontile E.N.E.L.** (44°06′·2N, 9°51′·3E) provides specialised berths for the bulk delivery of coal and oil to the nearby power station.

Molo dei Pagliari, 1 cable SE of Pontile E.N.E.L. is reserved for naval vessels. The quay marks the SE side of Porto Commerciale.

Porto Industriale

General information

4.238

1 **Position and Function** Porto Industriale (44°05′·6N, 9°51′·5E), on the E side of Porto di la Spezia, has developed primarily as an important shipbuilding and repair port and consequently has attracted mainly heavy industry. The military importance of La Spezia is reflected by the presence of several large military establishments.

4.239

1 **Approach and entry**. Porto Industriale is approached through Rada di La Spezia. A dredged channel leads to the N part of the port.

Limiting conditions

4.240

1 **Controlling depth**. The channel leading to the N part of Porto Industriale is dredged to 12·8 m, see also 4.192.

Deepest and longest berths:

Pontile I.N.M.A (44°06′·0N, 9°51′·5E) 320 m in length, depth alongside 8·9 m.

Arcola Petrolifer oil terminal mooring (2½ cables S of Pontile I.N.M.A.) depth 12·8 m.

4.241

1 **Maximum size of vessel handled**. The Arco Petrolifer oil terminal mooring accepts vessels up to 50 000 tons, maximum length 249 m, maximum draught 12·8 m.

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Harbour

4.242

1 **General layout**. Several shipyards front the Pagliari district (44°06′·1N, 9°51′·6E) and are separated by Porto Lotti Marina from San Bartolomeo shipyard, which lies 4 cables SSE. Punta San Bartolomeo (44°05′·4N, 9°51′·8E) is a military oil terminal within a restricted area, shown on the chart. Further shipyards extend along the coast to the vicinity of Passo di Levante, the NE entrance to La Spezia.

Basins and berths

4.243

1 **Molo dei Pagliari**, (44°06′·1N, 9°51′·4E), the northern boundary of Porto Industriale, is reserved for naval vessels.

Pontile I.N.M.A. provides the deepest and longest alongside berth (4.240), in this part of the port and belongs to the shipyard from which it extends.

2 **Punta San Bartolomeo oil terminal**, 7 cables SSE of Molo dei Pagliari, is a military berth and lies within a restricted area. The N and E limits of the area are indicated by the alignments of three beacons (yellow, cylindrical topmark) which stand on the point. The outer limit is indicated by light-buoys. Unloading operations are indicated by red flags flown from the beacons. Vessels greater than 10 grt are prohibited from navigation within the area, unless authorised by the harbour authorities. The area is shown on the chart.

3 **Molo del Muggiano** shelters the small craft basin of the adjacent shipyard. A shoal lies off the head of the mole and along its S side; mariners should keep at least 50 m clear of this part of the mole. Vessels of less than 6·1 m draught can berth on the N side of Molo del Muggiano and there are depths of of 1·5 to 3·5 m alongside the quay N of the root.

4 **Seno di Pertusola** lies between the head of Molo del Muggiano and Punta del Calandrello, 6 cables SE. The bay is occupied by a large shipyard and a number of factories. A floating dock of 40 000 tons lifting capacity is moored off the shipyard.

Small craft

Portovenere

4.244

1 **General information**. Portovenere (44°03′·0N, 9°50′·2E), a small craft harbour at the head of Baia di Portovenere which is entered between Torre Scuola (44°03′·1N, 9°51′·6E) and Punta della Castagna, 6 cables NNW. The harbour is protected by two L-shaped moles from which lights are exhibited; Molo Dondero, the S mole, (red metal column, 4 m in height), Molo Olivo (green column, 4 m in height). The town has tall adjoining houses, a prominent church with belfry and cupola stands in the higher part of the middle of it.

2 **Directions**. The harbour can be approached from Passagio di Portovenere or Golfo di La Spezia. The harbour entrance faces SE and lies at the NW end of a bar separating Passagio di Portovenere from the bay NE of it. Depths across the bar vary considerably from 5 m to a shoal depth of 1·4 m close off the entrance. Mariners should beware of the naval mooring buoy 4 cables ENE of the harbour entrance which lies within a prohibited anchorage and fishing area. A sewer outfall extends 120 m SW from the SE corner of the harbour.

3 **Anchorage** can be obtained in depths of 5 to 10 m within Baie di Portovenere. The bar previously described provides shelter from the W. Mariners should beware of the shellfish beds close inshore along much of the coast and the dangerous wreck within Seno dell Terrizo, 3½ cables ESE of the harbour entrance; all are shown on the chart.

4 **Berths**. The harbour provides approximately 30 berths in depths of 1 to 4 m. Vessels up to 45 m in length are accepted.

Repairs. Small craft repairs are available.

Other facilities. Comprehensive small craft facilities.

Supplies. Fuel, water and provisions available.

Seno dell Grazie

4.245

1 Seno dell Grazie (44°04′·2N, 9°50′·5) (4.212), a sheltered bay popular for over-wintering small craft. A slipway of 300 tons capacity fronts La Grazie at the head of the bay. There are a number of small quays and piers along the NW shore. Small craft repairs are undertaken.

Seno del Fezzano

4.246

1 **General information**. Base Nautica del Fezzano (44°04′·8N, 9°49′·6E) is a small craft marina fronting the village. The marina is protected by an L-shaped pontoon. Vessels up to 20 m in length are accepted.

Berths. The marina provides 250 pontoon berths in depths of 3 to 7 m.

2 **Repairs**. Small craft repairs are undertaken at the boatyard.

Other facilities. Usual marina facilities.

Supplies. Fuel water and provisions available.

Porto Mercantile

4.247

1 **General information**. Small craft may berth at pontoons extending from Banchina Constantino Morin, which lies between Porto Militare and the W side of Porto Commerciale. A marina consisting entirely of pontoons lies SW of Molo Italia (44°06′·2N, 9°50′·0E). Vessels up to 12 m in length are accepted.

2 **Berths**. The marina and adjacent area provide 600 berths in depths of 3 to 7 m.

Other facilities. The usual marina facilities are available.

Supplies. Fuel, water and provisions are available.

Porto Lotti

4.248

1 **General information**. Porto Lotti (44°05′·7N, 9°51′·5E), a marina, lies within Porto Industriale. A large L-shaped mole protects the S and W sides of the basin; a second mole extending ESE protects the N side. The heads of the two moles form the NNW facing entrance to the marina and exhibit lights. Vessels up to 60 m in length are accepted.

2 **Directions**. Mariners should beware of the mooring buoys, associated with the oil terminal mooring, which lie off the entrance. The use of anchors within the marina is prohibited.

Berths. The marina provides 548 mainly pontoon berths in depths of 3 to 8 m

3 **Repairs**. All types of small craft repairs are undertaken.

Other facilities. Comprehensive marina facities.

Supplies. Fuel, water and provisions available.

Lerici

4.249

1 **General information**. Lerici (44°04′·4N, 9°54′·5E), occupies the SE part of Seno di Lerici, entered between Punta Galera (44°04′·8N, 9°53′·3E) and a point, 9 cables ESE, on which stands a conspicuous castle. A mole, protecting the W side of the haven, extends approximately 250 m NW from the coast below the castle and exhibits a

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light (green mast, 6 m in height). There are depths of about 9 m in the approach to the haven. Vessels up to 25 m in length are accepted.

2 **Directions**. Shoal water close off the head of the mole is indicated by a light-buoy. Mariners must beware of a dangerous wreck, 1 cable N of the castle, which lies in depths of 5 to 6 m, part of which is awash.

Anchorage can be obtained by small vessels in depths of 2 to 9 m off the town. Mariners should note SW winds cause an appreciable swell within the harbour.

3 **Berths**. Two wooden piers extend WNW from the town, both have a depth of 3 m at the head. The N pier is reserved for local ferries. A quay lines the shore between the SW pier and the mole with depths alongside of of 1·2 to 3·2 m. Mariners should beware of rubble reducing the depth of water close to the quay and mole. Small vessels can berth on the mole using Mediterranean mooring; the area below the castle becomes untenable during strong SW winds. The harbour can accommodate approximately 220 vessels.

4 **Repairs**. Machinery and some hull repairs can be undertaken.

Other facilities. Limited small craft facilities.

Supplies. Fuel, water and provisions available.

Other names

4.250

1 Apuania, Pontile (44°06′·5N, 9°51′·1E).
Cantiere Ansaldo, Molo (44°05′·3N, 9°52′·2E).
Orientale, Banchina (44°06′·4N, 9°50′·4E).
Paita, Calata G.B. (44°06′·4N, 9°50′·0E).
Torre Scula, Punta (44°03′·0N, 9°51′·4E).
Varigano, Punta del (44°04′·1N, 9°50′·8E).
Verzocchi, Banchina (44°06′·5N, 9°51′·2E).

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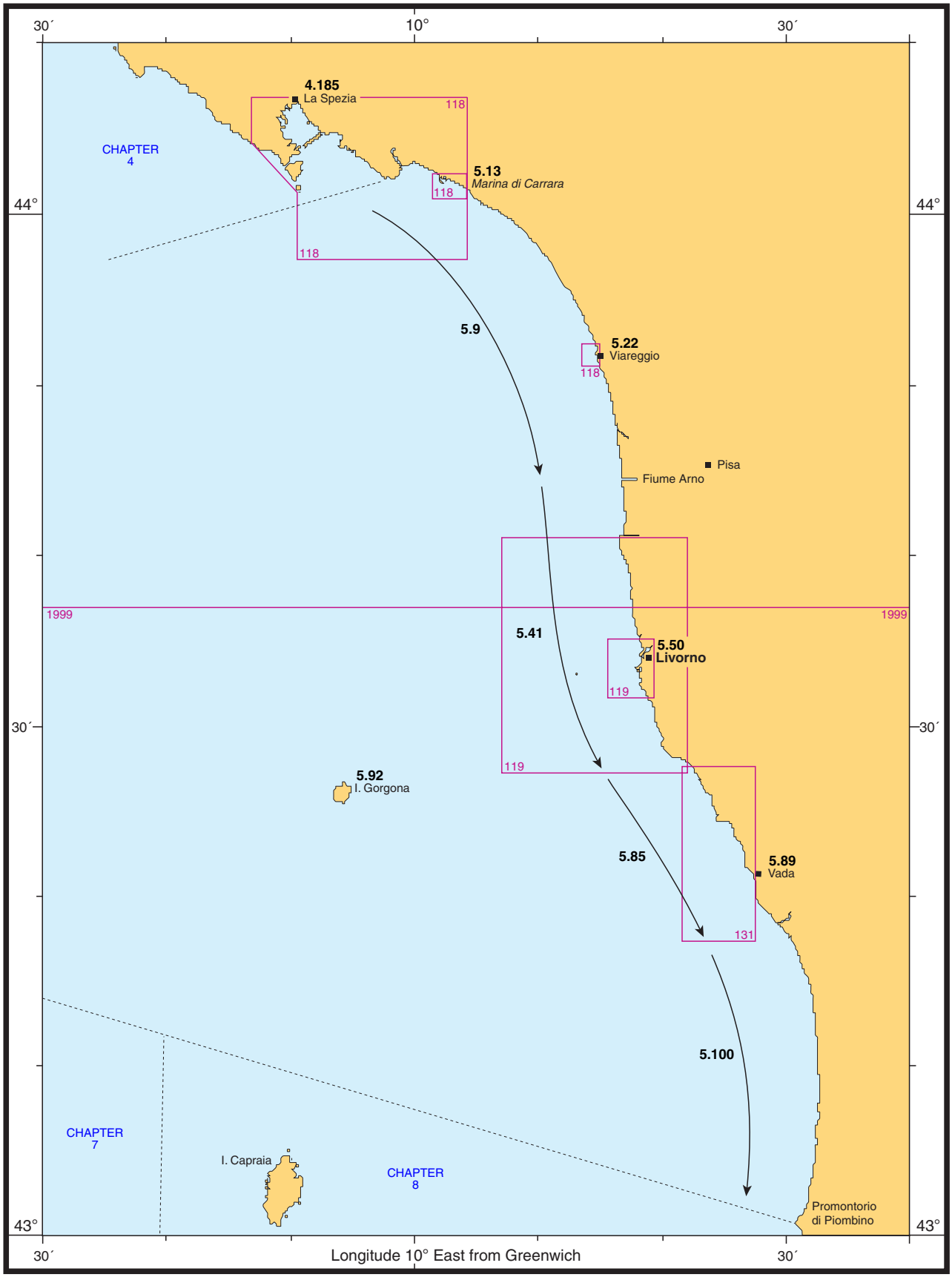
Chapter 5 - La Spezia to Pamontorio di Piombino including Isola Gorgona



March 2004

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CHAPTER 5

WEST COAST OF ITALY – LA SPEZIA TO PROMONTORIO DI PIOMBINO INCLUDING ISOLA GORGONA

GENERAL INFORMATION

Chart 1998, 1999

Scope of the chapter

5.1

1 This chapter describes the W coast of Italy between Capo Corvo (44°02′·2E, 9°57′·9E) and Promontorio di Piombino (42°58′·0N, 10°29′·0E), 67 miles SSE, including Isola Gorgona (43°25′·7N, 9°54′·0E), the most N island of Arcipelago Toscano (8.6). The sections are arranged as follows:

La Spezia to Livorno (5.6).
Livorno to Promontorio di Piombino (5.81).

Through route

5.2

1 An ocean route leads to and from the Gulf of Genoa (4.2) and the N end of the Corsican Channel (8.9). The route lies approximately 40 miles off the mainland coast and is not described in detail.

Topography

5.3

1 The coast from Fiume Magra, also known as Foce del Magra (44°02′·9N, 9°59′·3E), to Livorno (43°33′·0N, 10°17′·5E) is low and sandy however a high mountain range, Alpi Apune, rises behind it. A ridge of conspicuous peaks, providing several landmarks, lies approximately 6 miles inland between Capo Corvo and Porto di Vareggio, 16 miles SE. The mountains are a rich source of marble; quarrying has created conspicuous white patches on some of the mountain sides. With good visibility the mountains can appear as islands when seen from distance SSE of La Spezia (44°04′·0N, 9°52′·0E).

2 South of Livorno the coast extends SSE, is indented, rocky and fringed with dangers for approximately 8 miles. This more rugged appearance gives way, in the vicinity of Punta Castiglioncello (43°24′·0N, 10°24′·3E), to a low, sandy shore sometimes backed by pine woods, which continues S to Promontorio di Piombino (42°58′·0N, 10°29′·0E).

Promontorio di Piombino is rocky, elevated and stands conspicuously at the S end of this coast. The promontory extends 5 miles SSE from Porto Baratti (43°00′·0N, 10°31′·0E) on the NE side of Canale di Piombino (8.91); when viewed at distance from the N the promontory has the appearance of an island.

Depths

5.4

1 The seabed between Capo Corvo and Livorno shelves gradually inshore of the 50 m depth contour, which lies approximately 11 miles from the coast. To the W of Livorno obstructions and dangerous shoals, standing on this coastal bank, extend up to 7 miles offshore. This part of the coast is further encumbered by a number of dangerous wrecks which are shown on the charts.

2 Similarly shoals and dangers extend approximately 7 miles offshore WSW of Vada (43°21′·0N, 10°27′·0E). However S of these dangers the 50 m depth contour steadily closes the coast to lie within 2 miles of it close N of Promontorio di Piombino. The NW part of the promontory is relatively steep-to with the 50 m depth contour lying within 5 cables of the shore.

Dumping ground

5.5

1 A dumping ground for chemical waste lies in deep water 50 miles W of Livorno. The area, centred on (43°35′N, 9°11′E), is shown on the charts

LA SPEZIA TO LIVORNO

GENERAL INFORMATION

Area covered

5.6

1 This section covers the mainland coast of Italy from Capo Corvo (44°02′·2E, 9°57′·9E) to Torre del Romito (43°27′·8N, 10°21′·4E), approximately 38½ miles SSE, including the port of Livorno. The section is arranged as follows:

Capo Corvo to Fiume Arno (5.9).
Fiume Arno to Torre del Romito (5.41).
Livorno (5.50).

Topography

5.7

1 The coast between Capo Corvo and the mouth of Fiume Magra is rocky; the mouth of the river is easily identified by the tall trees standing on, and the short, rubble-built breakwaters extending from, each bank.

Close E of Fiume Magra the shore consists of a wide sandy beach which extends 33 miles SSE to Livorno.

2 Considerable development between Cinquale (43°58′·7N, 10°08′·7E) and Porto di Viareggio, 8 miles SSE, has resulted in a near continuous line of buildings close behind this part of the beach; thick pine woods stand close inland of the buildings.

The N part of an extensive plain lies between Viareggio (43°52′·0N, 10°15′·0E) and Fiume Arno; the city of Pisa lies 5 miles upstream in the centre of the plain. Fiume Arno is navigable to small craft above Pisa as far as Florence, approximately 60 miles from its mouth.

Depths

5.8

1 The 50 m depth contour runs generally parallel to this part of the coast lying approximately 7 miles offshore SW of Capo Corvo, 11 miles offshore SW of Viarggio (43°52′·0N, 10°15′·0E) and 8 miles offshore W of Livorno. A dangerous wreck, shown on Chart 1998 lies 5¾ miles SSW of Capo Corvo.

2 Inshore of the 20 m depth contour, which lies approximately midway between the 50 m depth contour and

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the shore, a number of dangerous wrecks, shown on Chart 1998, lie between Viareggio and Livorno.

Deposits from Fiume Serchio (43°47′·0N, 10°16′·0E) and Fiume Arno, 6¼ miles S, create shifting sandbanks along this part of the coast; mariners without good local knowledge are advised to remain at least 5 cables offshore between Viareggio and Fiume Arno.

3 To the W of Livorno dangerous shoals and obstructions extend to the 50 m depth contour; the most W, Secca di Fuori (43°35′·3N, 10°08′·5E) has a least depth of 8·9 m over it.

CAPO CORVO TO FIUME ARNO

General information

Chart 1998

Route

5.9

1 The coastal route leads, from a position SW of Capo Corvo (44°02′·2E, 9°57′·9E), 20 miles SSE to a position W of Fiume Arno (43°40′·8N, 10°16′·8E).

Military practice areas

5.10

1 Military exercise areas between Viareggio (43°52′·0N, 10°15′·0E) and Livorno, 19 miles SSE, are periodically activated. Mariners should consult local notices to mariners for full details.

Principal marks

5.11

1 **Landmarks**:
San Nicola Church (44°04′·7N, 10°02′·4E).
Ortonova Church (44°04′·2N, 10°03′·9E).
Torre Fiat (Balilla) (white, round, 50 m in height) (44°01′·3N, 10°04′·4E).
Marina di Carrara Church belfry (grey with clock, triple windows, dark spire, 45 m in height) (44°02′·3N, 10°02′·8E).

2 Monte Pisanino (44°08′·1N, 10°13′·0E).
Monte Sagro (44°06′·9N, 10°09′·6E).
Monte Altissimo (44°03′·1N, 10°14′·1E).
Monte Pania della Croce (44°02′·0N, 10°19′·5E).
Monte Serra (43°45′·2N, 10°33′·1E).

3 **Major lights**:
Marina di Carrarra, Molo di Ponente Light (white square tower and building, 22 m in height) (44°02′·1N, 10°02′·2E).
Viareggio Outer Breakwater Light (white round tower, 32 m in height) (43°51′·4N, 10°14′·2E).

4 **Offshore marks**:
Wave meter light-buoy (yellow) (43°55′·8N, 9°49′·6E).
Pillar light-buoy (yellow) (43°47′·0N, 9°49′·9E).

Directions

(continued from 4.174)

5.12

1 From a position approximately 7 miles S of Isola del Tino (44°01′·6N, 9°51′·0E), SE of an offshore wave meter buoy (5.11), the coastal route leads SSE passing, with positions relative to Viareggio Outer Breakwater Light (43°51′·4N, 10°14′·2E) (5.11):
SW of San Nicola Church (16 miles NW) (5.11), thence:

2 SW of Marina di Carrara (14 miles NW). Within the town the church belfry (5.11), several high-rise buildings and chimneys and a framework mast (red and white bands) are all clearly visible from seaward and provide a useful indication of the port (5.13).

(Directions for Marina di Carrara are given at 5.19)

Thence:

3 SW of Torre Fiat (12 miles NW) (5.11), thence:
SW of Marina di Massa (10¾ miles SW). The resort town fronts the coast and contains a number of hotels and large villas clearly visible from seaward. A pier (5.36), marked at its head by a light (red mast, green bands, 6 m in height), extends from the shore. Several conspicuous tanks and chimneys stand close inland of the town; one chimney is painted with red and white bands. Thence:

4 SW of Massa (11¼ miles NNW). The town is clearly visible from seaward and lies 2½ miles inland of Marina di Massa, separated from it by a dense pine wood. Thence:
SW of Cinquale (8¼ miles NW). The entrance to a small craft harbour at the mouth of Fiume Cinquale is marked by lights, see (5.37). Thence:

5 SW of Forte dei Marmi (6¾ miles NNW) (5.38). The resort town lies along the beach. The white, square belfry of the parish church rises above the houses; two high-rise buildings stand further inland. A masonry pier, marked by a light (red post, 3 m in height), extends from the shore. Thence:
SW of the light-buoy (pillar) (6 miles NW) marking the outer end of the recommended approach to La Spezia. Thence:

6 NE of an offshore light-buoy (18 miles WSW) (5.11).

(Directions for Viareggio are given at 5.31)

Thence:
SW of Viareggio Outer Breakwater Light (5.11).
Thence:
SW of Marina di Torre del Lago (2½ miles SSE). The resort town stands out clearly amongst the green pine woods. Thence:

7 SW of Fiume Serchio (5 miles SSE). The river mouth is almost completely obstructed by sandbanks. Thence:
To a position approximately 12 miles W of Fiume Arno (10¾ miles SSE). Marina di Pisa (5.44) occupies the S side of the river mouth. A light (green mast, 4 m in height) is exhibited from the breakwater fronting Marina di Pisa.

(Directions continue at 5.44)

Marina di Carrara

Chart 118 Approaches to La Spezia, Marina di Carrara

General information

5.13

1 **Position and function**. Marina di Carrara (44°02′·0N, 10°02′·5E) lies close NW of the mouth of Torrente Carrione. Its main function is the export of Carrara marble and is connected to the marble quarries by rail; the port also contains a shipyard and has facilities for small craft.

2 **Topography**. Marina di Carrara stands on a relatively narrow coastal plain with high ground rising quickly within a few miles of the coast. The village of Avenza (44°02′·7N, 10°03′·8) and town of Carrara, 2 miles further NE, stand inland and above Marina di Carrara and are clearly visible from seaward. Several marks (5.12) provide a good indication of the port.

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Approach and entry

5.14

1 The port is approached from the SSE and entered between the heads of Diga Foranea (41°01′·6N, 10°02′·5E) and Molo di Levante, 1½ cables N.

Limiting conditions

5.15

1 **Controlling depth**. The entrance and SE part of the port basin are dredged to 10 m however the port is subject to silting and mariners must confirm available depth with the Port Authority.

Deepest and longest berth. Banchina Fiorillo; alongside depth 10 m, length 2½ cables.

Local weather and sea state. In strong SW winds a heavy sea can develop making the entrance dangerous and sends an uncomfortable swell into the port. Strong NE winds can make the W quays difficult.

Arrival information

5.16

1 **Port operations**.

16 Jun-15 Sep	0001–2359
16 Sep-15 Jun	0700–1900

Notice of ETA. Normally 48 hours and 24 hours before arrival. The Port Authority must be informed by 1700 (local time), on the day before arrival, of vessels expecting to load or unload packaged dangerous cargoes.

Chart 118 Approaches to La Spezia

2 **Outer anchorages**:

Prohibited anchorage. Anchorage outside the designated anchorage area is prohibited unless authorised by the Port Authority.

Merchant vessel anchorage. Vessels awaiting berths within the port can obtain anchorage in the anchorage area, shown on the chart, centred on a position 1½ miles SSW of the harbour entrance. Anchor berths reserved for naval vessels lie in the N part of the area and are also shown on the chart. Anchorage positions must be reported to the Port Authority or pilot station. Vessels anchoring or weighing anchor have right of way within the anchorage area.

3 **Naval anchor berths**:

Berth	*Notes*
Y1	Reserved for large warships and auxiliaries
Y2	Reserved for large warships and auxiliaries
Z1	Any military vessel
Z2	Any military vessel
Z3	Any military vessel
Z4	Any military vessel
Z5	Any military vessel

4 **Pilotage** is compulsory for vessels of 500 grt or greater but not for the following types of vessel:

Warships.
Auxilliaries.
Italian and foreign hospital ships.
Fishing vessels not used for Atlantic fishing.
Tugs.
Vessels employed on local traffic or port services.

In addition vessels not exceeding 2000 grt, employed in coastal trade and not requiring a tug can request radio assistance from the pilot station, see *Admiralty List of Radio Signals* for details. The pilot boards 1 mile from the harbour entrance.

5 **Tug**. A tug is available. In some circumstances the Port Authority may decide use of it is compulsory.

Harbour

5.17

1 **General layout**. Marina di Carrara consists of a single basin protected from the E by Molo di Levante, which extends 3¼ cables SSW from the coast. The SW side of the harbour is formed by Diga Foranea which is joined to the coast by Molo di Ponente.

Development. Works are in progress (2002) between the root of Molo di Levante and the mouth of Torrente Carrione 2½ cables SE. The area is shown on the chart; entry to it is prohibited.

Principal marks

5.18

1 **Landmarks**:

Molo di Ponente Root Light (44°02′·1N, 10°02′·2E) (5.11).
Marina di Carrara Church belfry (44°02′·3N, 10°02′·3E) (5.11).

Major light:

Molo di Ponente Root Light – as above.

Directions for entering harbour

5.19

1 The chart is sufficient guide to approach and enter Marina di Carrara. The recommended track 320° leads through the entrance passing 60 m off Molo di Levante Head to avoid underwater obstructions.

Useful marks:

Diga Foranea Head Light (red metal column on pedestal, 5 m in height) (44°01′·6N, 10°02′·5E).
Molo di Levante Head Light (green column on pedestal, 5 m in height) (44°01′·7N, 10°02′·5E).
Gantry crane (red and white diagonal bands, yellow supports) at the root of Molo di Ponente.
Green sign (illuminated) (44°02′·1N, 10°02′·7E).

Port services

5.20

1 **Repairs**. All types of repairs can be undertaken.

Supplies: fuel; water; provisions.

Small craft

5.21

1 **General information**. There are 300 small craft berths at pontoons, in depths of 3 to 8 m, between the E side of the shipyard and Banchina Buscaiol. Vessels up to 30 m in length are accepted. The port provides comprehensive small craft facilities including repairs.

Porto di Viareggio

Chart 118 Viareggio

General information

5.22

1 **Position and function**. Porto di Viareggio (43°51′·6N, 10°14′·4E) fronts the popular tourist resort of Viareggio. This small commercial port originally developed to handle Carrara marble and has several ship building and repair yards for small vessels. Porto di Viareggio is also a fishing port with extensive facilities for small craft.

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Topography

5.23

1 Viareggio stands on a plain amongst dense pine woods; numerous hotels and other large buildings, interspersed with villas and gardens, line an esplanade which lies parallel to the coast. The port has developed to the S of the seaward end of Canale Burlamacca which connects Lago di Massaciuccoli, 3½ miles SE, with the sea.

Approach and entry

5.24

1 The port is approached from the NNW and entered between the heads of Diga Foranea, which protects the W side of the port, and Molo Nord.

Limiting conditions

5.25

1 **Controlling depth**. Depths in the entrance are normally about 3·6 m; dredging is conducted occasionally. Winter gales and flooding of Canale Burlamacca can increase silting thereby reducing depths in the entrance and within the port; mariners are advised to confirm depths available with the Harbour Master.

2 **Deepest and longest berth** The W side of Darsena Nuova; alongside depth 4 m, length 375 m.

Abnormal levels. Strong SW winds and heavy seas can increase water levels within Canale Burlamacca by up to 1 m above normal.

Local weather

5.26

1 Strong winds from the S or W can cause a heavy breaking sea to develop off the port.

The port is not well sheltered from NW winds and strong winds between SE and SW create a significant swell within it, particularly in Canale Burlamacca.

Arrival information

5.27

1 **Port operations**. The port operates 24 hours a day.

Outer anchorages. Anchorage can be obtained W or NW of the harbour entrance in depths of about 12 m, good holding ground. See Regulations below.

Pilotage is available 24 hours a day, see *Admiralty List of Radio Signals*.

2 **Regulations**. Special regulations apply to vessels carrying packaged and bulk dangerous cargoes including oil or petroleum products. Details must be obtained from the Port Authority.

Vessels are prohibited from stopping within 1 mile of Diga Foranea Head (43°51′·7N, 10°14′·0E). Within this area power driven vessels must navigate at minimum speed and tugs or any other small craft must give way to larger vessels including those under tow.

Harbour

5.28

1 The port consists of six basins. Avamporto, immediately within the harbour entrance, provides access to a series of four, interconnected small craft basins and the entrance to Canale Burlamacca in the N part of the port. Shipyards occupy the SE part of Avamporto; the entrance to Nuova Daresena, mainly used by fishing vessels, lies on the S side of the outer harbour.

Natural conditions

5.29

1 **Local weather**. Fog or cloud in the valleys of the Magra and Apuane mountains (5.3) indicate E winds accompanied by rain. Cloud cover of Monte Nero (43°29′·4N, 10°22′·0E) indicates S or SW winds. White stratus, with cirrus over it, above Canale di Piombino (8.91) indicates heavy weather from the S. Strong winds from the W are likely when Isola Gorgona (43°25′·7N, 9°54′·0E) can be seen very clearly at distance. Bad weather is also indicated by a high water stand within Canale Burlamacca.

2 **Wind**. During the winter winds between NE and SE prevail. An E wind will usually blow for several days and is often accompanied by rain. The Libeccio (SW wind) is unusual but can be violent and usually lasts for three days.

In the summer sea breezes from the W (Ponente) and NW (Maestro) prevail and are not usually strong.

3 **Currents**. A weak current sets N along this part of the coast. Currents induced by strong or prevailing winds will have greater effect.

Within Canale Burlamacca an out-going current, Corrente della Burlamacca, predominates.

Principal marks

5.30

1 **Landmarks**:

Santa Paolino Church belfry (square with flat top, cream coloured with reddish bands at the corners) (43°52′·2N, 10°14′·7E).

Viareggio Outer Breakwater Light (43°51′·4N, 10°14′·2E) (5.11).

Major light:

Viareggio Outer Breakwater Light – as above.

Directions for entering harbour

(Continued from 5.12)

5.31

1 **Approach and entry**. Generally the chart is sufficient guide to approach Porto di Viareggio. At night mariners may find the lights marking the harbour entrance, Diga Foranea Head Light, also known as South Breakwater Light (green column on pedestal, 5 m in height) (43°51′·7N, 10°14′·0E) and Molo Nord Head Light (red column on pedestal, 5 m in height) (43°51′·7N, 10°14′·1E), difficult to distinguish from lights and illuminated signs within the town.

Depths in the entrance are subject to considerable change (5.24) and a shoal extends into the entrance from the E side of the head of Diga Foranea. From a position NNW of Diga Foranea Head Light the recommended track passes:

2 5½ cables N of Diga Foranea Head Light, thence:

S through the centre of the entrance, to pass at least 70 m off Diga Foranea Head.

From the entrance the track leads ESE into the centre of Avamporto. Mariners should remain at least 20 m off the rubble and obstructions of the old head of Diga Foranea (1 cable SE of Diga Foranea Head Light). Mariners should also note the shoal, with a least depth of 2 m over it, 2 cables SE of Diga Foranea Head Light, and are advised to navigate at least 100 m E of it.

3 **Canale Burlamacca**. The canal entrance lies 2½ cables ENE of the Diga Foranea Head, between the S side of Molo Nord and Molo Sud, formed by the N sides of the small craft basins extending ENE from Avamporto. A statue, La Madonnina, stands on the old head of Molo Sud; small craft pontoon berths extend ESE of Daresena della Madonnina and the statue. The canal entrance is 30 m wide and has depths of about 3 m; the canal reduces in width approximately 1½ cables from the entrance and depths

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decrease to about 2 m. A swing footbridge spans the canal 2½ cables from the entrance; red lights are exhibited from it at night.

Basins and berths

5.32

1 **Nuova Darsena**, the S basin of the port, is lined with quays and has depths of 4·0 to 4·5 m. The basin is used by fishing vessels except for part of the W quay used by small craft under repair.

Port services

5.33

1 **Repairs**. All types of repairs for small vessels can be undertaken. There are several slipways, the largest has a capacity of 1000 tonnes.

Other facilities. There is a hospital at Viareggio.

Supplies: fuel; water; provisions.

Small craft

5.34

1 **General information**. Darsena della Madonnina, Daresena Europa and Darsena Italia provide an interconnected complex of small craft berths extending ENE from Avamporto. Darsena Toscana and Darsena Lucca lie further ENE and are approached through Canale Burlamacca. Small craft up to 60 m in length are accepted.

2 **Berths**. The small craft basins provide 1 500 berths in depths of 2 to 4 m.

Facilities. Comprehensive small craft facilities.

Small craft

Fiume Magra

5.35

1 **General information**. There are a number of moorings, basins and pontoons in Fiume Magra (44°02′·7N, 9°59′·4E). The mouth of Fiume Magra is easily identified by the tall trees occupying both banks and the red-roofed houses of the village of Bocca di Magra which stands on the W bank. Castello Fabbricotti, a prominent red building, stands 2 cables SSW of the village.

2 A shifting sandbank encumbers the river mouth; narrow channels are formed at each end of it. The entrance channel has a controlling depth of 3 m. The banks are constantly changing and mariners are advised that good local knowledge is essential to safely enter Fiume Magra otherwise a pilot should be taken. Within the river a buoyed channel leads to a fixed road bridge; only motor vessels can proceed further upstream to Marina 3B. Navigation within the bouyed channel is to be conducted at minimum speed. The harbour accepts vessels up to 20 m in length.

3 **Berths**. The marinas provide 150 berths in depths of about 4 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Chart 1998

Marina di Massa Pier

5.36

1 **General information**. Marina di Massa Pier (44°00′·4N, 10°05′·9E) extends 1 cable SW from the shore. The town of Marina di Massa stands close behind the beach and is fronted by an avenue, carried by several concrete bridges, over a series of small streams. Unmarked rubble breakwaters extend up to 1¼ cables from the coast in the vicinity of the town; some are submerged.

2 Small craft can berth alongside the pier in depths of 1·8 to 5·1 m however depths change following gales. Local knowledge is needed. During the summer vessels providing local tourist services use the berths. A light (5.12) marks the pier head.

Cinquale

5.37

1 **General information**. Cinquale (43°58′·6N, 10°08′·5E) is a small craft haven on the N bank of Fiume Cinquale. The mouth of the river is protected by two breakwaters extending approximately 75 m SW from each bank. The breakwaters are marked by lights; N side (red mast, 5 m in height), S side (green mast, 5 m in height). Shoal depths make the entrance dangerous, even in light onshore winds. Mariners should also beware of the structure of the SE breakwater. The NW breakwater carries the rails for the dredger and is without fendering.

2 **Depths**. The mouth of Fiume Cinquale is subject to heavy silting. The entrance channel is kept navigable between 15 June and 30 September by continuous dredging. During this period vessels of less than 2 m draught can be accepted. Without dredging depths in the channel are reduced to a few centimetres.

3 **Signals**. Mariners should note the light on the S side of the entrance is only exhibited when the channel can be used. A red flag is sometimes flown by day when the channel is closed.

Forte dei Marmi

5.38

1 **General information**. Forte dei Marmi (43°57′·5N, 10°10′·0E) is a resort town fronting the coast. A masonry pier extends 310 m SW from the coast. The pier head is marked by a light (5.12). In calm weather small craft can berth on the pier head in depths of about 6 m.

Chart 119

Bocca d'Arno

5.39

1 **General information**. Bocca d'Arno (43°40′·8N, 10°16′·3E) is a small craft harbour within Fiume Arno, close N of the resort of Marina di Pisa. The river mouth can be identified by the breakwaters extending from each bank; the S breakwater is marked by a light (5.12). The approach is encumbered with numerous shifting shoals created mainly from deposits carried by the river. Storms can create banks at the river mouth with depths of less than 1 m over them. Maximum size of vessel accepted; length 27 m, draught 3 m.

2 **Directions**. A channel 30 m wide leads 120° into the entrance passing 50 m off the the head of the N breakwater; good local knowledge is essential. Mariners should otherwise use a local pilot. In strong SW winds the entrance becomes dangerous.

Berths. The river provides 1000 small craft berths in depths of 1·5 to 4·0 m.

Facilities. There are comprehensive small craft facilities including repairs.

Other names

5.40

1 Castelnuovo (44°05′·0N, 10°02′·9E).
Fosdinovo (44°07′·0N, 10°03′·0E).
Marinella (44°02′·9N, 10°00′·0E).
Nebbione, Monte (44°08′·0N, 10°03′·0E).

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FIUME ARNO TO TORRE DEL ROMITO

General information

Charts 1998, 119

Route

5.41

1 The coastal route leads, from a position 12 miles W of Fiume Arno (43°40′·8N, 10°16′·8E), 14 miles SSE, to a position 11 miles W of Torre del Romito (43°27′·8N, 10°21′·4E).

Submarine cables

5.42

1 Submarine cables land in an area, shown on the charts, approximately 2½ miles S of Fiume Arno. Anchoring and fishing within an area enclosing the cables is prohibited.

Principal marks

5.43

1 **Landmarks**:

Torre del Marzocco (light coloured, slender, six sided with tiled roof) (43°34′·0N, 10°18′·3E).

Convent dome (43°33′·3N, 10°18′·5E).

Cathedral belfry (red, square) (43°33′·0N, 10°18′·6E).

Livorno Lighthouse (round masonry tower, 52 m in height) (43°32′·7N, 10°17′·8E).

Tall building (43°32′·3N, 10°18′·8E).

Sant' Jacopo (Iacopo) belfry (43°31′·8N, 10°18′·4E).

2 Naval Academy Clock Tower and Signal Station (43°31′·7N, 10°18′·5E). The academy is a large grey building, the square clock tower contains the signal station and is surmounted by a flag staff.

Monte Nero (43°29′·3N, 10°22′·0E). A round tower stands on the W part of the summit and a white chapel high on the W slope.

Torre del Boccale (attached to a villa, the whole resembles a castle) (43°28′·6N, 10°20′·0E). A pillar stands 2 cables E of it.

Torre del Romito (light coloured, crenellated, 15 m in height) (43°27′·8N, 10°21′·4E). The tower stands on the summit of a steep, wooded headland. A small craft harbour, Porticciolo Castel Sonnino (5.49), lies at the foot of the headland.

3 **Offshore marks**:

Secche della Meloria North Light (white round concrete tower on truncated conical base, 20 m in height) (43°35′·5N, 10°12′·7E).

Secche della Meloria East Light-beacon (E cardinal buoyant beacon, black with yellow band) (43°35′·4N, 10°15′·6E).

4 Secche della Meloria South Light (S cardinal, round tower, black with yellow top, 17 m in height) (43°32′·8N, 10°13′·2E).

Torre della Meloria (old, square building with arches at the base, 20 m in height) (43°33′·0N, 10°13′·2E).

Major light:

Livorno – as above.

Directions

(continued from 5.12)

5.44

1 From a position approximately 12 miles W of Fiume Arno (43°40′·8N, 10°16′·3E) the track leads SSE passing, with positions relative to Livorno Lighthouse (43°32′·7N, 10°17′·8E):

WSW of Marina di Pisa (7½ miles N). A slender belfry and a yellow building with a stumpy, crenellated tower stand within the town. Thence:

WSW of Tirrenia (5 miles N), thence:

2 WSW of Testa di Tramontana (5¾ miles NW), a shoal with a least depth of 9 m over it, which is the N extremity of Secche della Meloria. See 5.61, effect of local weather. Thence:

WSW of Testa di Ponente (5½ miles NW), a shoal with a least depth of 7·2 m over it which is the NW extremity of Secche della Meloria. A dangerous wreck, shown on Chart 119, lies close N of Testa di Ponente. Thence:

3 WSW of Secca di Furori (7¼ miles WNW), a shoal with a least depth of 8·9 m over it; an obstruction, with a least depth of 12 m over it, shown on Chart 119, lies 9 cables ESE of the shoal. Thence:

WSW of Secche della Meloria North Light (4¾ miles NW) (5.43), thence:

WSW of Secche della Meloria South Light (3¼ miles W) (5.43). Thence:

WSW of Livorno Light, thence:

To a position approximately 12 miles W of Torre del Romito (5½ miles SSE) (5.43).

Useful marks

5.45

1 Marina di Pisa Belfry (43°40′·5N, 10°16′·5E).

Hotel Continental, with antenna (43°37′·7N, 10°17′·4E).

Regina Mundi hospital, long building (43°36′·8N, 10°17′·5E).

(Directions continue, for Livorno at 5.70 and for the coastal route at 5.86)

Anchorage

Marina di Pisa

5.46

1 Marina di Pisa (43°40′·2N, 10°16′·5E). Temporary anchorage can be obtained off the town however caution is necessary due to unreliable depths caused by deposits from Fiume Arno and the influence of gales. Strong onshore winds quickly raise a short, dangerous sea. Mariners should note the prohibited anchorage area (5.42) close S.

Small craft

Ardenza

5.47

1 **General information**. Ardenza (43°31′·1N, 10°19′·0E) is a suburb of Livorno. The marina lies NW of the town and is formed by two rubble breakwaters. A white water tower and a church belfry SE of the harbour are useful marks. The entrance faces NW and has depths 2·1 m. vessels up to 10 m in length are accepted.

Berths; 266 in depths of less than 2 m.

Antignano

5.48

1 **General information**. Antignano (43°29′·8N, 10°19′·4E) is a small craft harbour near the foot of Monte Nero (5.43). The harbour is enclosed by two moles. A light (green metal pillar, 4 m in height) is exhibited from the head of the S mole. Vessels up to 9 m in length are accepted.

Berths; 240 in depths of 0·5 to 3·0 m at quays lining the moles.

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Porticciolo Castel Sonnino

5.49

1 **General information**. Porticciolo Castel Sonnino (43°27′·7N, 10°21′·5N) is a boat haven close SE of Torre del Romito. The haven is protected by a high mole which affords good shelter. The haven has depths of less than 2 m.

LIVORNO

General information

Chart 119

Position

5.50

1 Livorno (43°33′N, 10°19′E) stands on a wide plain backed by hills. The port fronts the N part of the city.

Function

5.51

1 The port handles bulk raw materials to service the heavy industries of the city which include ship building and repair. There is a large oil refinery close N of the city. Livorno also handles general cargo, bulk foodstuffs, forestry products, new cars and containers. The port provides ferry services to Sardegna and Corse and is a cruise liner destination.

Topography

5.52

1 The port is almost entirely artificial and protected by breakwaters. Close offshore an extensive area of shoals and dangers, Secche della Meloria (43°34′N, 10°13′E) provides shelter to some of the outer anchorages.

Port limits

5.53

1 The port limits extend 3 miles to seaward of the outer breakwaters.

Approach and entry

5.54

1 Livorno is approached from the NE or SW. The S entrance, Bocca Sud, is the main entrance to the port and approached through a Traffic Separation Scheme which leads through the main outer anchorage area. The separation scheme is shown on the chart. All vessels with a draught greater than 3 m must enter Livorno via Bocca Sud and are to proceed W of Secche della Meloria (5.52) to join the Traffic Separation Scheme.

Port Authority

5.55

1 Autorità Portuale Livorno, Palazzo Rosciano, Scali Rosciano 6, 57123 Livorno.

Limiting conditions

Controlling depths

5.56

1 **Entrances**:

Bocca Nord has a least depth of 4·1 m.

Bocca Sud has a dredged depth of 15 m however the port is subject to silting and depth available should be confirmed with the Port Authority.

Deepest and longest berth

5.57

1 Nuova Darsena Petroli, Berth 10; alongside depth 11·9 m.

Bancina Alto Fondale; alongside depth 11·3 m, length 750 m.

Tidal levels

5.58

1 Average heights of tide are; springs 0·46 m, neaps 0·34 m.

Abnormal levels

5.59

1 Winds from the S can increase tidal height to as much as 0·9 m, see 5.61 Local weather.

Maximum size of vessel handled

5.60

1 **General information**. Tankers of maximum length 295 m, maximum draught 11·3 m. Exceptionally and in favourable conditions vessels of length greater than 295 m can be accepted.

Bocca Nord. The maximum permitted draught in the N entrance is 3 m.

Local weather and sea state

5.61

1 **Visibility**. Pollution carried offshore on the morning land breeze can often create a haze over Secche della Meloria (43°34′·0N, 10°11′·0E) sufficient to obscure landmarks along this part of the coast. When this occurs mariners can proceed S until Monte Nero (43°29′·3N, 10°22′·0E) (5.43) is seen; generally the hills in this area are not obscured and marks in the city can then be identified.

2 **Winds**. Onshore winds from the W and NW prevail during the summer and from SE and SW during the winter. A strong SW wind will usually last for three days. Local topography causes a SW wind to veer slightly W in the vicinity of Livorno. In strong SE or SW winds the entrances to the port are dangerous.

With moderate winds from the S offshore a local N wind, which blows in squalls, can develop at Livorno.

Local weather. A change in the weather during the summer is often indicated by the late development of the sea breeze. When this happens the Vegliatura (the Insomniac), an onshore wind which can persist until 2300, blows.

3 White clouds along the coast indicate a N wind is imminent; cloud cover on Isola Gorgona (43°25′·7N, 9°54′·0E) or Monte Nero (43°29′·4N, 10°22′·0E) indicate a SE wind. Tidal heights higher than predicted are another indication of the SE wind. When Corse is covered by a

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streaky cloud formation, known locally as Seppie, a SW wind is likely. Tidal heights lower than predicted indicate good weather and NE winds.

4 **Current**. During the summer the prevailing N winds develop a S current, with a mean rate of ¼ kn, between Secche della Meloria and the coast; it is particularly noticeable between the roadstead and the port entrances. The rate may increase to 1½ kn with persistent W winds.

With prevailing S winds a N current develops. The localised N wind that is sometimes experienced at Livorno, see Winds above, does not have any marked effect on the N current.

Arrival information

Port operations
5.62

1 The port operates 24 hours a day.

Notice of ETA
5.63

Vessels loading or unloading dangerous liquid or gaseous cargoes 24 hours in advance of arrival. Other vessels, not subject to special regulations, 1 hour in advance.

Outer anchorages
5.64

1 **Prohibited anchorage**. Anchorage within the Traffic Separation Scheme in the SW approaches to the port is prohibited. The area is shown on the chart.

General information. Temporary anchorage, within the roadstead, in the limited shelter provided by Secche della Meloria can be obtained as follows, the anchorages are shown on the chart:

Depth	*Position, relative to Secche della Meloria South Light* (43°32′·8N, 10°13′·2E)	*Remarks*
10 to 11 m	2½ miles NE	Mud and rock. Provides good shelter in strong SW winds. Can be used to await suitable conditions to enter harbour. Mariners should note depths of 6 to 7 m lie approximately 5 cables W.
9 m	2¾ miles ENE	Mud. Sheltered from SW.
10 to 11 m	2 miles ENE	Weed. Sheltered from SW.
10 m	2¼ miles ENE	Sand and weed.

2 The following specific anchorages have been established within Livorno Roads and are shown on the chart:

Berth	*Remarks*
A	Vessels carrying munitions or explosives only.
B	Vessels less than 150 m in length.
C	Vessels less than 150 m in length.
D	Vessels greater than 150 m in length.
E	Oil tankers and gas carriers greater than 200 m in length.
Area bounded by 43°29′·5N and 43°30′·0N, 10°17′·0E and 10°17′·5E.	Tankers and gas carriers of less than 200 m in length

Submarine cables
5.65

1 Submarine cables are laid across the S entrance of the port, extending W and NNW from Darsena Morosini (43°32′·6N, 10°17′·7E) to the S head of Diga Curvilinea, 2 cables W. Also within the N entrance between Diga Marzocco Head (43°33′·5N, 10°17′·5E) and Diga Meloria, 2 cables SW. Posts (yellow, white diagonal cross topmark) mark each landing.

Pilotage and tugs
5.66

1 Pilotage is compulsory and available 24 hours a day for all vessels of 500 grt or greater. The pilot boards in the following positions:

Entrance	*Position*
Bocca Nord	43°34′·3N, 10°16′·6E
Bocca Sud	43°31′·7N, 10°16′·0E

Full details and procedures are contained in the relevant *Admiralty List of Radio Signals*.

2 **Tugs** are available. The Port Authority will provide guidance on tug requirements according to type of vessel, handling characteristics, berth and prevailing conditions. It is compulsory for vessels greater than 100 m in length moving to or from berths within Canale Industriale to take one tug.

Traffic regulations
5.67

1 **Traffic Separation Scheme**. A Traffic Separation Scheme, shown on the chart and within which anchoring and fishing are prohibited, is established in the SW approaches to the harbour. It consists of three sectors centred on Livorno Lighthouse (43°32′·7N, 10°17′·8E):

Outer Precautionary Area, 3½ to 4½ miles SW.

Traffic Separation Lanes, 1½ to 3½ miles SW. The lanes are divided by a central separation zone. The S lane is for inbound traffic, the N for outbound vessels.

Inner Precautionary Area, surrounding the entrance to 1½ miles SW.

2 **Regulations**. Stopping is prohibited in the Outer Precautionary Area.

Small craft and fishing vessels are permitted to cross the separation zone in a N-S direction or vice versa.

Vessel Traffic Service Scheme. Livorno is equipped with a Port Approaches Control System (PACS) for controlling the movement of maritime traffic within the port and approaches. The system incorporates a Ships Information Service and is compulsory for all vessels of 30 m length or greater.

All vessels must contact the Service 1 hour before arrival or departure. See the relevant *Admiralty List of Radio Signals* for details of reports and procedures.

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3 **Port regulation**. Vessels using either entrance must keep to the starboard side of the channel.

Harbour

General layout
5.68

1 The harbour consists of four main basins; Avamporto, entered via Bocca Sud; the Porto Mediceo complex close E of Avamporto; Bacino San Stefano; Porto Industriale, also known as Porto Nuovo, which includes the basins and waterways NE of Torre del Marzocco (43°34′·0N, 10°18′·3) with the exception of Canale dei Navicelli which leads NNW from Darsena Toscana.

A dredged channel leads from Bocca Sud N through Avamporto, NE through Bacino San Stefano to Darsena Toscana; dredged depths decrease from 15 m at Bocca Sud to 11·8 m in Darsena Toscano and are shown on the chart.

Development
5.69

1 Reclamation work is in progress (2002) on the seaward side of the NE part of Diga Marzocco, entry to the area is prohibited.

Directions for entering harbour
(continued from 5.44)

Chart 119

Approaches
5.70

1 **General information**. When approaching Livorno at night or in poor visibility from the N, W and SW several high, fixed green lights in the industrial part of the port will show before lights marking Secche della Meloria and the harbour.

2 **Bocca Nord**. From a position E of Secche della Meloria East Light-beacon (43°35′·4N, 10°15′·6E) (5.43) the track leads SSE passing, with positions relative to Livorno Lighthouse (43°32′·7N, 10°17′·8E):

NW of Torre del Meloria (3¼ miles W) (5.43), thence:

NW of Secche della Meloria South Light (3¼ miles W) (5.43), thence:

W of Torre del Marzocco (1½ miles NNE) (5.43), thence:

3 Between Diga Meloria North Head (9¼ cables NNW) which exhibits a light (green column on pedestal, 5 m in height) and Diga Marzocco Head, which also exhibits a light (red column on pedestal, 5 m in height).

The track leads, mid-channel, through Bocca Nord remaining clear of the shoals extending from the breakwater heads then leads ESE passing:

NE of the isolated shoal, with a least depth of 4·7 m over it, 1¼ cables SW of Diga Marzocco head.

4 **Bocca Sud**. From a position 3 miles S of Secche della Meloria South Light (43°32′·8N, 10°13′·2E) (5.43) the chart is sufficient guide to approach the entrance through the Livorno Traffic Separation Scheme. From a position 6 cables WSW of Livorno Light (43°32′·7N, 10°17′·8E) (5.43) the track leads ENE passing, with positions relative to the light:

N of Diga della Vegliaia W Head Light (5 cables SW) (green metal framework tower, 14 m in height), thence;

S of Diga Curvilinea S Head Light (2½ cables WSW) (eight-sided tower, 20 m in height).

5 The track then leads N passing W of Livorno Light and into Avamporto. The starboard side of the channel is marked by light-beacons (green, conical topmark) which at night are difficult to distinguish against the lights ashore. The dredged channel leads N to Bacino San Stefano, then NE to Darsena Toscano. The channel in the NE part of Darsena San Stefano is marked by light-beacons (lateral).

Diga Meloria Direction Light (white mast, 7 m in height) (43°33′·3N, 10°17′·4E) The white sector (222°–229°) can be used with care as a guide to the dredged channel leading NE from Bacino San Stefano; the sector does not clear the dangers adjacent to the channel.

Basins and berths

Anchorages and moorings
5.71

1 There are no designated anchorages within the port however a limited number of vessels can moor stern-to Diga Curvilinea. There must be sufficient room between vessels to permit them to let go from the breakwater and swing to their anchors in the event of S or SW gales which raise a moderate sea in this part of the port.

Alongside berths
5.72

1 **Bacino San Stefano.** The NE side of the basin provides six tanker berths in depths of 3·8 to 11·9 m; on the SE side Bancino Alto Fondale handles smaller container vessels and general cargo, see 5.57.

Darsena Toscano. Calata Massa provides four container vessel berths with an alongside depth of 11·8 m. The berths are used mainly for vessels greater than 250 m in length or carrying more than 1000 containers.

2 **Canale Industriale**. The basin provides 17 berths handling bulk raw materials and foodstuffs, most of the berths are private terminals.

Porto Mediceo. The complex of basins provides three ferry or cruise ship berths at its N end; small craft and tugs use the SE part of the main basin.

Bacino Cappellini on the SE side of the Diga Rettilinea container terminal has depths of 7·2 to 8·6 m. Calata Orlando handles smaller container movements. Bacino Firenze, close NE, is a ferry terminal.

Port services

Repairs
5.73

1 Repairs of all types can be undertaken. There are two dry docks of 350 000 tons capacity.

Other facilities
5.74

1 There are the usual facilities of a major port and large city, including oily waste disposal, deratting and salvage services.

Supplies
5.75

1 Fuel, water and provisions are available.

Communications
5.76

1 The nearest airport is at Pisa, 10 miles NNE.

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Small craft

General information

5.77

1 Within Livorno are 120 small craft berths in depths of 3 to 4 m, within the small basins in the E part of the port. Vessels up to 30 m in length are accepted. There are comprehensive facilities for small craft within the port.

C.P.O. Beppe Croce

5.78

1 **General information**. C.P.O. Beppe Croce (Darsena Morosini) (43°32′·6N, 10°17′·8E). The basin is protected by breakwaters and has depths of 1·4 to 5·9 m; it is a training centre for dinghy racing.

Porticciolo Nazario Sauro

5.79

1 **General information**. Porticciolo Nazario Sauro (43°32′·4N, 10°18′·1E) is a small craft haven in the S part of the port. The basin has depths less than 2 m and is protected by two breakwaters.

Other names

5.80

1 Piana, Secca (43°32′·6N, 10°17′·7E).

LIVORNO TO PROMONTORIO DI PIOMBINO

GENERAL INFORMATION

Chart 1998

Area covered

5.81

1 This section covers the mainland coast of Italy from Torre del Romito (43°27′·8N, 10°21′·4E) to Promontorio di Piombino (42°58′·0N, 10°29′·0E), approximately 32 miles SE, including Isola Gorgona (43°25′·7N, 9°54′·0E). The section is arranged as follows:

Torre del Romito to Fiume Cecina including Isola Gorgona (5.84).

Fiume Cecina to Promontorio di Piombino (5.99).

Topography

5.82

1 The coast SE of Livorno is indented and rocky as far as the vicinity of Torrente Chioma (43°26′·8N, 10°22′·7E) where it becomes less rugged and continues low for a further 3 miles to Punta Caststiglioncello. Here the rocky shore begins to give way to a wide sandy beach which continues from the mouth of Fiumara Fine (43°22′·3N, 10°26′·4E) to Fiume Cecina, 5 miles SSE. Close behind the coast the land is wooded or covered in thick vegetation and rises gradually to hills standing a few miles inland.

2 The low and sandy coast continues S to Punta del Molino (43°00′·5N, 10°31′·0E), a precipitous, rocky headland which abruptly marks the end of the sandy shore. To the S of Forte Castagneto (43°10′·5N, 10°32′·5E) the coastal hills close the coast and beach is backed with a thick cover of foliage and is otherwise unremarkable.

Depths

5.83

1 From Torre del Romito to Punta Castiglioncello the coast is relatively steep-to with the 50 m depth contour lying almost parallel to the coast between 1¼ and 2 miles offshore.

To the SE of Punta Castiglioncello the coast is fronted by a bank, with depths of less than 11 m over it, which extends up to 5 miles offshore and on which lie several rocky patches and dangerous wrecks. Secche di Vada (43°19′·2N, 10°21′·7E), with a depth of 2 m over it, lies approximately 1 mile from the W extremity of the bank. The bank is a particular danger to small vessels attempting to gain shelter from strong NE winds by running close to the coast.

2 South-east of Fiume Cecina the 50 m depth contour steadily closes the coast to lie within a mile of the NE part of Promontoria di Piombino. There are no isolated dangers to seaward of the 50 m depth contour between Torre del Romito and Promontorio di Piombino.

TORRE DEL ROMITO TO FIUME CECINA

General information

Chart 1998

Route

5.84

1 The coastal route leads, from a position 12 miles E of Torre del Romito (43°27′·8N, 10°21′·4E), 15 miles SSE to a position WSW of Fiume Cecina (43°18′·1N, 10°29′·5E).

Principal marks

5.85

1 **Landmarks**:

Villa di Punta Castiglioncello, also known as Villa di Punta Righini. The building is surmounted by a short, square tower with pyramidal top (43°24′·0N, 10°24′·3E).

Castiglioncello Tower, crenellated (43°24′·3N, 10°24′·8E).

Rosignano Marittimo castle (43°24′·3N, 10°28′·5E).

2 **Offshore mark**:

Secche di Vada Light (round, black concrete tower, red band, 18 m in height) (43°19′·2N, 10°21′·8E).

Directions

(continued from 5.44)

5.86

1 From a position 12 miles W of Torre del Romito (43°27′·8N, 10°21′·4E) the track leads SSE passing, with positions relative to Secche di Vada Light (43°19′·2N, 10°21′·8E) (5.85):

E of Isola Gorgona (21 miles WNW) (5.91), thence:

WSW of Castiglioncello (5¾ miles NNE), thence:

WSW of Rosignano Solvay (5¾ miles NE), the town contains several tall chimneys and has a large industrial plant on its S side. Thence:

WSW of Secche di Vada Light, thence:

To a position 12 miles WSW of Fiume Cecina (5¾ miles ESE).

Useful marks

5.87

1 Rosignano Marittimo belfry (square, yellow) (43°24′·4N, 10°28′·4E).

(Directions continue at 5.103)

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Anchorages and harbour

Chart 131 plan of Vada

Vada

5.88

1 **General information**. Vada (43°21′·0N, 10°27′·3E) has two berths for delivering raw materials and exporting processed chemicals used and produced by the plants at Rosignano Solvay, 2½ miles N. The small town surrounds the dark, slender spire of the parish church. A tall chimney, shown on the chart, stands in the E part of the town. The houses are low, white and have red roofs. To the N of the town a dense pine wood fringes the wide beach.

Pilotage. Pilots are available from Livorno and board about 5 cables SW of the large pier in daylight only. Vessels may depart, without using a pilot, at any time.

2 **Pontile Vittorio Veneto** is a concrete pier ¾ cable long, extending SW from the shore close N of the town, used for the delivery of coal and raw materials and the export of petro-chemical and sodium products. A light (red mast, green bands, 4 m in height) (43°21′·1N, 10°26′·7E) is exhibited from the pier head. The berth is protected by breakwaters from which lights are exhibited; W Mole Head (red mast, 4 m in height) (43°21′·1N, 10°26′·6E), Inner Mole Head (red mast, 4 m in height) (43°21′·2N, 10°26′·8E). The berth is approached through a channel, dredged depth 3·7 m, marked by light-buoys at its seaward end. There are several mooring buoys in the vicinity of the pier head. The maximum draught accepted is 4 m.

3 **Pontile Solvada**. A steel pier, used for unloading LPG and other fluids, extends 9 cables W from the shore close N of Pontile Vettorio Veneto. Vessels up to 30 000 tons and maximum draught 11 m can be accepted. Lights are exhibited from the Head (green mast, 10 m in height) and Elbow (white mast, 10 m in height). A shoal with a least depth of 4·6 m over it lies close N of the pier.

Secche di Vada

5.89

1 Secche di Vada anchorage (43°19′·8N, 10°24′·0E). Anchorage can be obtained ENE of Secche di Vada Light (5.85), in depths of 10 to 17 m, sand, mud and weed, good holding ground, in the positions shown on the chart. Small craft with local knowledge can anchor closer inshore.

Chart 1998

Marina di Cecina

5.90

1 Marina di Cecina (43°18′·0N, 10°29′·8E). Temporary anchorage can be obtained SW of the village. Strong onshore winds raise a heavy sea. During the summer the mouth of Fiume Cecina is obstructed by shoals which can prevent boats entering the river. A ridge of dark sand and mud with depths of less than 2 m fronts the river mouth and extends a short distance S, parallel to the coast, and discolours the water.

2 Forte de Cecina stands in the NW part of the village and has the appearance of several buildings. The parish church belfry is light in colour and stands close to the coast S of the river. Three small breakwaters extend from the shore adjacent to the village.

The belfry of Cecina church, 1½ miles inland from Marina di Cecina, is partly hidden by trees but is clearly visible from seaward.

Isola Gorgona

Chart 1998 (see 1.13)

General information

5.91

1 **Description** Isola Gorgona (43°26′N, 9°54′E) is the N island of Arcipelago Toscano (8.6) and also a penal settlement. Landing is normally prohibited. The island is wooded, hilly and cultivated on its E side; the W side is steep and rocky. Punta Gorgona, the highest point, stands in the SW part of the island, it has a disused signal station on the summit. Torre Vecchia, an old fort, stands 2 cables N of the signal station.

2 Lights are exhibited from Punta di Cala Maestra (Punta Paratella), the N extremity of the island, (white metal column on pedestal, 5 m in height), Punta Cala Sirocco, the S extremity of the island, (white column on pedestal, 5 m in height) and Cala di Scalo Mole Head (red metal column, 4 m in height) (43°25′·8N, 9°54′·4E).

3 **West and S coasts**. The W coast is without shelter except within Cala Maestra, which lies between Punta di Cala Mastra and Capo Zirri, 3½ cables WSW. The bay is surrounded by high, rocky cliffs, has depths of 7·8 m close W of Punta di Cala Maestra, to 18·6 m E of Capo Zirri. Only temporary shelter from E winds is afforded. A winding path leads from a landing place cut into the rock at the head of the bay to the cliff top. Landing is only possible in calm. weather and normally prohibited.

4 The S coast also offers little shelter, however Cala Sirocco on the NE side of Punta di Cala Sirocco can provide temporary shelter from W winds. The best berth is midway between the headlands in depths of about 13 m, sand and weed.

5 **East coast.** Cala dello Scalo, 5 cables NNE of Punta di Cala Sirocco, is the principal landing place for the island, partly sheltered by a mole, from which a light is exhibited, see above. The inner part of the mole is lined with a quay and in good weather small craft can berth alongside. The bay affords temporary shelter in W winds but becomes dangerous in strong E winds. Torre Nuova, high on the N side of the bay, is a tall brick building which houses most of the convicts.

Prohibited area

5.92

1 Isola Gorgona lies within Parco Nazionale dell'Arcipelago Toscano, see 8.8. The W and S coasts of the island are enclosed by a Zone 1 area between Punta Cala Maestra, the N extremity, and Punta della Tacca (43°25′·5E, 9°54′·4E).

Restricted area

5.93

1 The island is almost entirely enclosed by a national park Zone 2 area, see 8.8, which extends 3 miles offshore. The approach to Cala di Scalo, bounded by lines extending 085° from Torre Nuova (43°25′·9N, 9°54′·5E) and 101° from Punta Della Tacca is free from Zone 1 and 2 restrictions.

Small craft

Quercianella

5.94

1 **General information**. Quercianella (43°27′·4N, 10°21′·8) is a boat haven formed by a mole extending S then SE from the coast. A light (red mast, 5 m in height) is exhibited from the head of the mole. A small basin lies on the E side of the mole root. The haven has depths of less

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than 2 m and accepts boats up to 6 m in length. it is only usable in fair weather.

Berths; 100 on the inner face of the mole and within the basin.

Chart 131 plan of Vada

Foce del Chioma

5.95

1 **General information**. Foce del Chioma 43°26′·7N, 10°22′·8E) is a small craft harbour at the mouth of Torrente Chioma. A detached breakwater shelters the river mouth and creates two entrances however only the E channel is navigable. The approach is marked by buoys. The entrance becomes difficult in strong onshore winds. The harbour accepts vessels up to 14 m in length.

Berths; 40 in depths of 1·0 to 2·5 m.

Facilities. Limited small craft facilities; fuel, water and provisions available.

Castiglioncello Nord

5.96

1 **General information**. Castiglioncello Nord (43°24′·1)N, 10°24′·7E) lies on the S side of Punta Castiglioncello. A rubble breakwater extends ESE from the coast. Entry and exit channels have been established. The harbour has depths of about 1 m. Vessels up to 13 m in length are accepted.

Berths; the harbour can accommodate 70 small craft.

Facilities. There is a slipway, fuel and limited facilities for small craft repairs.

Porto Vecchio

5.97

1 **General information**. Porto Vecchio, also known as Cala Tre Scogli (43°24′·1N, 10°25′·2E) is a boat harbour sheltered by a rubble breakwater extending NW from the coast. The basin has depths 0·4 to 3·5 m. The inner part of the breakwater is faced with a short quay.

Chart 1998 (see 1.13)

Marina di Cecina

5.98

1 **General information**. Marina di Cecina (43°18′·2N, 10°29′·4E) is a marina on the N bank of Fiume Cecina. Breakwaters extend a short distance WSW from both banks of the river mouth; the marina basin lies 1 cable E. Vessels up to 12 m in length are accepted.

Berths; 650 at pontoons and quays in depths of less than 2 m.

FIUME CECINA TO PROMONTORIO DI PIOMBINO

General information

Chart 1998

Route

5.99

1 The coastal route leads, from a position 12 miles WSW of Fiume Cecina (43°18′·1N, 10°29′·5E), 17 miles SSE to a position W of Promontorio di Piombino (42°58′·0N, 10°29′·0E).

Prohibited anchorage

5.100

1 Anchoring and fishing are prohibited in an area, shown on the chart, containing submarine cables, extending 1 mile offshore between positions on the coast 5 cables S and 2½ miles N of Punta del Molino (43°00′·5N, 10°31′·0E).

Historic wreck

5.101

1 An historic wreck lies 3 cables SSW of Punta del Molino (43°00′·5N, 10°31′·0E). Anchoring, fishing and diving within 500 m of it are prohibited.

Principal marks

5.102

1 **Landmarks**:

Castello di Bibbona (red, round bastion) (43°14′·3N, 10°31′·8E).

Forte Castagneto (43°10′·5N, 10°32′·5E).

Villa de Stefant (43°00′·8N, 10°30′·8E).

Punta del Molino distinctive rocky headland, steep sided, covered with vegetation on summit. The headland has the appearance of a saddle between two other hills when seen from the SW (43°00′·5N, 10°31′·0E).

Directions

(continued from 5.86)

5.103

1 From a position 12 miles WSW of Fiume Cecina (43°18′·1N, 10°29′·5E) the track leads SSE passing, with positions relative to Forte Castagneto (43°10′·5N, 10°32′·5E):

WSW of Castello Bibbona (3¾ miles NNW) (5.102), thence:

WSW of Forte Castagneto, thence:

WSW of San Vincenzo belfry (5 miles S) (5.102), thence:

WSW of La Torraccia (9½ miles SSW) (5.102). The tower stands at the S end of Paludi di Rimigliano, a marshy tract lying behind the coast between 3 and 4¾ miles S of San Vincenzo. Thence:

W of Porto Baratti (11 miles SSW) (5.106), thence:

To a position 5 miles W of Promontorio di Piombino (13 miles SSW) (8.89).

(Directions continue, for the W coast of Italy at 8.95, Corse NW coast at 6.13, Corse E coast at 7.11 and the Corsican Channel at 8.13)

Useful marks

5.104

1 San Vincenzo church belfry (43°05′·9N, 10°32′·5E).

La Torraccia (an old square tower) (43°01′·2N, 10°31′·5E).

Torre Nuova (large tower surrounded by houses) (43°00′·1N, 10°31′·0E).

Anchorages

San Vincenzo

5.105

1 **General information**. The beach at San Vincenzo (43°05′·9N, 10°32′·5E) is fronted, for about 1 cable, by rocky ledges, covered with weed. There are depths of less than 2 m over the shoal which is also awash in places. The area can be recognised by the black discolouration of the water.

Anchorage. Temporary anchorage can be obtained in depths of 5·5 to 9·0 m, fine, light-coloured sand, between 2 and 3 cables offshore.

Porto Baratti

5.106

1 **General information**. Porto Baratti (42°59′·8N, 10°30′·5E) is entered between Punta del Molino (43°00′·5N, 10°31′·0E) and Colle di Populonia, a headland 1½ miles

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SW. The village of Populonia lies in the SW corner of the bay. A light (framework tower on white hut, 4 m in height) is exhibited from the N extremity of Colle di Populonia. Torre di Populonia, a round crenellated tower, stands on the summit of the headland.

2 The head of the bay is a light-coloured sandy beach backed by pine woods behind which the ground is cultivated to the foot of the surrounding wooded hills. A farmhouse, Il Casone, stands near the middle of the beach. The farmhouse has a grey chapel on its SW side. A prominent red farmhouse stands E of the chapel and overlooks the beach.

Anchorage can be obtained in depths of about 22 m, sand, on a line joining Punta del Molino and Torre di Popolonia with Il Casone bearing 138°. This berth lies 2 cables S of the prohibited anchorage area (5.100) within Porto Baratti. Mariners should also beware of the historic wreck (5.101) within Porto Baratti.

3 **Small vessel anchorage**. A natural breakwater extends NE from the SW corner of the bay, where a prominent red tower stands. A spit extends beyond the visible head of the breakwater providing an area of sheltered water with depths of 3 to 4 m. It has been reported that small vessels can shelter here in SW gales but the anchorage is unsafe when the wind veers WSW. A wooden jetty in the area has an alongside depth of 1·5 m.

Tunny nets are laid close W of the breakwater and extend 3½ cables NW.

Small craft

San Vincenzo

5.107

1 **General information**. San Vincenzo Marina (43°05′·9N, 10°32′·2E) is formed by two moles extending W from the coast and a detached breakwater, lying parallel to the shore, protecting the W side of the harbour. The harbour entrance lies in the SW corner of the harbour and is marked by lights; Breakwater S Head (red mast, 5 m in height) Mole Corner (green mast, 5 m in height). The harbour accepts vessels up to 13 m in length.

2 **Berths**; 270 in depths of less than 2 m.

Other names

5.108

1 Campiglia Marittima (43°02′·9N, 10°36′·3E).
Castagneto (43°09′·6N, 10°36′·6E).
Castiglioncello, Colle (43°12′·6N, 10°38′·8E).
Gherardesca, Castello dei (43°12′·6N, 10°38′·8E).
Leonardo, Poggio San (43°00′·8N, 10°32′·1E).
Rombolo, Monte (43°03′·8N, 10°35′·2E).
Stella, Scoglio (43°00′·9N, 10°30′·6E).

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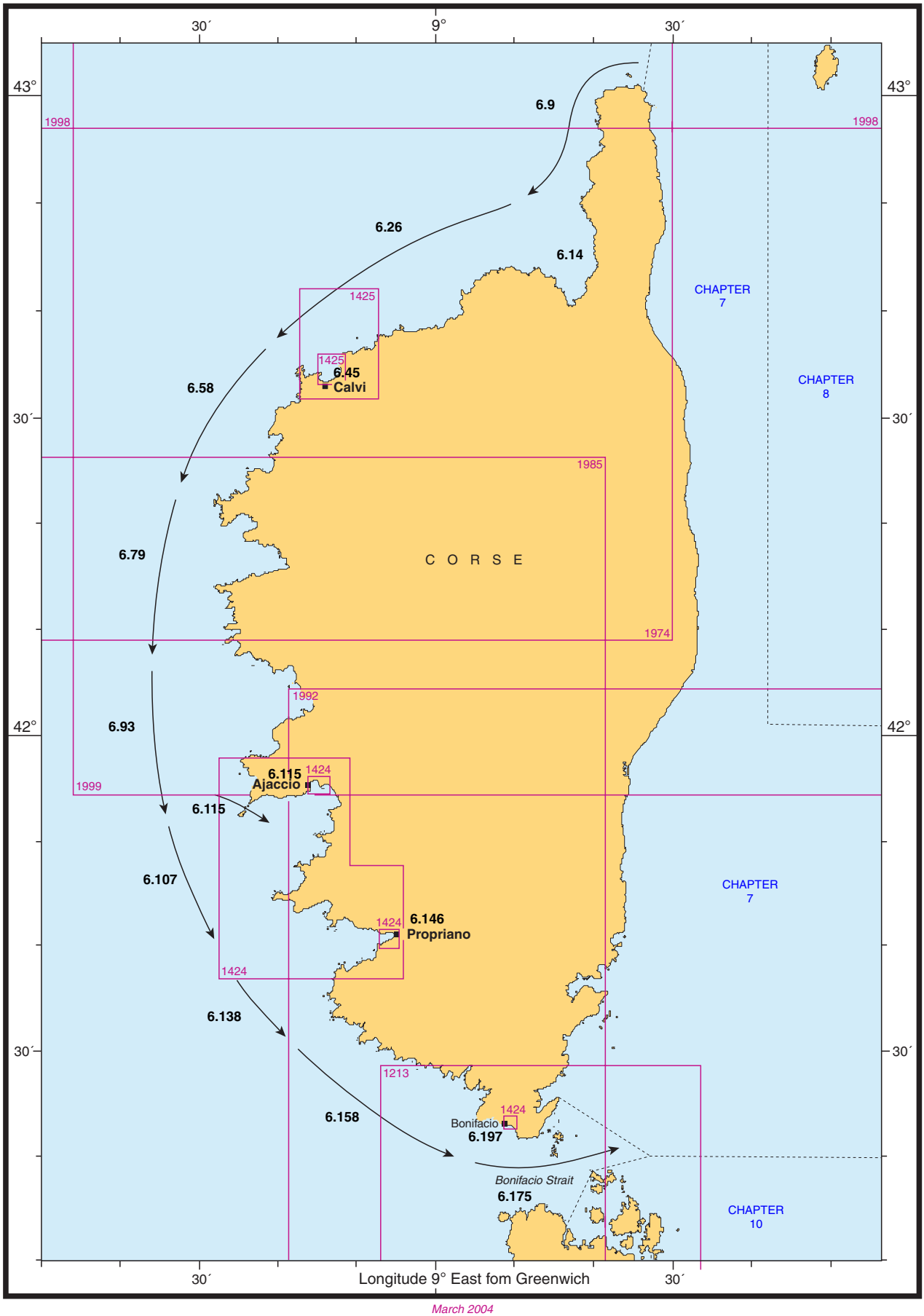
Chapter 6 - Corse - North-west, west and south coasts



March 2004

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CHAPTER 6

CORSE – NORTH-WEST, WEST AND SOUTH COASTS

GENERAL INFORMATION

Chart 1780

Scope of the chapter

6.1

1 This chapter describes the W side of the island of Corse (Corsica) between Pointe d'Agnello (43°01′N, 9°26′E), at the E end of Presqu'île du Cap Corse on the N coast to Punta di u Capicciolu (41°26′N, 9°16′E), including the Bonifacio Strait (41°17′N, 9°15′E). The sections are arranged as follows:

Pointe d'Agnello to Île de Gargalu (6.4).
Île de Gargalu to Cap Muro (6.73).
Cap Muro to Punta di u Capicciolu (6.133).

Through routes

6.2

1 An ocean route between the S coast of France and the W coast of Italy passes through the Bonifacio Strait; another ocean route between the E Mediterranean and the Gulf of Genoa passes through the Corsican Channel between Cap Corse, the promontory forming the N extremity of the island, and Isola Capraia (43°02′N, 9°49′E).

Topography

6.3

1 The high, mountainous nature of the island provides it with a distinctive outline easily seen from offshore. A range of mountains rise close S of Cap Corse, extend 35 miles S then curve W for 19 miles to the conical peak of Monte Cinto (42°23′N, 8°57′E), the highest point of the island, which can be seen from the NW whilst within sight of the French coast. Monte Paglia Orba (42°20′·6N, 8°52′·6E) is easily identified by the sheer N face of its summit. The main mountain ridge continues SSE from Monte Cinto, through the centre of the island, where the summits of Monte Rotondo, Monte d'Oro and Monte Renoso are prominent and generally snow-clad between November and April.

2 At Monte Calva (41°43′N, 9°13′E), the SE extremity of the main mountain range, Montagnes de Cagna branch SW and reach their highest point at the conical peak of Monte Ovace, approximately 10 miles along the ridge. L'Homme de Cagna, 1½ miles further SW, has a distinctive mushroom shape.

3 The island S of a valley extending SW from Porto Vecchio (41°36′N, 9°17′E) is less elevated. Corse is separated from Sardegna by the comparatively shallow Bonifacio Strait within which lie numerous islands. The islands geologically connect S Corse with the N part of Sardegna.3

POINTE D'AGNELLO TO ÎLE DE GARGALU

GENERAL INFORMATION

Chart 1999

Area covered

6.4

1 This section covers the NW coast of Corse between Pointe d'Agnello (43°01′N, 9°26′E) and Île de Gargalu (42°22′N, 8°32′E). It is arranged as follows:

Pointe d'Agnello to Punta Mortella (6.9).
Punta Mortella to La Revellata (6.26).

1 La Revellata to Île de Gargalu (6.58).

Topography

6.5

1 This rugged coast, extending SW from the W side of Cap Corse, is backed by the hills and mountains which rise quickly close inland. Although there are numerous coves and bays the coast offers little natural shelter.

Depths

6.6

1 The coast is generally steep-to and clear of isolated dangers to seaward of the 50 m depth contour, which lies within 2½ miles of the coast. However mariners should beware of Haut-fond de Centuri (43°00′N, 9°17′E) and Banc de Cavallo (42°32′N, 8°38′E). In heavy weather dangerous seas develop over these rocky banks which should be given a wide berth.

Seaplane operations

6.7

1 Seaplanes, used to fight forest fires, may operate from sheltered waters on this coast during the summer. Vessels must give way to seaplanes and remain at least 500 m from their operating area.

Prohibited areas

6.8

1 Anchoring, fishing, dredging and diving are prohibited in areas, shown on the chart, protecting submarine cables landing within Golfe de Sainte Florent (42°45′N, 9°17′E) as well as NW of and within Golfe de Calvi (42°35′N, 8°47′E). Fishing and diving are prohibited in an area close N of L'Île Rousse (42°38′N, 8°56′E) and NNW of La Revellata (42°35′N, 8°43′E); these areas are also shown on the chart.

POINTE D'AGNELLO TO PUNTA MORTELLA

General information

Chart 1999

Route

6.9

1 The coastal route leads from a position N of Pointe d'Agnello (43°01′N, 9°26′E) 25 miles SW to a position NNW of Punta Mortella (42°42′·3N, 9°15′·0E). An inshore route leads into Golfe de Saint-Florent (42°45′N, 9°17′E).

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Golfe de Saint–Florent (6.10)
(Original dated 1992)

(Photograph – SHOM)

Topography

6.10

1 The generally high, rugged W coast of Cap Corse is indented by a number of bays and inlets created by valleys descending from the hills and mountains which form the promontory. The bays are usually backed by a sand and mainly shingle beach behind which stand a number of small villages. Some inlets provide small craft harbours or havens. Close W of Cap Corse lies a wide bay, Golfe de Saint-Florent (42°45′N, 9°17′E). The head of the bay, formed by the flood-plain of a river makes a sharp contrast to the rocky, mountainous coastline which resumes to the W of it.

2 Although rocky and high much of the land along this coast is covered with vegetation. With the exception of Haut-fond de Centuri (43°00′N, 8°17′E), a rocky bank which becomes dangerous in heavy weather, the coast is steep-to and free from isolated dangers.

Rescue

6.11

1 There is a lifeboat stationed at Port Saint-Florent (6.24).

Principal marks

6.12

1 **Landmarks:**

Cap Corse Signal Station (43°0′·3N, 9°21′·5E), the signal station stands on the summit of Capo Grosso.

Sommet Torricella radome and TV mast (red obstruction lights) (42°57′·8N, 9°23′·1E).

Canari belfry (white, square) (42°50′·8N, 9°19′·8E). A château with brick towers and a large convent with a pink belfry stand close S and SE respectively.

2 **Major light:**

Île de La Giraglia (white tower, black top, 26 m in height) (43°01′·6N, 9°24′·4E).

Directions

(continued from 5.103)

6.13

1 From a position about 10 miles N of Pointe d'Agnello, on which stands a round tower (43°01′N, 9°26′E), the track leads SW passing, with positions relative to Île de la Giraglia Light (43°01′·6N, 9°24′·4E):

2 NNW of Île de La Giraglia, a steep, light coloured rock. The lighthouse (6.12) stands on the N part of the island close to an old tower. A square tower stands on the summit of the island. Thence:

NW of Cap Grosso (2¾ miles WSW), see 6.12. Mariners should beware of the wave recorder buoy moored 5 miles NW of Cap Grosso. Thence:

3 NW of Haut-fond de Centuri (6 miles WSW), a rocky bank with a least depth of 13·8 m over it. Heavy breaks can develop over the bank and it should be given a wide berth. Thence:

NW of Canari (11 miles SSW), see 6.12, thence:

4 NW of Golfe de Saint-Florent (16 miles SSW) to a position NW of Punta Mortella (42°43′·0N, 9°15′·3E). A light (white square tower, green top, 14 m in height) is exhibited from the point. A disused signal station and a ruined tower stand, respectively, 2 cables SW and 2 cables S of the point.

(Directions for the coastal route continue at 6.32 and for Golfe de Sainte-Florent at 6.15)

Golfe de Saint-Florent

General information

6.14

1 **Route**. An inshore route leads SSE from a position W of Cap Grosso (43°00′·3N, 9°21′·5E) into Golfe de Saint-Florent, which lies on the SW part of Cap Corse.

2 **Topography**. The high, mountainous coastline of Cap Corse descends to a broad flood plain which forms the head of Golfe de Saint-Florent. The bay is entered between Pointe Vecchiaia (Vecchiaja) (43°43′·0N, 9°19′·4E) and Punta Mortella (Pointe de la Mortella), 3 miles W. Écueil de Tignosu (Tignoso), a shoal, rocky bank, lies in the S

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part of the bay. Saint-Florent, a village with a citadel, stands on the E shore of the bay; a small craft harbour fronts the village.

3 **Prohibited areas**. Anchoring, fishing, diving and dredging are prohibited in two areas, shown on the chart, within and to seaward of Golfe de Saint-Florent, see also 6.8.

Directions

(continued from 6.13)

6.15

1 From a position approximately 8 miles W of Cap Grosso (43°00′·3N, 9°21′·5E) the track leads SSE into Golfe de Saint-Florent passing, with positions relative to Canari belfry (42°50′·8N, 9°19′·8E):

W of Haut-fond de Centuri (9 miles NNW) see 6.13, thence:

W of Île de Centuri (7¼ miles N), the island is connected to the coast by a ridge of rocks, thence:

2 W of Monte Minerviu (Minervio) (3 miles N), elevation 415 m. The SW part of the mountain forms Punta di Stintinu. Thence:

W of Monte Cuccaro (1¼ miles ESE), elevation 935 m, thence:

W of Punta di Canelle (Pointe de Canelle) (1¼ miles SW), thence:

ENE of Punta Mortella (8½ miles WSW), which exhibits a light, see 6.13, thence:

3 WSW of Punta Vecchiaia (Vecchiaja) (7¾ miles S), which exhibits a light (white truncated turret, red top, 5 m in height), to a position on the 50 m depth contour approximately 2 miles NNW of Saint-Florent (42°40′·8N, 9°18′·2E).

(Directions for Port Saint-Florent continue at 6.24)

Useful marks

6.16

1 Mattei mill (42°58′·5N, 9°22′·0E), stands on a ridge 1¼ miles NE of Île de Centuri. A disused mill stands 2 cables SE of it.

Tour de Gasparini (42°56′·8N, 9°21′·9E) (not charted).

Morsiglia village (42°56′·5N, 9°22′·0E), a belfry stands close SSE of the village.

2 Chappelle de la Madone stands on a summit 5 cables E of Morsiglia.

Chappelle de Sainte Lucie (42°56′·5N, 9°22′·2E) stands in a pass between two hills 2 cables SE of Morsiglia.

Pino convent belfry (42°54′·6N, 9°21′·1E). The belfry is conspicuous when approaching from the N. An old tower on a low rounded hill stands S of it.

Tour de Sénèque (1 mile ESE of Pino) stands on a remarkable rocky pinnacle. A convent occupies a small plateau at the foot of the tower.

3 Roches d'Albo (42°48′·8N, 9°19′·5E). This part of the coast is formed by a white cliff. A disused asbestos factory stands on the coast 5 cables NNW. The coast has been whitened by debris from the factory and the disused mines at Canari (6.12). The debris has also formed a grey coloured beach, up to ½ cable wide, which extends 1¾ miles SSE to the village of Nonza.

4 Albo Tower (5 cables SE of Roches d'Albo) stands on the coast in front of the village.

Nonza tower (42°47′·1N, 9°20′·7E). The large square tower stands above the N side of the village, which occupies the summit of a steep rocky headland.

Nonza belfry (1 cable E of Nonza tower), white in colour.

Anchorages

Marine de Barcaggio

6.17

1 Marine de Barcaggio (43°0′·5N, 9°24′·2E) is a small fishing village. In suitable conditions anchorage can be obtained in depths of 8 to 10 m, 3½ cables NNE of the village. Local knowledge is needed.

Marine de Tollare

6.18

1 Marine de Tollare (43°0′·3N, 9°23′·4E) is a small fishing village. In suitable conditions anchorage can be obtained in depths of about 10 m approximately 1½ cables N of the round tower which fronts the village. Local knowledge is needed.

Baie de Centuri

6.19

1 Baie de Centuri lies between Île de Centuri (42°57′·8N, 9°20′·5E) and a headland 8 cables N of it. Anchorage can be obtained in depths of 15 to 18 m, sand weed and rock, approximately 4 cables NNE of the island on the alignment (086°) of Marc Antoni Mill (42°58′·3N, 9°21′·1E) with Château Marc Antoni (square building with green shutters, terrace and flagstaff). Small craft can anchor closer inshore in depths of 5 to 10 m. Holding ground is poor.

La Mortella anchorage

6.20

1 Punta Mortella (42°43′·1N, 9°15′·4E) is the W headland of Golfe de Saint-Florent. Anchorage can be obtained in depths of 11 to 35 m, poor holding ground, 6 cables SE of Punta Mortella Light (6.13). The anchorage provides limited shelter due to the strong effect of swell.

The disused signal station and Pointe de Cepo Battery, respectively 1½ cables SW and 1¼ miles SE of Punta Mortella Light, are useful marks.

Rade di Fornali

6.21

1 Rade di Fornali (42°41′·3N, 9°17′·2E). Anchorage can be obtained in depths of about 12 m, 3 cables ESE of Punta de (Pointe de) Fornali Light (42°41′·3N, 9°16′·9E) (white square tower, green top, 11 m in height), remaining clear of the submarine cable about 5 cables furher E. Small vessels may obtain anchorage in depths of about 6 m, 1 cable S of the lighthouse, but need to remain W of Écueil de la Tignoso. Mariners should note the rocky shoal extends approximately 1 cable from the light-beacon (red tower, 9 m in height) marking it.

Small craft

Marine de Barcaggio

6.22

1 Marine de Barcaggio (43°0′·5N, 9°24′·2E) is a fishing vessel haven afforded some protection by two breakwaters. The N facing entrance is 20 m wide and the basin has depths of about 2 m.

Port de Centuri

6.23

1 Port de Centuri (42°57′·9N, 9°21′·0E) is primarily a small fishing harbour that accepts a few small craft. The

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harbour, on the SE side of Baie de Centuri, is protected by a breakwater extending N from the coast. The harbour has depths of 0·3 m to 2·0 m. The N facing entrance lies between the breakwater head and a rocky headland, on which stands a ruined tower. A shoal marked by a beacon (red) lies 20 m N of the breakwater head. In strong W winds heavy seas develop across the entrance making it dangerous. Limited small craft facilities.

2 Anchorage can be obtained in depths of 5 to 10 m sand, weed and rock, see 6.19.

Port de Saint-Florent

6.24

1 **General information**. Port de Saint-Florent (42°40′·8N, 9°18′·0E), a fishing harbour and marina, fronts the SW side of the village. The N side of the harbour is protected by an angled mole, Jetée Nord, which exhibits a light (white column, red top, 5 m in height). A breakwater extending WNW from the W bank of the mouth of Rivière Aliso protects the SW side and also exhibits a light (white turret, dark green top, 3 m in height). The harbour entrance faces SSW and has depths of 3·8 m. In strong N or NW winds the entrance becomes difficult.

2 **Directions**. The belfry and citadel within Saint-Florent are useful for identifying and approaching the harbour by day. From a position E of Pointe de Fonali Light (42°41′·3N, 9°16′·9E) the track leads S passing W of Écueil de Tignosu (6½ cable SE of Pointe de Fonali Light). Mariners should note the light-beacon marking this danger stands on the middle of the bank and are advised to navigate at least 1½ cables clear of it. A rocky shoal, with a depth of 1·7 m over it, lies 2 cables NE and a dangerous wreck approximately 2 cables NW of the light-buoy.

3 From a position WSW of Écueil de Tignosu Light-beacon the track leads S of the bank into the entrance. At night the white sector (227°–116°) of Jetée Nord Light leads into the entrance. Mariners should note that Écueil de Tignosu light-beacon is difficult to distinguish against the village lights.

Berths. The harbour provides 750 berths in depths of 1·0 to 2·5 m.

Facilities. Comprehensive small craft facilities.

Other names

6.25

1 Aliso, Anse d' (42°55′·5N, 9°21′·5E).
Grosso, Monte (42°30′·0N, 8°55′·4E).
Padro, Monte (42°28′·0N, 8°59′·4E).

PUNTA MORTELLA TO POINTE DE LA REVELLATA

General information

Chart 1999

Route

6.26

1 The coastal route continues, from a position NNW of Punta Mortella (42°42′·3N, 9°15′·0E), 25 miles SW to a position NW of Pointe de La Revellata (42°35′·0N, 8°43′·5E).

Topography

6.27

1 The coast between Punta Mortella and Île-Rousse, 15 miles WSW, is rocky and dominated by a mountain range which rises about 2½ miles inland. The most distinctive summits are Mont Genova (42°41′N, 9°12′E), cone shaped and dark coloured, Mont Robbia a pointed peak and Mont Iffana, high and rounded, respectively 1¾ miles N and 3½ miles W. The coastline is indented with numerous small bays and coves, many with substantial sandy beaches or backed by sand dunes.

2 The generally rugged nature of the coast continues from Île-Rousse to Pointe de La Revellata, 10 miles WSW, in a series of larger bays and more distinctive headlands.

Depths

6.28

1 Generally the coast is steep-to with the 50 m depth contour lying within 2½ miles of the coast. However mariners should note the coastal bank extending approximately 2 miles N of Punta di Mignola (42°44′·2N, 9°10′·0E).

Sea state

6.29

1 Irregular depths N of Punta di Mignola (6.28) cause a very heavy sea in W winds and the area should be given a wide berth.

Prohibited areas

6.30

1 Anchoring and fishing are prohibited in an area 2 cables wide extending 4 cables NNW of Punta di Lozari (Pointe Lozari) (6.32).

Principal marks

6.31

Landmarks:

1 Punta di Colombaja (Sommet d'Orcica) (42°36′·9N, 8°57′·0E), a conical mountain, elevation 409 m.
Chapelle Saint-François (42°36·′8N, 8°57′·8E), the church has a dome.

Major light:

La Revellata (white square tower, black top and corners, 19 m in height) (42°35′·0N, 8°43′·6E).

Directions

(continued from 6.13)

6.32

1 From a position NW of Punta Mortella (42°43′·0N, 9°15′·5E) the track leads SW passing, with positions relative to La Revellata Light (42°35′·0N, 8°43′·6E):
NW of Punta di Curza (23¾ miles ENE), a low-lying light coloured point, thence:
NW Punta di Malfalcu (19¼ miles ENE), thence:
NW of Punta di l'Acciolu (16¼ miles ENE), Croc de l'Acciolu, a distinctive rock resembling a beak pointing W, stands on it. The headland rises steeply to an elevation of 174 m. South of it stands Mont Orlandu (42°41′·4N, 9°04′·1E) elevation 107 m. Thence:

2 NW of Punta de Lozari (13 miles ENE). To the E of the point is a large sandy beach. A large house, with a number of sheds nearby, stands on the W side of the point. Thence:
NW of Grande-Île-Rousse, also known as Isula La Pietra (10 miles ENE). which exhibits a light (white square tower, and dwelling, green top, 13 m in height), thence:
NW of Punta di Vallitone (7½ miles ENE), La Galère, a rock awash, lies 2½ cables NE of it; mariners are advised to remain 5 cables clear of this danger. Thence:

3 NW of Danger d'Algajola (5½ miles ENE), a group of rocks with a least depth of 0·8 m over them.

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The danger is marked by a light-buoy (spar, N cardinal) moored 1 cable N of the rocks. The danger is covered by a green sector of Grande-Île-Rousse Light. A navigable channel leads between the danger and the coast, see 6.34. Thence:

NW of Punta Spano (3½ miles ENE), a low bare point, on which stands a ruined tower. A group of small, low flat islands lie close W of it. Thence:

4 NW of Golfe de Calvi (2½ miles E), thence:

NW of Golfe de la Revellata (Baie de Revellata) (1 mile SE) to a position NW of Pointe de La Revellata. The headland rises to a peak, Capu Belloni (6½ cables SW).

Useful marks

6.33

1 Belgodère (42°35′·1N, 9°01′·2E), a village standing on the slopes of a dark, bare mountain, elevation 1200 m.

Rocher de l'Éléphant (42°36′·2N, 8°49′·0E), two rounded rocks, named for their shape, stand on the slope of a hill a short distance inland.

Capu di Bestia (42°33′·3N, 8°52′·7E), the flat summit is easily identified.

(Directions continue at 6.64)

Channel inshore of Danger d'Algajola

Charts 1999, 1425 Approaches to Calvi

Route

6.34

1 A navigable channel with a least depth of 19·3 m leads between Danger d'Algajola (42°37′·6N, 8°50′·4E) and the coast.

Directions

6.35

The alignment (068°) of the following marks leads between Danger d'Algajola and the coast:

Grande-Île-Rousse Lighthouse (42°38′·7N, 8°56′·0E) (6.32) and:

Punta di Vallitone (2½ miles WSW).

Port de L'Île-Rousse

Chart 1999 (see 1.13)

General information

6.36

1 **Position and function**. Port de L'Île-Rousse (42°38′·5N, 8°56′·2E) is a small commercial and fishing port with marina facilities for small craft.

Topography. The port occupies the SE side of Isula Sicota, the most S of a group of four islands which constitute L'Île-Rousse. The harbour is formed by a causeway joining Isula Sicota to the coast and a mole extending SE from another causeway, on the NE part of the island, which links it to Grande-Île-Rousse the largest of the group, also known as Isula La Pietra. Isula Piana and Isula del Brocciu lie close off the N coast of Grande-Île-Rousse.

2 **Approach and entry**. The port is approached from the N and entered S of the mole protecting the NE side of the harbour.

Limiting conditions

6.37

1 **Deepest and longest berth**. The quay extending SW from the root of the mole; length 125 m, depth alongside 7 m.

Maximum size of vessel handled. Vessels up to 120 m in length and 8 m draught are accepted at the berth on the inner face of the mole.

Local weather and sea state. The harbour is sheltered from all except SW winds; the causeway provides little shelter. Departure in strong winds can be difficult.

Arrival information

6.38

1 **Port operations**. When a vessel is expected.

Outer anchorages. Anchorage outside the harbour is poor.

Pilotage is compulsory. Pilots are provided from Bastia.

Regulations concerning entry. A regulated area extends 1300 m E between the line of bearing 244° from the mole head light and the 10 m depth contour. Sailing vessels and small craft under 20 m in length may enter the area in order to enter or leave the port and its anchorages but are not permitted to stop. Warships and power driven vessels 50 m in length or greater have right of way at all times.

Harbour

6.39

1 **General layout**. The commercial harbour, open to the SE, occupies the N part of Port de L'Île-Rousse. An enclosed basin complex, close SSW of it, contains the fishing and yacht harbours.

Seaplanes used to fight forest fires may operate in the vicinity of L'Île-Rousse during the summer.

Hazards. In strong winds a heavy sea develops over Danger de L'Île-Rousse and Haut-fond de Naso see 6.41. In these conditions the dangers should be given a wide berth.

Principal marks

6.40

Landmarks:

1 Punta di Columbaj (42°37′·0N, 8°56′·9E) (6.31).

Isula La Pietra Light (42°38′·7N, 8°56′·0E) (white square tower and dwelling, green top, 13 m in height).

Directions for entering harbour

6.41

1 From a position N of Port de L'Île-Rousse Jetée Light (42°38′·5N, 8°56′·4E) (white tower, green top, 12 m in height) the track leads SSE passing, with positions relative to the light:

2 W of Haut-fond de Naso (6 cables NE), a rocky bank with a least depth of 13·1 m over it, thence:

E of Danger de L'Île-Rousse (4½ cables NNW), a rocky shoal with a least depth of 6·5 m over it, thence:

E of Isula La Pietra Light (4 cables NW) (6.40), thence:

E of Port de L'Île-Rousse Jetée head.

The alignment (165°) of Port de L'Île-Rousse Jetée head with Punta di Columbaja (6.40) leads close E of Danger de L'Île-Rousse.

3 **Useful marks:**

L'Île-Rousse Signal Station (42°38′·1N, 8°55′·4E).

L'Île-Rousse radio mast (1½ cables ESE of signal station).

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L'Île-Rousse Sainte-Marie Church (W end of the town), twin belfries.
L'Île-Rousse Cathedral (in the centre of the town).
L'Île-Rousse Hôtel Bonaparte (SE part of the town), a large red building.

Basins and berths

6.42

1 **Basins and alongside berths**. The main basin, open to the SE, provides berths for commercial vessels at two quays in its N corner; the berths share Ro-Ro facilities. A breakwater, Jetée du Large constructed parallel to the shore and extending from the SW corner of the commercial berth, forms the yacht harbour and Bassin des Pêcheurs, the fishing harbour.

Anchorage can be obtained, in good weather, S of the commercial berths in depths of 15 to 27 m. A light-buoy (E cardinal), marking shallow water inshore of it, is moored 1 cable S of the SW corner of the commercial berths.

Port services

6.43

1 **Repairs**. Minor repairs only.

Other facilities. Medical assistance available.

Supplies. Water from jetty connections. Small amounts of fuel and provisions.

Communications. Nearest airport at Calvi, 10 mile SW.

Rescue. There is a lifeboat stationed at L'Île-Rousse.

Small craft

6.44

1 **General information**. The yacht basin lies on the W side of the port and leads into Bassin des Pêcheurs. The E side of the basin is protected by Jetée du Large. The SE shore of Isula Sicota and the causeway connecting it to the coast of Corse form the W side of the basin. Vessels up to 14 m in length are accepted.

Directions. The S facing entrance lies between the head of Jetée du Large, from which a light is exhibited (42°38′·4N, 8°56′·2E) (lantern on a hut), and a short breakwater extending E from the causeway.

2 **Berths**. The basin provides 216 berths, 56 for visiting yachts, at quays and pontoons.

Facilities. Usual marina facilities including small repairs.

Supplies. Fuel. Water from jetty connections. Provisions available.

Port de Calvi

Chart 1425, Approaches to Calvi and plan of Calvi

General information

6.45

1 **Position and function**. Port de Calvi (42°34′·0N, 8°45′·7E) is a small, historic, commercial and fishing port with a large yacht harbour. The port has an important function as a local ferry terminal.

2 **Topography**. Calvi lies on the SW shore of Golfe de Calvi, a wide bay entered between Punta Spano (42°36′·1N, 8°48′·2E) and Punta San Francesco 2½ miles SW. The bay between Punta Caldano (1¼ miles S of Punta Spano) and Punta San Francesco fronts a broad flood plain, extending SE from the coast, created by the tributaries and lower reaches of two rivers, Fiume Secco and Rivière Figarella. The rivers enter the sea on the SE shore which consists of a beach backed by pine trees.

3 Punta San Francesco is a spur of a ridge connected to twin peaks rising 2½ miles S; Capu di a Veta (42°31′·8N, 8°44′·7E) (elevation 703 m) and Capu di a Conca (5 cables SSE) (elevation 725 m). The E promontory of Punta San Francesco, a natural defensive position, is surmounted by a citadel which dominates the town and port.

Approach and entry. The port is approached from the NE through Golfe de Calvi and entered S of Jetée Nord-Est which extends SE from the foot of the citadel.

4 **Traffic**. In 2000 the port was used by 17 vessels with a total deadweight 35 149 tons.

Limiting conditions

6.46

1 **Deepest and longest berth**. Quai du Commerce; length 150 m, depth alongside 5 to 10 m.

Maximum size of vessel handled. Length 120 m, draught 7·5 m.

Local weather and sea state. With N or NE winds a heavy sea can develop within Golfe de Calvi, this does not usually prevent vessels from entering the port.

Arrival information

6.47

1 **Port operations**. Day working only.

Calvi from E (6.45)

(Original dated 1992)

(Photograph – SHOM)

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Outer anchorage. Anchorage can be obtained within Golfe de Calvi in depths of 5 to 30 m sand and weed.

Anchorage is prohibited between June and September in an area, shown on the chart and marked by light-buoys at its W end, to the SE of the port. The area is used for small craft moorings during this period.

2 **Cables** land in the vicinity of Punta San Francesco (42°34′·3N, 8°45′·3E), anchoring trawling and dredging are prohibited in the area, shown on the chart, 5 cables wide extending 6 cables NNE from the coast.

Pilotage is not compulsory. When needed pilots are provided from Bastia.

Regulations concerning entry. A regulated area, 2 cables wide and shown on the chart extends 8 cables NE from the port. Sailing vessels and vessels below 20 m in length may enter the area, to enter or leave the port, but are prohibited from stopping. These vessels must give way to warships and power driven vessels of 50 m length or greater.

Harbour

6.48

1 **General layout**. The port fronts the town of Calvi extending generally SW from the citadel occupying the E promontory of Punta San Francesco.

2 The NE part of the port contains the commercial berths and close W of it the fishing vessel basin. The yacht harbour, protected by breakwaters, extends SW.

Seaplanes used to fight forest fires may operate within Golfe de Calvi during the summer.

Principal marks

Landmarks:

3 Capu di Bestia (42°33′·0N, 8°52′·7E) (6.33).

Montemaggiore, a village standing on a spur with a sheer S face. Within the village stands a slender belfry (1¼ miles S of Capu di Bestia).

Camp Raffalli water tower (42°33′·6N, 8°48′·0E).

Calenzana-Lumio railway station, a red building with white window frames (42°33′·6N, 8°47′·9E).

Chapel (42°33′·2N, 8°44′·3E).

House, ruined (42°33′·4N, 8°45′·0E).

Major light:

4 La Revellata (42°35′·0N, 8°43′·5E) (6.31).

Directions for entering harbour

6.49

1 From a position NE of La Revellata Light (42°35′·0N, 8°43′·5E) the track leads S passing, with positions relative to the light:

W of Punta Spano (3½ miles ENE) (6.32), thence:

W of Punta Caldanu (3¼ miles E), on which stands a ruined tower, to a position 1¼ miles NW of Camp Raffalli water tower (3½ miles ESE).

From this position the recommended track, shown on the chart, leads SW through the regulated area passing, with positions relative to Port de Calvi Pier, also known as Jetée Nord-Est, Head Light (white square turret, dark green top, 10 m in height) (42°34′·1N, 8°45′·8E):

2 NW of a fish haven (7 cables ENE), marked by a light-buoy (W cardinal), thence:

SE of Calvi citadel NE light (2 cables N) (framework tower, green top, on white house, 6 m in height), thence:

SE of the belfry (1½ cables NW) standing within the citadel, thence:

SE of the Pier Head Light.

The track then leads S of the Pier Head Light then NNW towards the berth. Mariners should note the N cardinal light-buoy and a mooring buoy respectively 2 cables SSE and 1 cable SW of the Pier Head Light.

Basins and berths

6.50

1 **Anchorage** is prohibited in the swinging area S of the commercial berths. A buoy marks the S limit of the area.

Alongside berths. Quai du Commerce, see 6.46, provides the commercial berths within the port; there is a Ro-Ro ramp at its NE end.

Port services

6.51

1 **Repairs**. Small craft only.

Supplies. Water and fuel for small craft available within the yacht harbour.

Communications. Calvi-Sainte-Catherine airport 3 miles SE.

2 **Rescue**. An inshore lifeboat is stationed at Calvi.

Small craft

6.52

1 **General information**. The yacht harbour occupies the SW part of the port protected on its SE side by a breakwater and the much smaller Mole NW extending SE from the coast. A light is exhibited from the head of the breakwater (white structure, red top, 4 m in height). In strong NE winds, particularly during the winter, berths on the quays lining the breakwaters are untenable. The yacht harbour has depths of 1·0 to 5·5 m.

2 **Berths**. The harbour provides 350 berths, mainly at pontoons. Larger yachts berth towards the head of Mole NW.

Facilities. Repairs are available. There is a slipway, boat lift of 50 tonnes capacity and mobile crane of 16 tonnes capacity.

Supplies. Water and electricity at marina berths. Fuel available.

Small craft

Chart 1999(see 1.13)

Marina di Malfalcu anchorage

6.53

1 Marina di Malfalcu (42°43′·7N, 9°07′·0E) is a small inlet leading SE and narrowing towards its head, which turns abruptly ENE. A watch tower stands on the W headland. Anchorage can be obtained in the middle of the bay in depths of about 2 m, sand and weed. The shores of the inlet are rocky and mariners should proceed with caution. The bay is exposed to N winds and affected by swell.

Port de San Damiano

6.54

1 **General information**. Port de San Damiano (42°36′·6N, 8°51′·3E) is a yacht haven on the E side of Punta San Damiano, close W of the village of Algajola. A slender white belfry stands in the village. Danger d'Algajola lies 1¼ miles NNW of the haven, see 6.32 and 6.34. The haven is afforded limited protection from the N and NE by an angled breakwater which has a quay on the inner face of the NE arm; two finger jetties extend approximately 50 m S from the N arm. The haven has depths of 0·8 m to 2·6 m. Anchorage can be obtained in depths of 2 to 3 m S of the breakwater in good conditions.

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Port de Sant'Ambrogio

6.55

1 **General information**. Port de Sant'Ambrogio, also known as Marine de Sant'Ambrogio (42°36′·2N, 8°49′·8E) is a private yacht harbour SE side Punta Sant'Ambrogio. The harbour, consisting of three small basins protected by two moles, accepts vessels up to 18 m in length.

2 **Directions**. The S facing harbour entrance is approached from the E through a short channel dredged to 2·5 m, the S limit of the channel is marked by a buoy. Depths should be confirmed with the Harbour Master. Lights exhibited from the heads of the moles mark the entrance; W head (white mast, red top, 6 m in height), E head (white mast, green top, 6 m in height). The entrance is dangerous in NE winds and mariners are advised not to attempt entering at night without local knowledge.

3 **Berths**. The harbour provides 150 berths in depths of 2·5 m.

Facilities. Comprehensive small craft facilities including a boatyard.

Supplies. Fuel and water available.

Cala Revellata

6.56

1 **General information**. Cala Revellata (42°34′·9N, 8°43′·6E) contains a private small craft haven, protected by a small breakwater, belonging to Centre de Recherche de l'Université de Liège. A light is exhibited from the head of the breakwater (white turret, dark green top, 4 m in height).

An unusual concrete building stands on the W side of the haven. Anchoring within 200 m of the light is prohibited, the area is shown on the chart.

Other names

6.57

1 Genibaretta, Punta di (42°44′·1N, 9°08′·7E).
Mignola, Punta di (42°44′·3N, 9°10′·0E).
Monticello (42°37′·1N, 8°57′·3E).
Peraiola (Porajola), Anse de (42°49′·7N, 9°03′·6E).
Saleccia, Plage de (42°43′·6N, 9°12′·5E).
Solche, Punta di (42°42′·8N, 9°05′·0E).

POINTE DE LA REVELLATA TO ÎLE DE GARGALU

General information

Charts 1999

Route

6.58

1 The coastal route continues, from a position NNW of Pointe de La Revellata (42°35′·0N, 8°43′·5E), 22 miles SW to a position WNW of Île de Gargalu (42°22′·3N, 8°32′·3E).

Topography

6.59

1 The W coast of Presqu'île de Revellata consists of almost sheer cliffs. To the SW of the promontory the coast remains rugged but indented by a regular series of bays and the land rises quickly to a range of mountains with elevations of 700 to 800 m. From Capo Cavallo (42°31′·0N, 8°40′·3E) to Capo Morsetta, 2½ miles SSW, the coast is once again composed of cliffs.

2 To the SW of Capo Morsetta several larger bays with sandy beaches, separated by distinctive rugged headlands, extend towards Île de Gargalu.

Depths

6.60

1 The coast is steep-to and generally free from isolated dangers within the 100 m depth contour, which lies approximately 1½ miles offshore. However mariners should beware of Banc de Cavallo (42°32′·0N, 8°38′·3E), which has a least depth of 31 m over it, see 6.6. In heavy weather remain at least 3 miles from Capo Cavallo.

Restricted areas

6.61

1 Anchoring, fishing and diving are restricted inshore of a line joining Pointe Nera (42°23′·0N, 8°34′·4E), Îlot Pallazu (1¼ miles W), Île de Gargalu and Punta Muchillina.

Nature reserve

6.62

1 Anse d'Elpa Nera, also known as Anse de la Foata (42°24′·2N, 8°36′·3E) is a nature reserve entered between Punta Bianca and Punta Validori, 5 cables S. Fishing and diving are prohibited within the reserve. Small craft are permitted to anchor close inshore.

Principal marks

6.63

Landmarks:

1 Capo Cavallo Signal Station (42°30′·8N, 8°40′·5E).
Capo di Vegno (42°26′·3N, 8°48′·0E), appears conical when seen from N but resembles a nipple when seen from SW.
Capu Tondu (42°23′·6E, 8°39′·8E).

Directions

(continued from 6.32)

6.64

1 From a position NW of Pointe de La Revellata (42°35′·0N, 8°43′·5E) the track leads SW passing, with positions relative to Île de Gargalu Light (white column, black top, 7 m in height) (42°22′·3N, 8°32′·2E):

2 NW of Banc de Cavallo (10½ miles NNE), thence:
NW of Capo Mursetta (Cap de la Morsetta) (8 miles NNE), the headland is faced with cliffs, thence:
NW of Capu di l'Argentella (Sommet de l'Argentelle) (9½ miles NE), thence:
NW of Punta di Ciuttone (Pointe Ciuttone) (6½ miles NW), an isolated outcrop of red granite rises to an elevation of 200 m 4 cables E of its extremity. Thence:
NW of Punta di Stollu (Stollo) (4¾ miles NE), thence:

3 NW of Les Scuglietti or Scoglietti (4½ miles NE), a group of rocks standing on a rocky bank extending 9 cables N from Punta Rossa (Pointe Rossa). Thence:
NW of Anse de Focolara, also known as Golfo di Focolara (3 miles ENE), a wide bay entered between Punta Validori (Pointe Validori) and Punta Scandola 1¼ miles SW. A group of rocks, Écueils de Porri lie close WNW of Punta Scandola. The shores of Anse de Focolara are high cliffs. Thence:

4 NW of Cala Scandola (2¼ miles ENE), the coast of the inlet is steep, thence:
NW of Baie d'Elbo (1¼ miles E), the bay is entered between Punta Nera and Punta Palazzu 1 mile W. Marina d'Elbo (6.71), an inlet in the SE part of

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the bay is the main landing place for the lobster fishery in Corse. The small village stands at the head of the bay above a sandy beach. Thence:

5 NW of Punta Palazzu (7 cables NE), a rugged, craggy headland of red granite off which lies Îlot Palazzu (Palazzo). Thence:

6 To a position WNW of Île de Gargalu which is is separated from Corse by a narrow channel. A masonry tower stands on the summit and Île de Gargalu Lighthouse stands on the NW part of the island. La Casque, a helmet shaped rock, stands on a small plateau close NW of the tower. Îlot Garganello lies close S of Île de Gargalu.

Clearing marks

6.65

1 A line of bearing less than (223°) of the NW extremity of Île de Gargalo (42°22′·2N, 8°32′·3E) open NW of Îlot Palazzu (7 cables NE) passes NW of Les Scuglietti (4½ miles NE).

Useful marks

6.66

1 Torre (Tour) Truccia, ruined (42°29′·8N, 8°40′·3E).

Punta di Vigatoggio (Sommet Vigatoggio) pyramidal daymarks stand on its summit and SW slope (42°29′·0N, 8°39′·8E).

Punta Muvrareccia (Sommet Mufrareccia) (42°24′·5N. 8°37′·3E).

Capu Pucile (Sommet Porcire) (42°21′·4N, 8°34′·5E).

(Directions continue at 6.82)

Anchorages

General information

6.67

1 In suitable conditions anchorage is obtainable in any of the bays on the W coast of Corse but they are not good. Some can be used with W or onshore winds, of these Baie de Sagone (6.101) is the least precarious.

Baie de Nichiareto

6.68

1 **General information**. Baie de Nichiareto (42°31′·7N, 8°42′·5E) is entered between Punta Guale and Punta Bianca, 1 mile SW. Anchorage can be obtained in depths of about 20 m. The bay is reported to afford good shelter from W and SW winds. Mariners should note numerous rocks lie inshore of the 10 m depth contour and within 1½ cables of Punta Bianca. An isolated rock with a depth of 7·6 m over it lies 4 cables NW of Punta Bianca.

Baie de Crovani

6.69

1 **General information**. Baie de Crovani (42°28′N, 8°40′E) is entered between Capo Mursetta, off which lies a low island with rocks extending 1 cable S and NW of it, and Punta Ferraghiola, also known as Cap Martino, 1¼ miles SSE. A sandy beach lines the head of the bay. The town of L'Argantelle occupies the SE part of the bay; a chimney (42°28′·0N, 8°41′·2E) within it is a useful mark.

Anchorage can be obtained in depths of 10 to 30 m, sand and gravel in the middle of the bay.

Golfe de Galeria

6.70

1 **General information**. Golfe de Galaria (42°25′·5N, 8°39′·0E) is easily identified by Capu Tondu (6.63). Tour Maraghio, ruined, stands on Sommet de Margine 1¼ miles E of the head of the bay and is a useful mark. Riviére Le Fango enters the SE part of the bay. A beach, Plage de Fango, backed by trees extends 2½ cables NNE from the N side of the river mouth and Tour Galeria, ruined (42°25′·2N, 8°39′·5E), stands on a low point on the S side. The village of Galeria, occupying the S corner of the bay, is fronted by a rocky bank.

2 Anchorage can be obtained in depths of 13·5 m to 24 m, sand and mud, good holding ground, NW of Tour Galeria. The anchorage is untenable with a W swell; fog or mist forming SW of Capu Tondu often precedes it.

Small craft

Marina d'Elbo

6.71

1 **General information**. Marina d'Elbo (42°22′·3N, 8°34′·4E) is a steep sided inlet, with a sandy beach at its head, above which stands a small fishing village. Rocky banks extend approximately 1½ cables NW of each headland and a tower stands on the E promontory. Mountains rise quickly behind the village. Marina d'Elbo is the main centre of longshore lobster fishing in Corse.

2 **Anchorage**. Small craft can obtain anchorage in depths of 7 to 8 m, sand and weed close to the beach and outside the nature reserve within Baie d'Elbo, see 6.62.

Other names

6.72

1 Bianca, Punta (Bianca, Pointe) (42°34′·2N, 8°42′·4E).

Vecchio Porto (Vecchia, Portu) (42°34′·2N, 8°43′·2E).

ÎLE DE GARGALU TO CAP MURO

GENERAL INFORMATION

Chart 1985, French Charts 7050, 6942 (see 1.13)

Area covered

6.73

1 This section covers the W coast of Corse between Île de Gargalu (42°22′N, 8°32′E) and Cap Muro (41°45′N, 8°40′E). It is arranged as follows:

Île de Gargalu to Punta di u Puntiglione (6.79).

Punta di u Puntiglione to Pointe de la Parata (6.93).

Pointe de la Parata to Cap Muro (6.107).

Topography

6.74

1 The W coast of Corse extends S in a series of three large bays; Golfe de Porto, Golfe de Sagone and Golfe d'Ajaccio, separated by high, rugged promontories. The coastline is further indented by numerous smaller bays and inlets behind which the land rises quickly to a range of mountains. Port d'Ajaccio (41°55′N, 8°45′E) provides the only shelter from W winds for larger vessels, there are however several havens for small craft.

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Depths

6.75

1 The coast is generally steep-to with the 50 m depth contour lying within 2 miles of the shore. However rocky banks extend from some headlands within the major bays and SE and SW of Îles Sanguinaires (41°53′N, 8°36′E).

Seaplane operations

6.76

1 Seaplanes, used to fight forest fires, may operate from sheltered waters on this coast in the summer, particularly within Golfe de Sagone (42°03′N, 8°36′E) and Golfe d'Ajaccio (15 miles SSE). Vessels must give way to seaplanes and remain at least 500 m from their operating area.

Traffic Regulations

6.77

1 Vessels of 1600 grt or greater carrying hydrocarbons or other dangerous cargoes must remain at least 7 miles offshore and may only approach Golfe d'Ajaccio through the approach channel shown on the chart.

Prohibited areas

6.78

1 Fishing and diving are prohibited inshore of a line joining Île de Gargalu Light (42°22′·3N, 8°32′·2E) and Punta Muchillina (2½ miles SSE) and in an area extending about 1 mile from the S coast of Golfe de Porto (8½ miles SE); both areas are shown on the chart.

ÎLE DE GARGALU TO PUNTA DI U PUNTIGLIONE

General information

Chart 1985

Route

6.79

1 The coastal route leads, from a position WNW of Île de Gargalu (42°22′·2N, 8°32′·4E), 15 miles S to a position W of Punta di u Puntiglione (42°07′·9N, 8°35′·0E).

Topography

6.80

1 Golfe de Girolata and Golfe de Porto lie between Punta Muchillina (Pointe Rossa) (42°20′N, 8°33′E) and Cap Rossu (6 miles S). The bays are separated by a cliff faced promontory, Capo Senino, created by Monte Senino which rises steeply to an elevation of 618 m. The shores are steep-to and free from dangers except close inshore. Cliffs between the town of Porto, at the head of Golfe de Porto, and Piana, 2¾ miles WSW, gradually increase in elevation. Several detached dangers lie within 3 cables of this part of the coast.

2 Cap Rossu, faced with red granite cliffs, has several rocks lying up to 1½ cables W of it. The coast then extends S to Punta di u Puntiglione in a series of small bays separated by rocky promontories. The coast is clear of isolated dangers to seaward of the 20 m depth contour, which lies generally within 3 cables of the shore.

Principal mark

6.81

Landmark:

1 Tour de Turghio (42°14′·3N, 8°33′·2), ruined, stands 5½ cables E of Capu Rossu on the summit of a high, red granite cliff.

Directions

(continued from 6.64)

6.82

1 From a position WNW of Île de Gargalu Light (42°22′·3N, 8°32′·2E) the track leads S passing, with positions relative to the light:

W of Îlot Garganellu (5 cables SSE), thence:

W of Punta Muchillina (2½ miles SSE), thence:

2 W of Cap Rossu (8½ miles S), on which stands Tour de Turghio (6.81), thence:

W of Punta d'Orchina (12 miles SSE), Tour d'Orchina stands 7½ cables ENE of the point, thence:

W of Punta d'Ormigna (13 miles S) to a position W of Punta di u Puntiglione (15 miles SSE). The headland has a steep, rocky shore and rises to a conical peak, on which stands a tower.

Useful marks

6.83

1 Port de Girolata Fort (42°20′·9N, 8°36′·8E), the fort has a square tower at its SE end and stands on the crest of a rugged promontory.

Monte San Ghiabicu TV mast (42°14′·3N, 8°37′·3E).

Anse de Chiuni, Club Méditerranée complex chimney (42°10′·2N, 8°35′·7E).

(Directions continue at 6.99)

Anchorages

Port de Girolata

6.84

1 Port de Girolata (Anse de Girolata) (42°21′·0N, 8°36′·9E). A rocky promontory extends about 1½ cables SSE from the coast creating a natural small craft haven NE of it, see 6.86. A fort (6.83) stands on the rock fringed promontory.

Anchorage can be obtained in depths of 20 to 29 m, sand and weed, approximately 2 cables S of the fort. The anchorage is reported to have good holding ground even with moderate W winds and swell however mariners are advised to exercise caution if onshore winds develop.

Anse de Ficajola, Marina di a Calanche

6.85

1 Anse de Ficajola, Marina di a Calanche (42°15′·3N, 8°37′·8E) lies E of Punta di Ficajola fronting the village of Ficajola. Anchorage can be obtained in a depth of 8 m close inshore approximately 6 cables E of the point. Mariners should note there are numerous dangers within 1½ cables of Punta Piana, 2½ cables W of Punta di Ficajola. The bay between Punta Piana and Îlot Vardiola, 1¼ miles WSW, is also encumbered with numerous dangers lying up to 3 cables offshore.

Small craft

Port de Girolata

6.86

1 **General information**. Port de Girolata (Anse de Girolata) (42°21′·0N, 8°36′·9E) (6.84) lies in the NE part of Golfe de Girolata which is entered between Punta Muchillina and Capo Senino, 2¼ miles SE.

2 **Anchorage** can be obtained in depths of 2 to 3 m, sand and weed, moderate holding ground, closer to the promontory in the SW part of the cove; the NE part is shoal. In good weather anchorage in depths of 6 to 12 m can be obtained outside the cove.

Berths. Three finger jetties with alongside depths of 1 to 2 m extend from the beach on the NW side of the cove

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but are primarily for local boats. In the summer the haven becomes crowded.

3 **Facilities**. There are no facilities.

Porto Marina
6.87

1 **General information**. Porto Marina (42°16′·1N, 8°41′·5E) lies at the mouth of Rivière de Porto, at the head of Golfe de Porto. The W facing entrance is 20 m wide between a rocky promontory and a rubble training wall on the S bank of the river. The entrance is difficult due to rocks on the N side. A tower on the promontory is a useful mark. The haven has depths of 1 to 2 m.

Berths. Visiting yachts usually berth at the quay on the N bank of the river but the berths can only be used in fair weather. A small basin on the S bank provides marina berths and is also used by fishing vessels.

2 **Facilities**. Fuel, water and limited marina facilities.

Portu di a Castagna
6.88

1 Portu di a Castagna, also known as Port de Porto, (42°15′·8N, 8°40′·8E) has a small wharf 40 m in length sheltered from the NW by Punta Capicciolo. The wharf is paved with red granite and has an alongside depth of 2 m. There are no facilities. There is no anchorage.

Cala di Palu anchorage
6.89

1 Cala di Palu (Anse de Palu) (42°13′·9N, 8°33′·7E) lies between the SE side of Cap Rossu and Punta di l'Ancisa (Pointe Lancisa) 7 cables SE. Anchorage can be obtained close inshore in depths of about 5 m, sand, in a cove on the NW side of the bay. A remarkable column of rock lies close off the W side of the cove. Mariners should note a shoal with a least depth of 3·5 m over it lies 2¼ cables ENE of the rock.

Porto d'Arone anchorage
6.90

1 Porto d'Arone (Anse d'Arone) (42°12′·3N, 8°34′·6E) lies on the SE side of Punta a i Tuselli. Anchorage can be obtained in depths of 2 to 5 m, sand and weed close off the beach on the NE side of the bay. Most of the E shore is encumbered with rocks.

Anse de Chiuni anchorage
6.91

1 **General information**. Anse de Chiuni (Baie de Chioni) (42°10′·0N, 8°35′·0E) lies between Punta d'Orchina and Punta d'Omigna, 1¾ miles SSW. A rocky bank, with a large rock at its outer end, extends 1½ cables W of Punta d'Orchina. Mariners should also note a shoal with a depth of 4·1 m over it 2½ cables S of the point. Tour d'Orchina, (6.82) stands 7½ cables ENE of the point. Rocher de Cervi lies 5 cables SSW of Tour d'Orchina. A tower also stands on Punta d'Omigna. The buildings and chimney (6.83) of the Club Méditerranée complex at the head of the bay are useful marks.

2 **Anchorage** can be obtained in depths of 4 to 5 m, sand and weed, off the beach. During the summer the bay is crowded.

Golfe de Peru anchorage
6.92

1 Golfe de Peru (Baie de Pero) (42°08′·8N, 8°35′·3E) lies between Punta d'Ormigna and Punta di u Puntiglione, 1½ miles SE.

Anchorage can be obtained in depths of 5 to 10 m, sand and weed, off the beach at the head of the bay.

PUNTA DI U PUNTIGLIONE TO POINTE DE LA PARATA

General information

Chart 1985

Route
6.93

1 The coastal route leads, from a position W of Punta di u Puntiglione (42°07′·9N, 8°35′·0E), 15 miles S to a position W of Pointe de la Parata (41°53′·7N, 8°36′·6E).

Topography
6.94

1 This part of the coast is mostly occupied by Golfe de Sagone, a wide W facing bay which nevertheless affords some shelter. The coastline is dominated by the mountains and hills which rise close inland and include a number of landmark peaks.

Depths
6.95

1 Although generally steep-to Golfe de Sagone contains a number of dangers up to 1 mile from the coast. Most are banks or underwater ridges formed by spurs extending into deep water from the mountainous interior of the island. Similarly Îles Sanguinaires, which lie up to 1¾ miles SW of Pointe de la Parata, are effectively the above water crest of a ridge extending a further 4 miles offshore. Although the seabed shelves steeply away from the islands mariners must beware of a number of outlying shoals and dangers.

Prohibited area
6.96

1 An underwater archaeological site lies close offshore 5 cables SW of Pietra Piombata (41°58′·7N, 8°36′·7E). Diving is prohibited within 100 m of it.

Rescue
6.97

1 There is a lifeboat stationed at Cargèse (42°07′·9N, 8°35′·9E).

Principal marks
6.98

Landmarks:

1 Monte Paglia Orba (42°20′·6N, 8°52′·7E) (6.3).
Monte Cinto (42°22′·9N, 8°56′·8E) (6.3).
Sommet de Saltelle (42°07′·9N, 8°45′·4E), elevation 920 m.
Monte Sant' Agnelu (Mont Saint Angelo) (42°0′·8N, 8°41′·2E), elevation 347 m.

Directions
(continued from 6.82)

6.99

1 From a position W of Punta di u Puntiglione (42°07′·9N, 8°35′·0E) the track leads S passing, with positions relative to the headland:
W of Rocher Marifaja (Marrevicce) (2 miles ESE), thence:
W of Pointe de Triu (4 miles ESE) a rocky bank, Plateau de la Licciola, with a least depth of 2·7 m over it, extends 8 cables SW of the point. Thence:

2 W of Récif de Saint-Joseph (6 miles ESE), a rocky shoal extending 9 cables SW of Pointe

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Saint-Joseph. There are visible and drying rocks and depths of 1·2 to 12·3 m along its length. Thence:

W of Baie de Liscia (8 miles ESE), which lies between Pointe Capigliolu (Pointe Loccu) and Pointe Palmentoju (Palmentojo), 1¼ miles S, thence:

3 W of Récif de Paliagi (7½ miles SE), a rocky shoal with a least depth of 0·9 m over it, 6 cables NNE of Pointe Paliagi, thence:

W of Banc de Provençale (7 miles SSE), an offshore bank with a least depth of 15·4 m over it, thence:

W of Pietro Piombata (9 miles SSE), a rocky islet with submerged rocks inshore of it, thence:

4 W of Cap de Feno (10 miles S), a rocky headland with a ruined tower 1 cable E of the point. Thence:

W of Écueil de Fica (Fico) (10½ miles S) a small rocky shoal with a least depth of 1·6 m over it, thence:

5 W of La Botte (11 miles S), a large rock, thence:

To a position W of Punta de la Parata (14½ miles S), the extremity of Presqu'île de la Parata. Tour de la Parata stands on the summit of the point and a signal station on a summit 9 cables NE of it.

Useful marks

6.100

1 Cargèse, radio mast (42°08′·3N, 8°36′·1E).

Tour de Capigliolu (42°04′·0N, 8°44′·6E), a ruined tower stands close NE of it further up the hill.

Sommet Castellu (Castello Capraja) (42°03′·8N, 8°44′·9E).

(Directions continue at 6.113)

Anchorage

Baie de Sagone

6.101

1 **General information**. Baie de Sagone (42°06′·7E, 8°41′·6E) is approached through Golfe de Sagone which lies between Pointe de Triu (42°06′·1N, 8°39′·7E) and Pointe Parragiola, 6 miles S. Baie de Sagone lies between Pointe Abellu (Pointe de la Batterie), 9 cables ENE of Pointe de Triu, and a point 1 mile E. The anchorage is sheltered from the W by Pointe Abellu but becomes precarious with SW winds. A ruined tower stands on Pointe Abellu; a short stone breakwater lies approximately 1 cable N of it, see 6.103. The village of Sagone occupies the NE corner of the bay.

2 **Anchorage** can be obtained in a depth of 12 m, sand and mud 1½ cables ESE of Pointe Abellu. A controlled small vessel anchorage lies closer inshore. Wrecks with a least depth of 17·7 and 25·5 m over them lie, respectively 2½ cables and 6½ cables SSW of the anchorage.

Small craft

Cargèse

6.102

1 **General information**. Cargèse 42°07′·9N, 8°35′·9E) is a yacht harbour and marina on the W shore of Marina di Cargèse. The harbour is protected from the SE by a mole, which extends 180 m NE from the coast, and from the ENE by a much smaller breakwater. Lights are exhibited from the heads of both breakwaters marking the E facing entrance; Jetée Sud Head (white truncated turret, red top, 7 m in height), Jetée Nord Head (white structure, green top, 4 m in height). A tower standing 4 cables NW of the harbour, a ruined tower 3 cables NNE, two belfries within the village and the radio mast 4 cables NNE of them are useful marks.

2 **Anchorage**. In good weather anchorage can be obtained in depths of 2 to 10 m, sand and weed, approximately 2 cables E of the entrance.

Directions. The entrance has a depth of 4 m. In strong SW winds the entrance becomes dangerous. A shoal with a depth of 1 m over it lies 4 cables E of the harbour.

3 **Berths**. The S breakwater provides 50 Mediterranean Moorings in depths of 0·5 to 2·5 m. There are 150 berths in depths of 0·8 to 2·5 m at pontoons on the NW side of the harbour.

Facilities. Fuel and water available, limited marina facilities. Some provisions available. A lifeboat is stationed here.

Port de Sagone

6.103

1 Port de Sagone (42°06′·7N, 8°41′·6E) consists of two small craft havens:

Sagone Ouest is formed by a short stone mole extending 30 m from the W shore of Baie de Sagone. The quay on its N side has depths of 2 to 5 m. Another quay extends N from the root of the mole and is used by local fishing vessels. Small craft can obtain anchorage in depths of 4 to 7 m, sand and weed, within a designated area, ½ cable NE of the mole. Fuel and water are available.

2 **Sagone Est, Quai de la Douane**. A small quay, 20 m in length, on the E side of the bay, close S of the village of Sagone.

Anse de Portu Provençale anchorage

6.104

1 Anse de Portu Provençale (41°59′·6N, 8°40′·0E) occupies the NE corner of Golfe de Lava which lies between Pointe Parragiola (42°00′·0N, 8°39′·3E) and Cap de Feno, 3½ miles SW.

Anchorage can be obtained in depths of 5 to 10 m, sand and weed, moderate holding ground, 3 cables E of Pointe Pelusella, a headland 5 cables SSE of Pointe Parragiola. Small craft moorings are also laid off the beach.

Anse de la Figuera

6.105

1 Anse de la Figuera (41°58′·2N, 8°38′·2E) lies in the SW part of Golfe de Lava (6.104) between the coast and a rocky bank extending ENE from Pointe de Petra Rossa. Îlot de la Figuera (Figiera) (41°58′·4N, 8°38′·0E) stands on the NE part of the bank which extends approximately 1 cable NE beyond the island.

Anchorage can be obtained in depths of 5 to 10 m, sand and weed, 1 cable SE of Îlot de la Figuera.

Other names

6.106

1 Liamone, Plage du (42°04′·3N, 8°44′·3E).

Liscia, La (42°03′N, 8°45′E), a river.

Minaccia, Anse de (41°56′·3N, 8°37′·2E).

Moines, Pointe des (Capicciolo, Pointe de) (42°07′·2N, 8°38′·2E).

Molendinu, Punta di (Molendiu, Pointe), (42°07′·4N, 8°37′·5E).

Monte, Capu di u (Sommet Al Monte) (42°01′·1N, 8°42′·9E).

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Sari (42°04′·7E, 8°50′·0E).
Tranpitatojo, Pointe (Castellaccio, Pointe) (42°01′·3N, 8°40′·3E).
Vida, Sommet (42°01′·5N, 8°44′·1E).

POINTE DE LA PARATA TO CAP MURO

General information

Chart 1985

Routes

6.107

1 The coastal route leads, from a position W of Pointe de la Parata (41°53′·7N, 8°36′·6E), 15 miles SSE to a position WSW of Cap Muro (41°44′·5N, 8°39′·6E). Inshore routes lead through Passe des Sanguinaires, which lies between Pointe de la Parata and Île de Porri, and through Golfe d'Ajaccio, the approach to Port d'Ajaccio (41°55′N, 8°45′E).

Topography

6.108

1 The coast remains dominated by the foothills and peaks of the mountains close inland. The snowy summits of Monte d'Oro and Monte Rotondo (6.3) may be seen NE of the head of Golfe d'Ajaccio. The bay, open SW, provides a wide, deep approach to Port d'Ajaccio which lies in the NW part of the head of the inlet.

Depths

6.109

1 Exceptionally deep water extends to the head of Golfe d'Ajaccio; the 100 m depth contour lying within 6 cables of the shore and within the entrance to the port. However numerous rocks and shoals encumber the waters inshore of the 30 m depth contour which lies, generally, within 5 cables of the coast. The exceptions to this are the shoals and dangers around Îles Sanguinaires which extend 8 cables SE and 1½ miles SW of Grand Sanguinaire (41°52′·5N, 8°35′·5E).

Traffic regulations

6.110

1 Vessels of 1600 grt or greater carrying hydrocarbons or other dangerous cargoes must approach Port d'Ajaccio through the approach channel shown on the chart. Vessels approaching the port are to remain on the S side of the channel; vessels leaving are to remain on the N side. These vessels are required to to provide SURNAV reports and maintain VHF contact with La Parata Signal Station, see the relevant *Admiralty List of Radio Signals*. Movements within the channel by vessels carrying dangerous cargoes are not permitted between 2200 and 0600 local time.

Rescue

6.111

1 A French MRSC (Sous-CROSS), see 1.45, is located at Ajaccio (41°55′N, 8°45′E).

Principal marks

6.112

Landmarks:

1 Punta di Lisa (Mont de Lisa) (41°56′·8N, 8°40′·8E), elevation 790 m.
Punta Pozzo di Borgo (41°57′·3N, 8°42′·1E), a conical peak, elevation 779 m. A TV mast, which exhibits red obstruction lights, stands on the summit.
Punta Cozzanaccio (Sommet de Cozzonaccio) (41°51′·3N, 8°53′·3E).
Punta di a Saina TV mast (41°46′·1N, 8°46′·0E).

Major lights:

2 Grande Sanguinaire (white square tower, black top, white building, 18 m in height) (41°52′·8N, 8°35′·7E).
Ajaccio, La Citadelle (white tower, red top, 13 m in height) (41°55′·0N, 8°44′·5E).

Directions

(continued from 6.99)

6.113

1 From a position W of Punta de la Parata (41°53′·7N, 8°36′·6E) the track leads SSE passing, with positions relative to the point:
WSW of Îles Sanguinaires (1½ miles SW), a shoal with a least depth of 15·4 m over it, lies 1½ miles SW of Grande Sanguinaire (1¼ miles SW), thence:
WSW of Golfe d'Ajaccio (4 miles SE), thence:

2 W of Cap Muro (10 miles SSE), from which a light is exhibited (white square tower, black top, 11 m in height) to a position WSW of the headland.

Useful marks

6.114

1 Grande Sanguinaire, tower (41°52′·6N, 8°35′·3E).
Grande Sanguinaire, disused signal station (1¼ cables NE of tower).
Cap Muro Light, see above.
Écueil du Tabernacle Light-buoy (41°52′·0N, 8°36′·5E) (pillar, port hand).

2 La Castagna Tower (41°48′·0N, 8°42′·9E).

(Directions continue at 6.142)

Passe des Sanguinaires

Chart 1424

6.115

1 **Route**. Passe des Sanguinaires leads between Pointe de la Parata and Île de Porri, the most N of the Îles des Sanguinaires. The channel provides a useful good weather route through the islands for vessels of moderate draft. Local knowledge is required.

2 **Directions**. The channel is 2¾ cables wide but depths of 4 m or less extend 1½ cables N of Île de Porri. Depths of about 7 m lie on the N side of the channel. A track passing about one third of the width of the channel from Pointe de la Parata is advised. Pointe de la Parata ends with a rock sufficiently steep-to for small vessels to pass close to it.

Anchorage can be obtained in depths of 5 to 10 m, sand and weed, 6 cables ENE of Pointe de la Parata Tower.

Port d'Ajaccio

General information

6.116

1 **Position and function**. Port d'Ajaccio (41°55′N, 8°45′E) lies at the head of Golfe d'Ajaccio. The port handles general cargo, bulk oil products, liquefied gas, is an important ferry terminal and provides facilities for yachts and small craft. It also has a small fishing harbour.

Topography. The port fronts Ajaccio, the capital of Corse, which lies on the W shore of Baie d'Ajaccio. The bay is well protected, particularly from the W, by the hills and mountains surrounding it.

2 **Port limits**. The port limit extends NNE from Jetée de la Citadelle, the breakwater extending from the W headland of Baie d'Ajaccio. However the basins on the W side of

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Port d'Ajaccio from S (6.116)

(Original dated 1992)

(Photograph – SHOM)

the bay and the specialised tanker berths along the N shore and E of Pointe d'Aspretto are enclosed by a Regulated Area and there is a mandatory approach channel to Port d'Ajaccio for some vessels, see 6.110. The limits and areas are shown on the chart.

3 **Approach and entry**. The port is approached through Golfe d'Ajaccio, which lies between Pointe de la Parata (41°53′·7N, 8°36′·6E) and Cap Muro, 9½ miles SSE, and entered on passing into Baie d'Ajaccio, which lies between Ajaccio Citadelle (41°55′·1N, 8°44′·5E) and Darse d'Aspretto, 1 mile ENE. However Tahiti Tanker Berth E of Darse d'Aspretto also forms part of the port.

4 **Traffic.** In 2000 the port was used by 436 vessels with a total deadweight 2 323 209 tons.

Port Authority. Capitainerie, Gare Maritime, Quai L'Herminier, Ajaccio.

Limiting conditions

6.117

Deepest and longest berth. Jetée des Capucins (6.121).

Maximum size of vessel handled. Length 175 m, draught 9 m.

Local weather and sea state. Strong SW and ENE winds cause a moderately rough sea within Baie d'Ajaccio.

Arrival information

6.118

1 **Port operations**. The port does not handle petroleum products or gas between 2200 and 0600 local time.

Vessel Traffic Service. A Vessel Traffic Service Scheme operates for vessels over 1600 grt carrying hydrocarbons or other dangerous cargoes. See the relevant *Admiralty List of Radio Signals* for details.

Notice of ETA. 24 hours in advance.

Outer anchorages. The holding ground within Baie d'Ajaccio is good.

Anchoring is prohibited within an area, shown on the chart, NNE of Jetée de la Citadelle and in the vicinity of submarine cables which land close W of Ajaccio Citadelle.

2 Mouillage des Capucins, E of Bassin des Capucins, is used for large vessels. Anchorage can be obtained in depths of 20 to 26 m, sand and mud, very good holding ground.

Mouillage de Cannes lies E of Bassin de Cannes in the vicinity of Richelieu mooring buoy. Use of the anchorage and mooring buoy must be authorised.

Mouillage d'Aspretto. The anchorage lies E of Aspretto Military Base outside the prohibited and regulated areas. Anchoring is prohibited within 250 m of Tahiti Tanker Berth. Mariners should remain at least 2 cables clear of Les Scoglietti, the rocky shoal S of the base.

3 **Pilotage** is compulsory, within the area E of a line joining La Guardiola Light-beacon (41°54′·3N, 8°43′·3E) and L'Isolella Tower (41°50′·7N, 8°45′·4E), for all vessels over 45 m in length and is available 0600–2000 local time or by request for movements outside these times. The pilot boards 4 cables E of Citadelle Light-beacon (41°54′·8N, 8°44′·5E).

4 **Regulations**. The port is enclosed by a regulated area, shown on the chart; the boundary extends E from Citadelle Light (6.112) passes S of Les Scoglietti then N to the coast. Sailing vessels and small craft of less than 20 m in length are permitted within the area to enter or leave the port. These vessels are not permitted to stop within the area and must give way to warships and power driven vessels of 50 m or more in length.

A prohibited area, shown on the chart, encloses the Aspretto Military Base and Les Scoglietti, on the E side of the port. The area E of the base is frequently used to train military divers, indicated by a blue pennant flown from the signal station within the base. When this signal is displayed vessels must remain at least 5 cables from the E side of Pointe d'Aspretto.

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5 Entry to the restricted area enclosing the Sea-line submarine pipeline gas terminal, close E of Appontemont Jeanne d'Arc, is prohibited whenever an LNG carrier is berthed there.

Only vessels authorised to use the Saint-Joseph petroleum products jetty are permitted to enter the restricted area enclosing it.

Harbour

6.119

1 **General layout**. The W side of the port is divided into three basins; Bassin de la Ville, Bassin des Capucins and Bassin des Cannes, also known as Port Charles Ornano (Port de l'Amirauté). Appontement Jeanne d'Arc and Appontement Saint-Joseph providing specialised berths for, respectively, liquefied gas and petroleum products, extend from the N shore of the bay. The Tahiti Tanker Berth, also for gas carriers, lies E of Aspretto Military Base and the Naval Air Station which occupy most of the E side of the port.

Landmarks:

Grande Sanguinaire Tower (41°52′·6N, 8°35′·3E).
La Castagna Tower (41°48′·0N, 8°43′·0E).
Sommet Scudo (41°55′·3N, 8°40′·8E).
L'Isolella Tower (41°50′·7N, 8°45′·4E).
Porticcio, hotel (41°53′·0N, 8°46′·9E).

Major lights:

Grande Sanguinaire (41°52′·7N, 8°35′·7E) (6.112).
Ajaccio, La Citadelle (41°55′·0N, 8°44′·5E) (6.112).

Directions for entering harbour

6.120

1 **Approach**. From a position 8 miles WNW of Cap Muro (41°44′·5N, 8°39′·6E) the approach channel leads ENE passing, with positions relative to the headland:

2 NW of Cap Muro, the headland is fringed with rocks and shoals extending up to 4 cables from it. A light (6.113) is exhibited from the headland. Thence:

SE of Écueil de Tabernacle Light-buoy (8 miles NNW) (pillar, port hand) marking a shoal, with a least depth of 3·3 m over it, which forms part of a rocky bank extending SE from Pointe de Tabernacle, the SE point of Grande Sanguinaire. Thence:

3 SE of Grande Sanguinaire Light (9 miles NNW) (6.112), thence:

NW of Pointe de la Castagna (4 miles NE). The N side of the headland consists of high cliffs. A rocky shoal, Écueils d'l Campanili, extends 3 cables W of it. La Castagna Tower (6.119) stands on the summit of the headland. Thence:

NW of La Campanina beacon (7 miles NE) (isolated danger, round masonry, black and red bands, 7 m in height), marking the outer end of a rocky bank extending SW from Pointe de Sette Nava. Thence:

NW of L'Isolella Tower (6.119). Écueil de la Fontaine, a rocky bank, extends 4 cables N of the tower. Thence:

SE of a light-buoy (10 miles NNW) (E cardinal) marking the E of two fish farms, thence:

SE of La Botte de Canicciu (10 miles NNE), thence:

SE of La Guardiola Light-beacon (10½ miles NNE) (red tower, 10 m in height). Chapelle des Grecs stands on the coast 3 cables N of it, thence:

NW of Écueil Dorbera (10 miles NE), thence:

SE of Pointe Maestrello (11 miles NNE), thence:

SE of Écueil de la Citadelle Light-beacon (11½ miles NNE) (red tower, 13 m in height) thence:

To a position SE of Ajaccio Citadelle Light (white tower, red top, 13 m in height) (41°55′·0N, 8°44′·5E).

Entrance channel. The track leads N into Baie d'Ajaccio, entered between La Citadelle and Darse d'Aspretto, 1 mile ENE.

4 **Useful marks:**

Solar panels (41°54′·8N, 8°39′·0E).
Capitello Tower (41°54′·3N, 8°48′·0E).
Ajaccio Campo dell'Oro Airport Control Tower (41°55′·3N, 8°47′·8E).

Basins and berths

6.121

1 **Bassin de la Ville**, close NE of Ajaccio Citadelle, is protected from the S by Jetée de la Citadelle which exhibits a light from its head (white column, red top, 13 m in height). Pontoons secured to the inner face of the mole provide marina berths for small craft. A small basin at the root of the mole is used by fishing vessels. There are two commercial berths on the W side of the basin and a third on the S side of Jetée des Capucins. Quai de Gare Maritime, also known as Quai Brancaleoni, is the largest berth; length 240 m, alongside depth 6 to 7 m. The quay has a Ro-Ro facility at its N end.

2 **Bassin des Capucins**, lies between Jetée des Capucins and Jetée du Margonajo. The basin contains five berths, four of which have a Ro-Ro capability. The largest berth is Jetée des Capucins (N); length 175 m, alongside depth 8 m. The wall SW of Jetée du Margonajo has no berth on it.

3 **Bassin des Cannes**, N of Jetée du Margonajo, contains a marina and small craft harbour (6.124).

Appontement Jeanne d'Arc. The jetty is no longer used for cargo handling; vessels anchor approximately 1 cable E and connect to the adjacent Sea-line submarine pipeline.

4 **Appontement Saint-Joseph** handles petroleum products tankers. Swell generated by SW winds prohibits berthing.

Tahiti Tanker Berth for LNG carriers accepts vessels up to 1500 tonnes and maximum draught 5 m.

Port services

6.122

1 **Repairs**. Only minor repairs can be undertaken.

Other facilities. There are civil and military hospitals in the town.

Supplies. Water available from jetty connections. Fuel and provisions available.

2 **Communications**. The airport 3 miles E of Ajaccio provides domestic and international services.

Rescue. The French maritime rescue organisation is controlled by Centres Régionaux Opérationnels de Surveillance et de Sauvetage (CROSS). The maritime rescue sub-centre (Sous-CROSS) for the Mediterranean is located at Aspretto Naval Air Station.

3 A lifeboat is stationed at Ajaccio.

Small craft

6.123

1 **Port Tino Rossi** (41°55′·2N, 8°44′·6E) occupies the S part of Bassin de la Ville, in the SW corner of the port.

Berths. The marina provides 250 berths at pontoons in a depth of 2·5 m. There are 60 berths for visiting yachts.

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Facilities. Comprehensive small craft facilities including repairs.

6.124

1 **Port Charles Ornano** (Port de l'Amiranté) (41°55′·9N, 8°44′·7E), is a large marina occupying Bassin des Cannes in the NW part of the port. The basin is protected by Jetée du Margonajo, which extends ENE from the coast, and Port des Cannes S Breakwater which is joined to it and extends N then NE. Lights are exhibited from the elbow (white column, 6 m in height) created by the breakwaters and from the head of Port des Cannes S Breakwater (white turret, red top, 3 m in height). The harbour accepts vessels up to 35 m in length.

2 **Berths**. The marina has 850 berths, mainly at pontoons, in depths of 5 to 12 m.

Facilities. Comprehensive small craft facilities including repairs.

Small craft

Anse de Porticclo

6.125

1 Anse de Porticclo (41°53′·1N, 8°47′·3E) lies 4 cables ENE of the conspicuous hotel standing on Pointe de Porticclo. A dangerous rocky shoal lies up to 3 cables offshore close W of the bay.

A small jetty extends SE into the bay providing alongside berths in depths of about 2 m. Anchorage is obtainable S and SSE of the jetty.

Anse Sainte-Barbe anchorage

6.126

1 **General information**. Anse Sainte-Barbe (41°51′·0N, 8°45′·9E) lies close E of Pointe de Damigliana. Although the inlet can provide good shelter the entrance is difficult, due to the rocky shoals either side of it. It is often crowded; the inner part of the bay is reserved for local vessels.

Anchorage can be obtained, in fair weather, in depths of 4 to 8 m, sand and weed.

Anse de Medea anchorage

6.127

1 Anse de Medea (41°50′·5N, 8°45′·9E). Anchorage can be obtained in depths of 5 to 20 m 3 cables SE of L'Isolella Tower (41°50′·7N, 8°45′·4E). Shoals extend up to 1½ cables SW of the E headland of the bay.

Anse Ottioni anchorage

6.128

1 Anse Ottioni (41°49′·8N, 8°46′·5E). In fair weather anchorage can be obtained in depths of 5 to 20 m, sand. Numerous rocks line the headlands inshore of the 5 m depth contour.

Chiavari

6.129

1 **General information**. Chiavari (41°48′·7N, 8°45′·7E) is an old harbour fronting the village of Verghia. A small mole provides limited berthing at its outer end in a depth of 3 m.

Anchorage can be obtained in depths of 5 to 20 m off the harbour.

Anse de Portigliolo anchorage

6.130

1 **General information**. Anse de Portigliolo (41°48′·0N, 8°44′·3E) fronts the village of Portigliolo. Although well sheltered from the SSW entry is made difficult by the dangers extending from each headland.

Anchorage can be obtained in depths of 5 to 10 m in the middle of the bay.

Anse de Cacalu anchorage

6.131

1 **General information**. Anse de Cacalu (Anse de Cacao) (41°45′·0N, 8°41′·0E) lies close E of Pointe de Cacalu. The coast of the bay is rugged and fringed with rocks; a bank with a least depth of 0·3 m over it extends 3 cables NNW from the E headland.

Anchorage can be obtained in depths of 5 to 20 m in the middle of the bay.

Other names

6.132

1 Castagna (41°47′·8N, 8°43′·4E).
Guardiola, Pointe (41°45′·0N, 8°40′·0E).
Guardiola, Sommet (41°45′·0N, 8°40′·4E).
Prunelli, Rivière (41°54′·3N, 8°48′·4E).
Scudo, Pointe de (41°54′·3N, 8°40′·6E).

CAP MURO TO PUNTA DI U CAPICCIOLA

GENERAL INFORMATION

Chart 1985

Area covered

6.133

1 This section cover the SW coast of Corse between Cap Muro (41°45′N, 8°40′E) and Punta di u Capicciola (41°25′·7N, 9°16′·2E). It is arranged as follows:

Cap Muro to Pointe de Senetosa (6.138).
Pointe Senetosa to Cap de Feno (6.158).
Bonifacio Strait (6.175).

Topography

6.134

1 The characteristic wide bays of the W coast continue briefly with Golfe de Valinco (41°40′N, 8°48′E). From Pointe de Senetosa, 6 miles S, the coast extends 23 miles SE in a progression of small bays and coves, fringed with rocks and dangers, into the Bonifacio Strait. Les Moines (41°27′N, 8°54′E), a dangerous shoal, forms part of a rocky bank extending up to 4½ miles off the SW coast.

2 This coast is dominated by Montagnes de Cagna, a ridge of peaks extending SW from Monte Calve. The highest point of the range is Punta d'Ovace (41°35′N, 9°05′E).

Depths

6.135

1 Offshore the seabed rises gradually from the ocean floor into the relatively shallow water of the Bonifacio Strait where depths of less than 50 m are encountered in the fairways.

Although generally steep-to the coast is fringed with rocks and shoals, some of which extend into coastal waters. The Bonifacio Strait is encumbered by numerous islands, rocks and dangerous shoals.

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Seaplane operations

6.136

1 Seaplanes, used to fight forest fires, may operate from sheltered waters on this coast in the summer, particularly within Golfe di Valinco (41°40′N, 8°48′E). Vessels must give way to seaplanes and remain at least 500 m from their operating area.

Territorial waters

6.137

1 The boundary of French and Italian territorial waters within the Bonifacio Strait is indicated by the alignment (104°) of beacons on Isola Budelli (41°16′·6N, 9°20′·9E) and Isola La Maddalena (41°15′·7N, 9°25′·5E) and the alignment (221°) of a pair of beacons on Punta Marmorata (41°15′·5N, 9°14′·0E).

CAP MURO TO POINTE DE SENETOSA

General information

Chart 1985

Routes

6.138

1 The coastal route leads, from a position WSW of Cap Muro (41°44′·5N, 8°39′·6E), 20 miles SE to a position SSW of Pointe de Senetosa (41°33′·5N, 8°47′·3E).

An inshore route leads through Golfe de Valinco to the port of Propriano (41°40′·7N, 8°54′·1E).

Topography

6.139

1 Golfe de Valinco lies between Cap Muro and Pointe de Campomoro (Campo Moro), 8¾ miles SE, extends 6 miles E and is bordered by mountains. The peaks on the N side of the bay are generally higher than those on the S. The head of Golfe de Valinco is a wide sandy beach; Rivière Baraci enters the bay at the N end of it. The coast S of Pointe de Campomoro (41°38′·4N, 8°48′·4E) remains rocky and elevated close inland but now progessess in a series of small bays and inlets.

Depths

6.140

1 Deep water extends into Golfe de Valinco to within 1¾ miles of the head of the bay, the seabed then shelves gradually to the 5 m depth contour which lies approximately 1 cable from the shore. However the shores of the bay are fringed with rocks which can extend up to 6 cables off some headlands.

Principal marks

6.141

1 **Landmarks:**

Punta di a Saina TV mast (41°46′·2N, 8°46′·0E).

Neru Tower (41°43′·6N, 8°42′·6E).

Punta di Buturetu (Sommet de Buturetto) (41°43′·6N, 8°54′·6E), a rock on the summit resembles a citadel.

Punta Furchiccioli (Furchicciole) (41°45′·6N, 8°59′·6E), appears to be a bare, black, level ridge very steep to the W.

2 Punta di Savaziglia (Sommet de Savaziglia) (41°40′·7N, 8°57′·7E), conical with two peaks.

Calanca Tower (41°41′·5N, 8°54′·4E).

Major lights:

Propriano, Jetée Scogliu Longu (white tower, green top, 17 m in height) (41°40′·8N, 8°53′·9E).

Pointe de Senetosa (two white towers, black tops, 15 m in height) (41°33′·5N, 8°47′·7E).

Directions

(continued from 6.113)

6.142

1 From a position WSW of Cap Muro (41°44′·5N, 8°39′·6E) the track leads SE passing, with positions relative to Cap Muro Light (41°44′·4N, 8°39′·7E):

SW of Neru Tower (2¼ miles SE), which stands on Cap Neru. The headland is formed from high blackish cliffs and is fringed with dangers extending up to 2½ cables offshore. The light coloured tower shows up clearly amongst the surrounding trees. Thence:

2 SW of Capannella Tower (5½ miles ESE), thence:

SW of Micalona Tower (8 miles ESE), thence:

SW of Calanca Tower (10¼ miles ESE), thence:

SW of Jetée Scogliu Longu Light (11¼ miles ESE), see 6.141, thence:

SW of Pointe de Campomoro (9 miles SE), on which stands a fort with a large round tower, thence:

3 SW of Punta d'Eccica (Pointe d'Eccica) (10½ miles SSE), the headland rises to a peak, Palo d'Eccica, which resembles a ruined tower. Îlot d'Eccica, a low bare island, lies 4 cables W of the headland; the channel between them is much encumbered with rocks and shoals. Thence:

W of Pointe de Senetosa Light (12½ miles SSE) (6.141) to a position SSW of the light.

(Directions continue at 6.164)

Anchorages

Chart 1424

Baie de Cupabia

6.143

1 Baie de Cupabia (41°44′N, 8°46′E) lies between Cap Neru and Pointe de Porto Pollo, 3 miles ESE. Anchorage can be obtained in depths of 12 to 15 m, sand and weed, 4 cables WNW of Capannella Tower (41°43′·4N, 8°47′·1E) as shown on the chart. It has been reported the anchorage is well sheltered from winds between W through N to S.

Porto Pollo

6.144

1 **General information**. Porto Pollo lies between a point 5 cables E of Pointe de Porto Pollo (41°42′N, 8°47′E) and a rocky promontory 8½ cables NE. A small craft haven lies in the NW part of the bay. Mariners should note Rochers de Taravu, shown on the chart, SSW of the anchorage.

Anchorage can be obtained in depths of about 20 m, moderate or poor holding ground E of the yacht haven breakwater, in the position shown on the chart. Small craft anchor closer inshore, see 6.154.

Baie de Campomoro

6.145

1 Baie de Campomoro (41°38′N, 8°49′E) lies close E of Pointe de Campomoro. The village of the Campomoro stands at the head of the bay. Château Durazzo, a modern building with three turrets, stands close SW of the village. An area, shown on the chart, within which fishing and diving are prohibited lies E of the bay.

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Propriano Port de Commerce (6.146)

(Original dated 2001)

(Photograph – SHOM)

2 Anchorage can be obtained in depths of about 20 m on the W side of the bay however the shelter is precarious and should the wind shift NE vessels must proceed to sea.

Port de Propriano

General information

6.146

1 **Position and function**. Port de Propriano (41°40′·7N, 8°54′·0E) is a small commercial port, handling mainly ferries and Ro-Ro traffic, with fishing and yacht harbours.

Topography. Port de Propriano fronts the town of Propriano at the head of Golfe de Valinco. The W side of the port is protected by promontory which extends 2 cables NNW from the coast, Roches de Scogliu Longu lie close off its head.

2 **Approach and entry**. Port de Propriano is approached through Golfe de Valinco and entered ESE of Jetée Nord (41°40′·8N, 8°54′·0E).

Traffic. In 2000 the port was used by 131 vessels with a total deadweight of 427 216 tons.

Port Authority. Port Authority of Propriano, Quai St. Erasme, Propriano, Corse.

Limiting conditions

6.147

1 **Controlling depth**. The commercial harbour has depths of 5·8 to 12·2 m.

Deepest and longest berth. The Ro-Ro berth on the S side of the commercial harbour; length 200 m depth alongside 8 m.

Maximum size of vessel handled. Length 180 m draught 7·5 m

Arrival information

6.148

1 **Port operations**. The port operates between 0800 and 2000 local time.

Outer anchorage. Anchoring is prohibited within a line, shown the chart, joining Jetée Nord and the breakwater protecting the yacht harbour, between 1 June and 30 September.

Anchorage is obtainable in depths of 5 to 10 m, sand and weed at the head of Golfe de Valinco.

2 **Pilotage** is compulsory for all vessels 60 m in length or greater. The compulsory pilotage area lies E of a line joining Pointe de Taravu (41°42′·1N, 8°50′·2E) and Portigliolo (41°38′·9N, 8°52′·1E). Pilots are provided from Ajaccio. In bad weather the pilot will board off the harbour entrance.

Regulations. The commercial harbour is closed to yachts and small craft.

Harbour

6.149

1 **General layout**. Port de Commerce occupies the NW part of the port separated from the fishing and yacht harbours by the Ro-Ro berth, extending ENE from the S end of Quai L'Herminier, and the W end of the yacht harbour breakwater.

Landmarks:

Punta di a Saina TV mast (41°46′·2N, 8°46′·0E).
Neru Tower (41°43′·6N, 8°42′·6E).
Calanca Tower (41°41′·5N, 8°53′·4E).
Jetée Scogliu Longu Lighthouse, see below.

Major Light:

Propriano, Jetée Scogliu Longu (41°40′·8N, 8°53′·9E) (6.141).

Directions for entering harbour

6.150

1 **Approaches**. From a position SSW of Cap Muro Light (41°44′·5N, 8°39′·7E) the track leads ENE into Golfe de Valinco passing, with positions relative to Pointe de Porto Pollo (41°42′N, 8°47′E):

S of Neru Tower (3½ miles NW), thence:
S of U Fraté (Sommet de la Moneta) (3½ miles NW), thence:

2 S of Punta di a Saina TV mast (4 miles NNW), thence:
S of Capannella Tower (1½ miles N), thence:
N of Pointe de Campomoro (3¾ miles SSE) (6.142), thence:
N of Botte du Campomoro (4 miles SE), thence:
S of Pointe de Taravu (2½ miles E), thence:

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3 N of Punta de Falumbaja (Pointe Cardicciani) (4½ miles SE). The point has a number of detached rocks close offshore, one of which is white and prominent. The track then leads to the pilot boarding area, 2 miles E of Jetée Scogliu Longu Light (6.149), shown on the chart.

Entrance. From the pilot boarding area the track leads ENE passing, with positions relative to Jetée Scogliu Longu Light:

4 N of Cap Laurosa (8 cables SW), thence:
S of Calanca Tower (8 cables NNW), thence:
N of Jetée Scogliu Longu Lighthouse to a position NNE of Jetée Nord Head Light (1 cable E) (white column, dark green top, 7 m in height) from which Port de Commerce can be approached.

Berths

6.151

1 The Ro-Ro berth on the S side of Port de Commerce is the largest; length 165 m. The dolphins on Quai des Transbordeurs, on the N side of the basin, provide another Ro-Ro berth.

Port services

6.152

1 **Facilities**. The usual facilities of a large town.

Supplies. Water from jetty connections, fuel at Quai L'Herminier.

Communications. The nearest airport is Propriano-Tavaria, 3½ miles from the port.

Rescue. There is a lifeboat stationed here.

Small craft

6.153

1 The basins S and SE of Port de Commerce provide 550 mainly marina berths in depths of 2·5 m to 4·0 m. There are 50 berths for visiting yachts. The entrance to the harbour lies between the E end of Brise-lames Ouest and a short breakwater extending from the shore close S. A light (red structure, 1 m in height), exhibited from the E end of Brise-lames Ouest, marks the N side of the entrance.

2 The yacht harbour provides comprehensive small craft facilities including repairs.

Small craft

Porto Pollo

6.154

1 **General information**. Porto Pollo (41°42′·5N, 8°47′·7E) is a small craft haven 1 mile NE of Pointe de Porto Pollo. The haven is protected by a mole extending 65 m N from the coast creating a small basin, with depths of 0·5 m to 2·5 m, open N. Within it three pontoon jetties extend N. The approach and entry present little difficulty but mariners should beware of Rochers du Taravu extending 6 cables SSE from the SE part of Pointe de Porto Pollo.

2 **Anchorage** can be obtained E of the mole.

Berths. The haven provides 150 mainly marina berths at pontoons with limited berthing on the inner face of the mole.

Facilities. Limited marina facilities.

Plage du Taravo anchorage

6.155

1 Plage du Taravo (41°43′N, 8°49′E) lines a wide bay NW of Pointe de Taravu (Punta di Bitussu). Anchorage can be obtained in depths of 3 to 7 m, sand and weed, off the W end of the beach.

Baie de Campomoro

6.156

1 Baie de Campomoro (41°38′·0N, 8°49′·0E). A small jetty with an alongside depth of 2·5 m at its head lies in the SW part of the bay.

Other names

6.157

1 Agulia, Anse d' (41°35′·2N, 8°46′·6E).
Aglio, Pointe d' (41°41′·5N, 8°53′·2E).
Arana, Anse d' (41°35′·0N, 8°47′·3E).
Conca, Calanque de (41°34′·5N, 8°48′·2E).
Ferro, Anse de (41°35′·0N, 8°47′·3E).
Rizzanèse (Rizzanèze), Rivière (41°38′·8N, 8°52′·2E).
Scalonu, Punta di (Migni, Pointe delli) (41°37′·8N, 8°47′·5E).

POINTE DE SENETOSA TO CAP DE FENO

General information

Charts 1985, 1992 and 1213

Route

6.158

1 The coastal route continues, from a position SSW of Pointe de Senetosa (41°33′·5N, 8°47′·3E), 15 miles SE to a position SW of Cap de Feno (41°23′·5N, 9°06′·0E) at the W end of the Bonifacio Strait Vessel Traffic Service area.

Inshore routes lead between several dangers lying off this coast and into inlets where anchorage is obtainable.

Topography

6.159

1 The coast extends SE in a series of rock fringed bays and coves overlooked by Montagnes de Cagna which rise a short distance inland. Les Moines (41°27′N, 8°54′E), effectively a continuation of the ridge of peaks extending SW from the interior of the island, is a dangerous rocky shoal which lies up to 4½ miles offshore and stands on the larger bank rising from the deep water close offshore.

Depths

6.160

1 With the exception of Les Moines and associated shoals the coast is steep-to and clear of dangers with the 100 m depth contour lying between 5 cables and 1½ miles of the coast. However close inshore the coast is fringed with rocks and dangers. The seabed now rises steadily from the deep water W of Corse towards the relatively shallow Bonifacio Strait, 5 miles E of Cap de Feno.

Hazards

6.161

1 The W boundary of the Bonifacio Strait Vessel Traffic Service (6.180) lies S of Cap de Feno with the W-going lane of the scheme on the Corsican side of the channel. Mariners navigating S through coastal waters or approaching the Bonifacio Strait to transit E should take full account of the problem of crossing traffic and note the precautionary area shown on the chart.

Nature reserves

6.162

1 Nature reserves enclose Les Moines (41°27′·5N, 8°54′·5E) and Îles Bruzzi (41°27′·7N, 9°01′·3E), the areas are shown on Chart 1213. Entry to the reserves is prohibited 1 Nov-15 Sep.

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Principal marks

6.163

1 **Landmarks:**

La Petrosa TV mast (41°30′·9N, 8°58′·7E).

Tour d'Olmeto (41°28′·6N, 8°59′·1E).

Mont Corbu TV mast (41°25′·4N, 9°08′·3E).

Major lights:

Pointe de Senetosa (41°33′·5N, 8°47′·7E) (6.141).

Cap de Feno (white square tower, black top, 11 m in height) (41°23′·6E, 9°05′·8E). The tower is marked "Feno" in black letters.

Cap de Feno and Lighthouse from S (6.163)

(Original dated 1992)

(Photograph – SHOM)

Directions

(continued from 6.142)

6.164

1 From a position SSW of Point de Senetosa Light (41°33′·5N, 8°47′·7E) the track leads ESE passing, with positions relative to the light:

SSW of Cala di Tizzano (2½ miles SE), an old grey fort standing on the W side of the entrance, thence:

SSW of Pointe de Lattoniccia (Cap de Zivia) (3¼ miles SE). Îlot de Lattoniccia, also known as Botte de Tizzano, about 20 m in height, white and steep, lies 3 cables S of the headland. Foul ground lies between the coast and islet. Thence:

2 SSW of Haut-fond de Lattoniccia (5½ miles SSE), a rocky bank with a least depth of 20·6 m over it. In strong W winds a heavy sea develops over the bank and mariners are advised to keep clear of it. Thence:

SSW of Pointe de Murtoli (5 miles SE), thence:

SSW of Pointe de Roccapina (7¼ miles SE). Tour de Roccapina stands 5 cables NE of the point and 2 cables further NE a ruined watch tower resembles a lion lying down, when seen from E. Thence:

3 SSW of Les Moines (8 miles SE), a light (S cardinal, 33 m in height, marked "Les Moines") stands on the S group of dangers. The red sector (306°–328°) of Pointe de Senetosa Light (6.163) also covers the danger but the light is obscured by Pointe Lattoniccia on closing the coast. The intensified sector (104½°–111½°) of Cap de Feno Light (6.163) covers the SW part of the danger. Thence:

4 SSW of Petit Écueil d'Olmeto (9½ miles SE), the outer of a group of three dangerous shoals extending 2¼ miles SW from Punta di Caniscione. Olmeto Tower, white and prominent, stands on the NE part of the headland. Thence:

SSW of Mont Milese (11¼ miles SE), elevation 166 m, thence:

5 SSW of Caldaerello belfry (12¾ miles ESE), white, square, thence:

SSW of Punta di Ventilegne (Pointe de Ventilègne) (14½ miles SE), thence:

SSW of Cap de Feno (17 miles SE) to join the E-going route through the Bonifacio Strait.

Useful marks

6.165

1 Sommet di Pietra Nera (41°32′·2N, 8°52′·6E) (elevation 197 m).

Punta di u Grecu (Sommet Cauria) (41°31′·4N, 8°54′·6E) (elevation 276 m).

La Monaccia belfry (41°30′·8N, 9°00′·7E), slender and blue coloured.

2 Monte Cheta (Monte Quieta or Sommet de Chéta) (41°29′·5E, 9°03′·0E), the peak is a pointed pyramid of dark heaped-up blocks. The peak can also give the appearance of a church steeple.

(Directions for the Bonifacio Strait continue at 6.186, for inshore channels through Les Moines at 6.167 and for the NW coast of Sardegna at 9.11)

Les Moines

Charts 1985, 1213

Description of waterway

6.166

1 A number of dangers extend up to 3½ miles offshore between between Pointe de Roccapina (41°29′·5N, 8°55′·2E) and Punta di Caniscione, 3 miles SE. With local knowledge small vessels can be navigated through some of the channels between them. Les Moines lies within a nature reserve, see 6.162.

Directions

6.167

1 **Channel between Écueil Le Prêtre and Grand Écueil d'Olmeto**. The line of bearing 296° of the rocky islet close WSW of Pointe de Roccapina (41°29′·4N, 8°55′·4E), seen midway between Pointe de Lattoniccia (Cap de Zivia) and Îlot de Lattoniccia (Botte de Tizzano), leads between Grand Écueil d'Olmeto and Écueil Le Prêtre. Although the channel has a depth of 21·5 m the leading line passes very close to a shoal with a least depth of 9·6 m over it, 1½ cables SW of Écueil Le Prêtre. A partly destroyed beacon (isolated danger) stands on Écueil Le Prêtre.

2 **Channel between Grand and Petit Écueil d'Olmeto**. **Leading marks**. The alignment (330°) of the following marks leads between the dangers in a depth of 42 m:

Tour de Roccapina (41°29′·8N, 8°55′·8E) and:

Punta di u Grecu 41°31′·4N, 8°54′·6E) (elevation 276 m).

Anchorages

Chart 1213

Cala di Fornellu

6.168

1 **General information**. Cala di Fornellu (Anse de Fornello) lies between Punta di Caniscione (41°28′·5N, 8°59′·0E) and a point 8½ cables E, from which a group of rocks extends 1¼ cables S. Monaccia belfry (6.165) is a useful mark.

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Anchorage can be obtained by small vessels in depths of about 16·5 m, 4 cables ENE of Tour d'Olmeto (6.163), as shown on the chart.

Baie de Figari

6.169

1 **General information**. Baie (Golfe) de Figari (41°27′·5N, 9°03′·5E) lies between Punta di Capuneru (Point de Figari) and Punta di Ventilegne 2 miles SE. The sides of the inlet are fringed with rocks extending up to 1½ cables from the W and 3 cables from the E shore. With local knowledge Baie de Figari provides good anchorage for small vessels. A small craft harbour, Pianottoli-Caldarello, lies in the NW head of the bay. A direction light (41°28′·5N, 9°04′·4E) is exhibited from the head of Pianottoli-Caldarello breakwater.

2 **Anchorage** can be obtained in a depth of about 17 m, sand, mud and weed, moderate holding ground, 1½ cables ESE of Tour de Caldarellu (41°27′·8N, 9°03′·5E), grey, stands on a rocky headland. Mont U Castellu, a rocky outcrop 1¼ miles NNE of the tower, is a useful mark. Anchorage can also be obtained in depths of 8 to 9 m, N and NE of Îlot du Port at the head of the bay.

Directions. From a position SW of Punta di Ventilegne the line of bearing 008° of Tour de Caldarello leads into the bay passing, with positions relative to the tower:

W of Écueil de Testa di u Gattu (di Gatto) (1½ miles SSE), a dangerous rocky shoal, thence:

Between an unnamed rocky shoal (7½ cables SW) with a least depth of 0·4 m over it and another unnamed rocky shoal (7½ cables SE), on which stands a rock 1·2 m in height, thence:

3 E of Rochers de Saint-Jean (6 cables SW), a group of above water rocks moderately steep to on the E side. A light-buoy (port hand) is moored ½ cable SE of it. Thence:

W of Écueil de Figari (6 cables SE), thence:

W of a light-buoy (starboard hand) (3 cables S).

The white sector (035°–037½°) of Pianottoli-Caldarello Direction Light clears into the anchorage ESE of Tour de Caldarello, the track passing midway between the tower and Îlot Purraja (Porraja) (3 cables ESE). A fish farm occupies a cove 5 cables NE of the tower, its limits are indicated by beacons; entry into the area is prohibited.

4 Only with good local knowledge can mariners proceed NE of Tour de Caldarello to the Îlot du Port anchorage.

Small craft

Chart 1985

Cala di Tizzano (Port de Tizzano)

6.170

1 **General information**. Cala di Tizzano (41°32′·6N, 8°51′·1E) is a narrow cove 2½ miles ESE of Pointe de Senetosa. The entrance can be identified by an old grey fort on the W side and a group of houses on the opposite shore. A breakwater extends 70 m from the E shore of the inlet; N of the breakwater the cove becomes very shallow.

2 **Anchorage** can be obtained in depths of 4 to 8 m, sand and weed in the entrance to the cove. Smaller vessels may anchor off the beach at the head of the inlet.

Berths. Mediterranean moorings are available on the inner face of the breakwater for vessels with a maximum draught of 1·5 m.

Facilities. Water and provisions are available.

Golfe de Murtoli and Golfe de Roccapina

6.171

1 **General information**. Golfe de Murtoli and Golfe de Roccapina (Anse de Roccapina) are separated by Pointe de Murtoli (41°30′·3N, 8°53′·1E). Much of the coast of both inlets is rock fringed but they are frequently used, in good weather, as small craft anchorages. A dangerous wreck lies 9 cables NW of Pointe de Murtoli.

Chart 1213

Anse d'Arbitru

6.172

1 Anse d'Arbitru (41°28′·5N, 9°00′·8E). With local knowledge the inlet can provide a good anchorage in depths of 5 to 7 m.

Piannotti-Caldarello

6.173

1 **General information**. Paiannotti-Caldarello (41°28′·6N, 9°04·4E) is a fishing harbour and yacht haven at the head of Baie de Figari. The haven is protected from the SW by an angled mole, a light (direction) is exhibited from its head. The white sector (035°–037½°) clears the narrow channel approaching the haven (6.169). The haven has depths of 1·5 to 6·0 m.

2 **Berths**. The haven has 200 yacht berths. The basin formed by the mole is reserved for fishing vessels. A pontoon jetty with depths of 1·5 m and a landing wharf with depths of less than 1 m lie W of the haven.

Other names

6.174

1 Bruzzi, Pointe (41°27′·8N, 9°01′·5E).
Chevanu, Anse de (41°28′·0N, 9°02′·0E).
Pozzo, Sommet di (41°28′·5N, 9°01′·8E).
Ruisseau de Loreto (41°31′·9N, 8°54′·9E).
Villa, Sommet de (41°32′·0N, 8°54′·0E).

BONIFACIO STRAIT

General information

Charts 1985, 1992 and 1213

Description of waterway

6.175

1 The Bonifacio Strait, also known as Bouches de Bonifacio (French) and Bocche di Bonifacio (Italian) lies between the S coast of Corse and the N coast of Sardegna connecting the Mediterranean and Tyrrhenian Seas. A Vessel Traffic Service Scheme (VTSS) (6.180) governs the routes through the strait. This section describes:

The main routes used by the VTSS.

2 The S coast of Corse between Cap de Feno (41°23′·5N, 9°06′·0E) and Punta di u Capicciolu (41°25′·8N, 9°15′·9E), including the Îles Lavezzi archipelago.

The N coast of Sardegna between Capo Testa (41°14′·4N, 9°08′·3E) and Punta Marmorata (41°15′·5N, 9°14′·0E).

Topography

6.176

1 The S coast of Corse and N coast of Sardegna are, geologically, the same region. The coasts are rugged, rocky and indented by numerous small bays and coves, occasionally deeper inlets provide shelter. The rugged islands, fringed with rocks and shoals, which encumber the

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channel are further evidence of the physical continuity of the area.

Although the land rises gradually from each coast towards the mountainous interior of both islands some hills provide useful marks on either side of the strait.

Depths

6.177

1 To the W of the Bonifacio Strait depths reduce gradually from the ocean floor to the 100 m depth contour, located approximately at the 9° E meridian. Depths within the traffic lanes range between 33 m and 90 m and the lanes are free from isolated dangers. With the exception of Écueil de Lavezzi (41°19′N, 9°15′E) and a bank with a least depth of 19·3 m over it, 2½ miles NE, the coasts of the strait are steep-to with dangers enclosed by the 50 m depth contour which lies generally within 5 cables of the shore. To the E of the traffic scheme, at approximately the 9°30′E meridian, the seabed shelves quickly into deep water.

Traffic concentration

6.178

1 Concentrations of traffic may be encountered within the the precautionary areas at each end of the Bonifacio Strait VTSS and within the scheme where through traffic converges with vessels crossing the charted routes.

Traffic regulations

6.179

1 In addition to the mandatory requirements of BONIFREP, see 6.180, it is prohibited for French and Italian registered vessels and vessels navigating between two French ports carrying hydrocarbons, dangerous chemicals or substances likely to pollute the sea or coastline to transit the Bonifacio Strait.

2 Mariners navigating vessels of 5000 grt or greater carrying these cargoes are strongly urged not to use the Bonifacio Strait.

Vessel Traffic Service

6.180

1 An IMO adopted Vessel Traffic Service Scheme (VTSS) is in operation for the control of shipping within the Bonifacio Strait The charted routes are mandatory for all vessels of 20 m or more in length.

The ship reporting system, known as BONIFREP, is mandatory for all vessels of 300 grt or greater. Full details of the scheme are contained in the relevant *Admiralty List of Radio Signals*.

Nature Reserve and National Park

6.181

1 A Nature Reserve has been established around Îles Lavezzi (41°22′N, 9°15′E), diving and fishing within it are prohibited; the area is shown on Chart 1213.

A National Park lies between Isola Razzoli (41°18′·5N, 9°20′·5E) and Isola Santa Maria, 1½ miles E. Entry to the area, shown on Chart 1213, is prohibited.

Rescue

6.182

1 A lifeboat is stationed at Port de Bonifacio (6.197).

Natural conditions

6.183

1 **Current**. Within the Bonifacio Strait tidal streams are weak and variable however wind induced currents are more significant;

Wind direction	*Current*	*Rate (max) kn*
NW	E	2
W	E	4
E	W	3

2 **Weather and sea state**. In strong winds, particularly from NW, breaks develop throughout waterway.

Magnetic anomaly. A local magnetic anomaly, caused by submarine power cables, giving a maximum deviation of 3° may be experienced in the vicinity of the 9°12′E meridian.

Principal marks

6.184

1 **Landmarks:**

Mont Corbu TV mast (41°25′·5N, 9°08′·3E).

Tour de Sant' Amanza (41°25′·0N, 9°15′·4E), ruined.

Major lights:

Cap de Feno (41°23′·6N, 9°05′·8E) (6.163).

2 Capo Testa (white square tower and two storey dwelling, 23 m in height) (41°14′·7N, 9°08′·7E).

Cap Pertusato (white square tower, black top and corners, 21 m in height) (41°22′·1N, 9°11′·1E). The light is marked "Pertusato" in black letters on a wall beneath the tower.

Île Lavezzi (square tower, white dwelling, red band, 12 m in height) (41°20′·1N, 9°15′·6E).

3 Isola Razzoli (truncated conical stone tower, 12 m in height) (41°18′·5N, 9°20′·4E).

Other navigational aids

6.185

1 **Racons:**

Écueil de Lavezzi Light-beacon (41°19′·1N, 9°15′·3E).

Isola Razzoli Light (41°18′·5N, 9°20′·4E).

Directions

(continued from 6.164)

6.186

1 **East-going**. From a position approximately 8 miles SSW of Cap de Feno (41°23′·5N, 9°06′·0E) the track joins the Bonifacio Strait VTSS and initially leads E passing, with positions relative to Écueil de Lavezzi Light-beacon (41°19′·1N, 9°15′·3E):

S of Cap de Feno (8½ miles NW), from which a light is exhibited (6.163) thence:

2 S of Mont de la Trinité (8 miles NW), the most W of the three peaks is surmounted by Croix de la Trinité, close S of which is a monastery. Thence:

S of Mont Corbu TV mast (8¼ miles NW), thence:

N of Capo Testa (6½ miles SW), a rugged prominent peninsula fringed with rocks. Several shoals with depths of less than 8 m lie within 1½ miles of the W side of the headland; breaks may form over them. A light is exhibited from the headland (6.184). Thence:

3 S of Pointe de la Madonetta Light (red square tower, grey corners, 12 m in height) (6¼ miles NW), marking the W side of the entrance to Port de Bonifacio. Part of the town stands on top of the peninsula E of it and can be seen clearly. Thence:

N of Isolotto Municca (5 miles SW). Submarine power cables land 5 cables SE of the island. Thence:

4 S of Cap Pertusato (4½ miles NW), a light (6.184) is exhibited from a position 2 cables NE of it. A signal station stands 5 cables NW of the light. A

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shoal with a least depth of 4·2 m lies 4 cables ESE of the light. Thence:

N of the entrance to Porto Longonsardo (Porto di Santa Teresa Gallura) (4½ miles SW). Light-beacons (lateral) mark shoals either side of the entrance, thence:

N of Punta Falcone (3½ miles SSW) the N extremity of Sardegna, thence:

5 N of Punta Marmorata, 5 cables E of Punta Falcone. Beacons standing SW of Punta Marmorata indicate part of the boundary of Franco-Italian territorial waters. Thence;

S of Pyramide de La Sémillante (1¼ miles NNW) The conspicuous obelisk is a memorial to the ship's company of the French frigate *Sémillante,* lost in 1854. Thence:

6 S of Écueil de Lavezzi Light-beacon (black tower, red band, isolated danger topmark, 22 m in height).

The track then leads NE passing, with positions relative to Écueil de Lavezzi Light-beacon (41°19′·1N, 9°15′·3E):

SE of Sud Lavezzi Light-buoy (S cardinal) (7½ cables S), thence:

SE of Capu di u Beccu (Pointe Becchi) (1 mile NNE), on which stands Île Lavezzi Light, see 6.184, thence:

7 N of Isola Razzoli (4 miles E) (10.5), a hilly island which exhibits a light (6.184). Secca Razzoli, a rock with a least depth of 8 m over it, and Scoglio Callot, an above water rock, lie respectively 5½ and 2¾ cables NW of Isola Razzoli.

The traffic lane continues NE for a further 3 miles to the inner end of the E precautionary area; the extent of the area is shown on the chart.

(Directions for passage NE of Arcipelago di La Maddalena continue at 10.13)

6.187

1 **West-going**. From a position approximately 9 miles E of Punta di u Capicciolu (41°25′·8N, 9°15′·9E) the track joins the Bonifacio Strait VTSS and initially leads SW passing, with positions relative to Écueil de Lavezzi Light-beacon (41°19′·0N, 9°15′·3E):

SE of Tour de Sant' Amanza (6 miles N) (6.184), thence:

2 SE of Écueil de Perduto (4 miles NE), the shoal is marked by a light-beacon (E cardinal), thence:

SE of Île Perduto (3¾ miles NE), a low island surmounted by a small block of rock. The island is surrounded by rocks and shoals extending up to 3½ cables from it. A light-buoy (W cardinal) WNW of the island marks the the edge of these shoals. Thence:

3 SE of an unnamed bank (2¾ miles NE) with a least depth of 19·3 m over it, thence:

NW of Isola Razzoli Light (4 miles ESE) (6.184), thence:

SE of Île Cavallo (2½ miles NNE), which exhibits a sectored light (white masonry turret, 3 m in height) from the head of the marina breakwater, thence:

4 SE of Île Lavezzi (1 mile NNE), a rugged mass of rock surrounded by islets, rocks and shoals. The island exhibits a light (6.184), thence:

SE of Écueil de Lavezzi Light-beacon, thence:

S of Sud Lavezzi Light-buoy (S cardinal) (7½ cables S).

The track then leads WNW passing, with positions relative to Écueil de Lavezzi Light-beacon:

5 S of Pyramide de La Sémillante (1¼ miles NNW) (6.186), thence:

S of Punta de Sperono (3¼ miles NW), the headland has vertical sides. A beacon, with a pole topmark, stands on it. Thence

6 S of Le Prêtre (3¼ miles NW), a dangerous shoal marked by a beacon (isolated danger), thence:

S of Cala Sciumara (Fiumara) (4¼ miles NW). Submarine power cables land at the head of the inlet. The position is marked by beacons (black and yellow). Thence:

S of Cap Pertusato Light (6.184) and shoal (6.186) thence:

7 S of Pointe de la Madonetta Light (6.186), thence:

S of Cap de Feno light (8½ miles NW) (6.184).

The W-going lane now enters the W precautionary area, the extent of which is shown on the chart.

(Directions continue, for the W coast of Sardegna at 9.11)

Passage de Piantarella

Route

6.188

1 Passage de Piantarella leads between the islands and dangers off the SE coast of Corse between Punta de Sperono (41°22′·0N, 9°13′·3E) and Punta di u Capicciolu, 4 miles NE. The passage is only practicable with local knowledge, in good weather, by day when the beacons are clearly visible.

Directions

6.189

1 From a position SSE of Punta de Sperono the alignment (023°) of Tignosa di Ratino Beacon (N cardinal, 6 m in height) (41°22′·7N, 9°14′·4E) with the E extremity of Corse leads NE into the channel passing, with positions relative to the beacon:

E of Le Prêtre (1½ miles SW) (6.187), thence:

E of Punta de Sperono (1 mile SW) (6.187), thence:

E of Rocher de la Vachetta (8 cables SW).

2 On clearing Rocher de la Vachetta the track must be adjusted to pass 1 cable W of Tignosa di Ratino Beacon passing, with positions relative to the beacon:

E of Île Piana (5 cables SW), low and flat, thence:

W of Île Ratino (3½ cables SE), rocks and dangers extend 2 cables W of the island. Thence:

W of Tignosa di Ratino Beacon.

3 The alignment (228½°) astern of Île Piana beacon (wall, white SW side, black NE side) (41°22′·4N, 9°18′·8E) with Punta de Sperono beacon (black and white notched wall, pole topmark), 6 cables SW leads NE in a least depth of 5 m passing, with positions relative to Île Piana beacon:

Close SE of a shoal (1¼ miles NE) with a least depth of 3·5 m over it, thence:

4 NW of Île Poraggia (2 miles NE), a beacon (stone pyramid) stands on it, thence:

Close NW of Écueil de Porraggia (2¼ miles NE), a dangerous rocky bank. In 1998 it was reported that vessels should keep N of the charted 228½° lead in this vicinity to pass 2 cables clear of the danger. Thence:

5 SE of Îles Gavetti (2¼ miles NNE), a group of rocks extending 7 cables E from the coast of Corse, to a position E of Tour de Sant' Amanza (3 miles NNE).

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Piantarella anchorage

6.190

1 Anchoring is prohibited in the vicinity of the pipeline crossing Passage de Piantarella; the prohibited area is shown on the chart.

With local knowledge anchorage can be obtained in depths of 5 to 10 m, 2 cables NE of Île Piana beacon (6.189). The anchorage affords good shelter by day from all directions. In fine weather good anchorage can also be obtained NW of Tignosa di Ratino Beacon (6.189).

Channel between Île Ratino and Île Cavallo

General information

6.191

1 The channel between Île Ratino (41°22′·6N, 9°14′·8E) and Île Cavallo, 5 cables SE, has a least depth of 6·3 m but the navigable width is, in many places, reduced by dangerous shoals to approximately 1 cable. The channel is only suitable for small vessels navigated using local knowledge in fair weather.

Channel between Île Lavezzi and Écueil de Lavezzi

General information

6.192

1 The channel between Île Lavezzi (41°20′·5N, 9°15′·3E) and Écueil de Lavezzi, 1 mile S, has a least depth of 11·5 m between the rocky shoals. The channel does not significantly reduce distance and may only by used by vessels free to navigate outside the Bonifacio Strait Vessel Traffic Scheme lanes.

Directions

6.193

1 The line of bearing 106° of Isola Razzoli Light (41°18′·4N, 9°20′·4E) (6.184) leads through the channel.

Channel between Île Cavallo and Île Perduto

General information

6.194

1 The channel between Île Cavallo (41°22′N, 9°16′E) and Île Perduto, 1½ miles E, is useful for vessels rounding Corse. The channel has a least depth of 28·5 m.

Anchorages

Baie di Santa Reparata

6.195

1 Baie di Santa Raparata (41°14′·5N, 9°10′·0E). With local knowledge good anchorage for small vessels can be obtained in depths of about 10 m within the bay. However strong winds from NW or NE send in a heavy swell.

Cala Marmorata

6.196

1 **General information**. Cala Marmorata (41°15′·0N, 9°14′·4E) is entered S of Isole Marmorata, two islets close SE of Punta Marmorata. The passage between the islands and Sardegna is obstructed by rocks. A dangerous wreck, with masts showing, lies NNE of the islets. The head of the bay is rocky and should not be approached within 1 cable.

2 **Anchorage** can be obtained in depths of about 20 m in the middle of the bay. The anchorage is well sheltered but NW winds can send in a heavy swell.

Port de Bonifacio

Chart 1424

General information

6.197

1 **Position and function**. Port de Bonifacio (41°23′·4N, 9°09′·4E) is a small commercial, ferry and fishing port. A large yacht harbour occupies its E end.

2 **Topography**. The coast between Cap de Feno (41°23′·5N, 9°06′·5E) and Cap Pertusato, 4 miles ESE, is rugged and rocky, comprising mainly of red granite. About 2¾ miles ESE of Cap de Feno the coast consists of a sheer cliff composed of whitish limestone backed by angular ridges. A narrow inlet penetrates the cliffs and extends 8 cables E creating a high rocky peninsula on which the fortified town of Bonifacio stands. The headlands each side of the entrance are sheer and striated. The inlet provides a well sheltered natural harbour but can be difficult to distinguish from a distance.

3 **Approach and entry**. Port de Bonifacio is approached from the SSW and entered between Pointe de la Madonetta (41°23′·3N, 9°08′·7E) and Pointe du Timon, 2¼ cables SE.

Traffic. In 2000 the port was used by 2 vessels with a total deadweight 542 tons.

Port Authority. Port Authority of Bonifacio, Corse, France.

Bonifacio from W (6.197)

(Original dated 1992)

(Photograph – SHOM)

Limiting conditions

6.198

1 **Deepest and longest berth**. Port de Commerce Berth 3 (Quai de la Marine Nationale); length 60 m, depth alongside 7 m. French naval vessels have priority of use.

Maximum size of vessel handled. Length 100 m, draught 6 m.

Local weather and sea state. In good weather entry is straightforward by day or night. With strong winds between SW and NW or from the E entry and manoeuvring within the harbour becomes difficult.

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Arrival information

6.199

1 **Port operations**: 24 hours.

Notice of ETA required: 24 hours in advance.

Prohibited anchorage. Anchoring is prohibited in an area within Calanque de la Catena, on the N side of the port, shown on the chart.

Pilotage is compulsory for vessels 70 m or greater in length. The compulsory pilotage area is bounded by the 9°05′·8E meridian (Cap de Feno) and the parallel 41°22′N (Cap Pertusato). Pilots are provided by Ajaccio, see the relevant *Admiralty List of Radio Signals* for further details

2 **Tugs** can be arranged.

Regulated area. Port de Bonifacio is enclosed by a regulated area, shown on the chart. Sailing vessels and small craft under 20 m in length are only permitted within the area in order to enter harbour and are prohibited from stopping. These vessels must give way to warships and power driven vessels 50 m or greater in length.

Harbour

6.200

1 **General layout.** Port de Bonifacio lies within an inlet approximately 8 cables in length and between ¾ cable and 1 cable in width. Avant-Port, which contains the commercial berths, lies 3½ cables E of the entrance on the S shore. The fishing and yacht harbour occupy the head of the inlet.

Directions for entering harbour

6.201

1 From a position S of Pointe de la Madonetta (41°23′·3N, 9°08′·7E), the S point of a short peninsula from which a light (6.186) is exhibited, the track leads NNE into the entrance passing, with positions relative to Pointe de la Madonetta Light:

2 SE of the light, thence:

NW of Pointe du Timon (2½ cables SE), the headland is sheer and steep-to, except for a shoal, with a least depth of 5 m over it, close NW which lies in the entrance to Grotte Saint-Antoine, a large cave. Thence:

W of Pointe de l'Entrée (2 cables ENE), mariners should note the shoal depth of 8 m which lies ½ cable WSW of the point.

3 Once NW of Pointe de l'Entrée the track leads ENE then E into Avant-Port passing, with positions relative to Pointe de la Madonetta Light:

S of Pointe de l'Arinella Light (red structure, grey base, 9 m in height) (3½ cables NE). Calanque d'Arinella lies E of Pointe de l'Arinella. Thence:

N of Points Cacavento Light (white pyramid, dark green top, 4 m in height) (4½ cables ENE).

Useful mark:

Church of Saint Francois belfry (low, conical) (41°23′·2N, 9°09′·1E).

Mill (built of iron) (41°23′·4N, 9°09′·3).

Church of Saint Dominique (tower, with a barracks close SW) (41°23′·4N, 9°09′·4E).

4 Church of Saint Marie belfry (domed) (41°23′·3N, 9°09′·6E).

Berths

6.202

1 Avant-Port provides five berths; four are at quays, the largest of which is Berth 3, Quai de la Marine Nationale, see 6.198. The westernmost quay is a Ro-Ro berth. Two dolphins immediately E of Quai de la Marine Nationale provide the fifth berth which also belongs to the French Navy.

Port services

6.203

1 **Repairs**. Small repairs can be undertaken, divers are available.

Other facilities. There is a hospital in the town.

Supplies. Water available from jetty connections, small quantities of fuel available, provisions.

Communications. Nearest airport Figari-Corse Sud, 8 miles NNW.

Rescue

6.204

1 A lifeboat is stationed at Port de Bonifacio.

Small craft

6.205

1 **General information**. The quays and pontoon jetties available to small craft begin ½ cable E of Quai de la Marine Nationale. The yacht harbour normally accepts vessels up to 15 m in length however vessels up to 55 m are accepted by arrangement.

Berths. The yacht harbour provides 450 berths, of which 300 are available to visiting yachts, in depths 1·5 to 7 m.

2 **Facilities**. Comprehensive small craft facilities are available.

Porto Longonsardo

Chart 1213

General information

6.206

1 **Position and function**. Porto Longonsardo, also known as Porto di Santa Teresa di Gallura (41°15′N, 9°12′E), on the N coast of Sardegna, is a small ferry and fishing port with a substantial yacht harbour.

Topography. The port lies within a narrow inlet extending 7 cables SSW from the Bonifacio Strait. The cliffs either side of the entrance continue into the outer part of the inlet. Rocky banks with dangerous shoals on them extend NNE from both sides of the entrance. The village of Santa Teresa di Gallura stands on the W side of the inlet.

2 **Approach and entry**. Porto Longonsardo is approached from the Bonifacio Strait and entered between Punta Corvo (41°14′·7N, 9°12′·0E) and a headland 3 cables WNW, on which stands a conspicuous circular tower.

Limiting conditions

6.207

1 **Controlling depth**. The entrance channel has a least depth of 4·9 m.

Deepest and longest berth. Banchina di Ponente; length 190 m depth alongside 4·5 m.

Local weather and sea state. Strong NW winds send a swell into the harbour.

Arrival information

6.208

1 **Port operations**. 24 hours.

Harbour

6.209

1 **General layout**. The main ferry berth, Banchina di Ponente lies 3 cables SE of Punta Corvo Light, fronting Santa Teresa di Gallura. A short mole, from which a light is exhibited (green mast, 6 m in height) (41°14′·4N, 9°11′·7E) extends from the S end of the quay and marks

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the N end of Banchina Commerciale, used by ferries and fishing vessels; the yacht harbour occupies the head of the inlet S of it.

2 **Current**. A W-going current, attaining a rate of 2½ to 3 kn in the vicinity of the port, can be induced by E winds.

Directions for entering harbour

6.210

1 **Approach**. The entrance should be approached in the white sector (164°–184°) of Punta Corvo light (white hut, 7 m in height) (41°14′·7N, 9°12′·0E) passing, with positions relative to the light:

W of an unnamed shoal (6 cables NNE), with a least depth of 3·6 m over it, marked by a light-beacon (port hand), thence:

2 E of an unnamed shoal (4 cables NNW), with a least depth of 3·5 m over it, marked by a light-beacon (starboard hand).

Entrance lights. The alignment (196½°) of Porto Longonsardo Leading Lights leads into the harbour towards Banchina Ponente:

3 Front light (white and green mast, white rectangle, black stripe topmark, 10 m in height) (41°14′·3N, 9°11′·7E).

Rear light (mast, white rectangle, black stripe topmark, 5 m in height) (7 cables from front light).

Berths

6.211

1 **Anchorage**. Small vessels are permitted to anchor in depths of 5 m, good holding ground E of Banchina Commerciale.

Alongside berths, see 6.209.

Port services

6.212

1 **Supplies**. Water available from jetty connections, provisions available.

Small craft

6.213

1 **General information** The yacht harbour occupies the head of the inlet, S of the ferry berths. The harbour has depths of 2 to 5 m and accepts vessels up to 30 m in length.

Berths. The harbour provides 1000 berths, mainly at pontoons. Small craft are permitted to anchor in the small basin opposite Banchina Commerciale.

Facilities. Usual marina facilities available.

Small craft

Cala Spinosa

6.214

1 Cala Spinosa (41°14′·7N, 9°09′·0E) contains a quay.

Port de Cavallo

6.215

1 **General information**. Port de Cavallo (41°21′·8N, 9°15′·9E) is a marina on the S side of Île Cavallo. A mole extending S then WSW from the coast forms the basin. A light (white masonry turret, 3 m in height) is exhibited from the head of the mole. The marina is approached from the S remaining in the white sector (337°–344°) of the light. The approach is also marked by light-bouys (lateral). The marina has depths of 2·6 to 6·0 m and accepts vessels up to 20 m in length.

2 **Berths**: 240, mainly at pontoons, 37 are reserved for visiting yachts.

Facilities. The usual marina facilities are available.

Île Razzoli, Cala Lunga

6.216

1 Cala Lunga (41°18′·3N, 9°20′·0E) contains a short beach on which landing is possible. A small pier, used for servicing Île Razzoli Light, lies in the NE corner of the bay.

Other names

6.217

1 Barcaccia, Cala (41°14′·5N, 9°15′·8E).
Quadro, Porto (41°15′·1N, 9°12′·7E).
Sambuco, Cala (41°14′·8N, 9°15′·0E).
Scale, Contra di li (41°15′·0N, 9°13′·5E).

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NOTES

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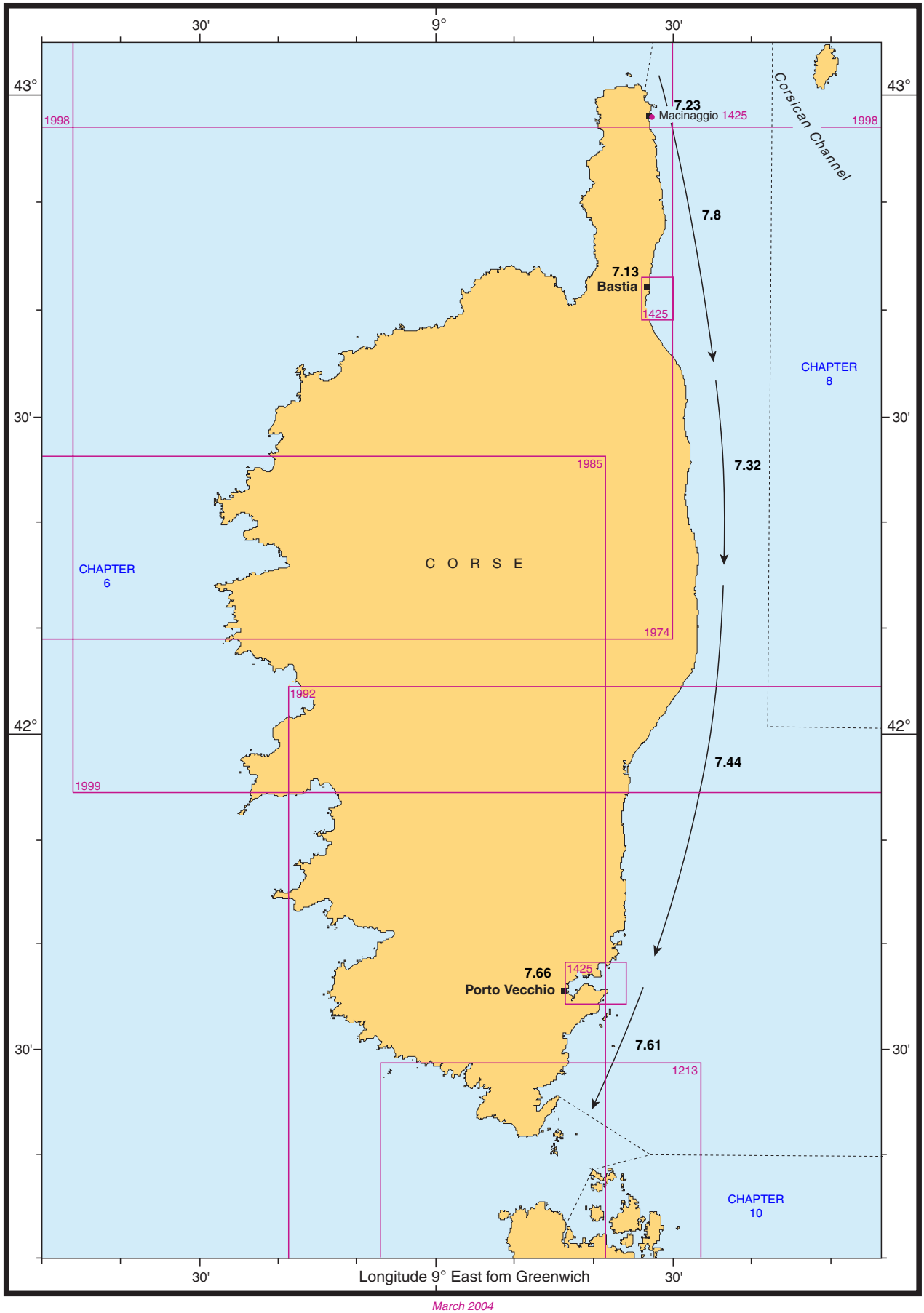
Chapter 7 - Corse - East coast



March 2004

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CHAPTER 7

CORSE – EAST COAST

GENERAL INFORMATION

Charts 1780, 1992, 1999

Scope of the chapter

7.1

1 This chapter describes the E side of the island of Corse between Pointe d'Agnello (43°01′N, 9°26′E) at the E end of Presqu'île du Cap Corse, on the N coast, to Punta di u Capicciolu (41°26′N, 9°16′E). The sections are arranged as follows:

2 Pointe d'Agnello to Tour d'Alistro (7.5).
Tour d'Alistro to Punta di u Capicciolu (7.40).

Through route

7.2

1 An ocean route between the E Mediterranean and the Gulf of Genoa passes through the Corsican Channel which lies between the NE coast of Corse and Isola Capraia, one of the western Italian islands of Arcipelago Toscano. The group comprises of Isola Gorgona (43°25′·7N, 9°54′·0E), Isola d'Elba, Isola Pianosa, Formiche di Montecristo and Isola di Montecristo.

Topography

7.3

1 The E coast of Corse between Pointe d'Agnello and Punta di u Capicciolu, approximately 90 miles S, can be divided into three topographically distinctive areas. The N section, from Pointe d'Agnello to Bastia (42°42′·0N, 9°27′·2E) being the most varied. The relatively low-lying coast extends SE from Pointe d'Agnello in a series of small, rock fringed bays to Pointe de Santa-Maria (42°59′·2N, 9°27′·7E). A coastal bank extends 1 mile NE from, and Îles Fiocchiarola lie up to 4 cables ESE of, the headland. The coast then continues 17 miles S towards Bastia and consists of rocky cliffs, broken by sandy beaches, backed by a high mountain ridge.

2 Immediately S of Bastia there is a marked change in topography as the mountains recede a few miles inland and the coast becomes low, marshy and fringed with a wide sandy beach.

3 A more rugged appearance returns in the vicinity of Solenzara (41°51′·5N, 9°24′·0E); here mountains and hills rise close to the coast and the number and size of bays indenting the rocky shore increase. The largest of them, Golfe de Porto-Vecchio (41°36′·7N, 9°20′·0E), contains the port of Porto-Vecchio. Close S of Golfe de Porto-Vecchio Îles Cerbicales and associated rocks and dangers lie up to 4 miles offshore. The coast, remaining steep and rocky, now leads 11 miles SSW towards the E end of the Bonifacio Strait.

Local magnetic anomalies

7.4

1 Magnetic anomalies have been reported at frequent intervals along the E coast of Corse, particularly between the latitudes of 42°17′N and 41°35′N, with deviations of up to 5° observed.

In addition a local magnetic anomaly creating a deviation of up to 2°30′ may be experienced within 1 mile of the power cables which land 2 miles S of Bastia.

POINTE D'AGNELLO TO TOUR D'ALISTRO

GENERAL INFORMATION

Chart 1999

Area covered

7.5

1 This section covers the NE coast of Corse between Pointe d'Agnello (43°01′N, 9°26′E) and Tour d'Allistro (42°15′N, 9°33′E). It is arranged as follows:

Pointe d'Agnello to Punta di Arcu (7.8).
Punta di Arcu to Tour d'Allistro (7.32).

Topography

7.6

1 The coast SE of Pointe d'Agnello leads, in a series of small bays, to Îles Finocchiarola which stand on a coastal bank extending up to 1 mile NE from the shore. The narrow coastal plain then quickly gives way to the mountain range forming much of Presqu'île du Cap Corse.

Between Îles Finocchiarola and Bastia, 17 miles S, ridges and foothills of the mountainous interior extend to the coast creating a series of rocky cliffs.

2 South of Bastia a coastal plain has been created by deposit from rivers and streams flowing from the mountains and hills lying between 2 and 5 miles inland.

Depths

7.7

1 The NE coast of Corse is steep-to except in the vicinity of Îles Finocchiarola (42°59′·0N, 9°28′·2E) and Punta di Arcu (25 miles S) where coastal banks extend, respectively, 2½ miles and 4 miles offshore. Elsewhere the 50 m depth contour lies within 2 miles of the coast; E of it depths increase rapidly as the seabed falls to the ocean floor.

POINTE D'AGNELLO TO PUNTA DI ARCU

General information

Chart 1999

Routes

7.8

1 An ocean route leads through the Corsican Channel (43°00′N, 9°40′E) between the the NE coast of Corse and Isola Capraia.

The coastal route leads, from a position N of Pointe d'Agnello (43°00′·6N, 9°25′·6E), 9 miles SE to a position E of Îles Finocchiarola (42°59′·0N, 9°28′·2E), then 27 miles SSE to a position E of Punta di Arcu (Pointe d'Arco) (42°34′·0N, 9°31′·5E).

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2 Inshore routes lead through approach channels, shown on the chart, to Bastia (41°42′N, 9°27′E) and the Bastia-Sud Gas Terminal, 3 miles SSE.

Restricted areas

7.9

1 Isola Capraia (43°02′N, 9°49′E) lies within the Arcipelago Toscana National Park. Navigation and fishing within 3 miles of and landing on the island require permission from local authorities.

Principal marks

7.10

1 **Landmarks:**

Sommet Toricella radome and TV mast (red obstruction lights) (42°57′·8N, 9°23′·1E).

Serra di Pigno, elevation 961 m, surmounted by a mast (red and white, 100 m in height) (42°41′·6N, 9°24′·0E).

Sainte-Marie Church Spire, Bastia (ochre coloured) (42°41′·6N, 9°27′·2E).

Gas terminal tank (white) (42°39′·8N, 9°26′·8E).

2 **Major light:**

Jetée du Dragon, Bastia (grey tower red lantern, 13 m in height) (42°41′·6N, 9°27′·3E).

Directions

(continued from 5.103)

7.11

1 From a position about 10 miles N of Pointe d'Agnello, on which stands a round tower (43°00′·6N, 9°25′·6E), the track leads SSE passing, with positions relative to Capo Sagro Light (42°47′·7N, 9°29′·4E):

ENE of Pointe d'Agnello (13 miles NNW), thence:

ENE of Sommet Toricella (11½ miles NNW) (7.10), thence:

2 ENE of Banc de Santa Maria (12 miles N), which extends 1¼ miles NE from the coast. Two shoals, with depths of 10·0 m and 9·3 m over them, lie on the outer end of the bank. The sea breaks heavily on the bank in foul weather. Thence:

E of Finocchiarola Light-buoy (11¾ miles N) (E cardinal), thence:

3 E of Îles Finocchiarola (11 miles N), a group of three islands, surrounded by rocks, standing a bank which extends up to 5 cables from the coast. A ruined tower stands on the E island; the remains of a stranded wreck lies NW of it. Thence:

E of Punta di a Coscia (Pointe de la Coscia) (10¼ miles NNW). The headland has a rounded summit on which stand an old mill and a TV mast (65 m high). Thence:

4 E of Macinaggio Jetée Head Light (10 miles NNW) (white tower, red top, 8 m in height), thence:

WSW of Punta del Trattoio Light (19 miles NE) (white hut, 3 m in height). Isola Capraia is described at 8.14. Thence:

E of Marine de Meria (8¼ miles NNW). An old windmill stands on the rocky promontory on the N side of the village. A tower stands on the shore 1 cable SSW of the windmill. Thence:

E of Santa-Severa (Marina de Luri) (5½ miles NNW), a small fishing harbour and marina, thence:

E of Marine de Porticciolo (4¾ miles NNW), the bay contains three boat havens, thence:

E of Marine de Pietrcorbara (2¾ miles NNW). The bay contains a boat haven; Tour de Castellare stands on the S headland, see 7.12. Thence:

5 E of Capo Sagro Light (white tower, green top, 8 m in height) (42°47′·7N, 9°29′·4E), thence:

E of Bastia (6 miles SSW), thence:

E of Bastia-Sud Gas Terminal (8 miles SSW). The entrance to Étang de Biguglia, a lagoon extending 7 miles SSE and separated from the sea by a ridge of sand dunes covered with vegetation, lies W of the terminal.

6 The track then leads SSE to a position about 12 miles E of Punta di Arcu (14 miles SSE).

(Directions continue, for Punta di Arcu to Tour d'Alistro at 7.35 and for Bastia at 7.17)

Useful marks

7.12

1 Tour de Sénèque, (42°54′·3N, 9°22′·3E) (6.16), stands on a ridge; a rocky pinnacle stands 2 cables SW of the tower.

Tour de l'Osse (Losse) (42°51′·7N, 9°28′·8E), grey, round, crenellated, stands above a low rocky cliff.

Tour de Castellare (Tour d'Aquila) (42°50′·0N, 9°28′·9E), ruined, stands on a rocky pinnacle.

Santa-Catalina (Catterina) Convent (42°49′·1N, 9°29′·2E), close to the coast, has a trefoil shaped tower.

2 Capo Sagro TV mast (42°48′·3N, 9°29′·1E), red and white with red obstruction lights.

Capo Sagro Signal Station (42°47′·9N, 9°29′·3E).

Mont Merizatodio (elevation 781 m) (42°47′·7N, 9°27′·3E).

Pozzo belfry (42°46′·3N, 9°27′·7E).

La Vasina (Lavasina) Convent belfry (grey, white cross on top) (42°45′·6N, 9°27′·9E).

Tour de Miomo (round) (42°44′·5N, 9°27′·7E).

Furiani belfry (white, square) (42°39′·5N, 9°24′·9E).

Bastia

Chart 1425 Plan of Bastia

General information

7.13

1 **Position and function**. Bastia (42°42′N, 9°27′E) is a small commercial and fishing port with marina facilities for small craft.

2 **Topography**. The port fronts the town of Bastia, which occupies a relatively narrow coastal plain and the lower slopes of the hills which rise quickly towards the mountainous interior of Corse. A mountain ridge 2 miles W of Bastia is dominated by Serra di Pigno, on which stands a TV mast (7.10).

3 **Approach and entry**. The port is approached from the E through a regulated area shown on the chart. Vessels carrying dangerous cargoes must use the approach channel, also shown on the chart, see 7.15. Sailing vessels and vessels 20 m in length or less may enter the area when entering or leaving the harbour; they are not permitted to stop within the regulated area and must give way to warships and power driven vessels 50 m in length or greater.

Limiting conditions

7.14

1 **Deepest and longest berth**. Quai Est, the inner face of Jetée Saint-Nicolas, 260 m in length, depth alongside 8 m.

Maximum size of vessel handled; length 200 m, draught 8·8 m.

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2 **Local weather and sea state**. The *Libeccio*, a strong W to SW wind, descends in violent squalls from Serra di Pigno (7.10). When this wind is blowing strongly entering or leaving Port Saint-Nicolas and berthing or unberthing at Quai Est becomes impossible. Strong E winds raise a swell and a very disturbed sea. A strong *Sirocco* makes Quai Nord unusable for small vessels.

3 A strong W wind (*Libeccio* and *Mistral*) makes entry or berthing in Vieux-Port difficult because of the violent and unpredictable squalls created.

Arrival information

7.15

1 **Port operations**; 0700–2000 local time.

Notice of ETA; 24 hours and 1 hour in advance.

Outer anchorages. Anchorage can be obtained in depths of 20 to 25 m, sand and mud, SE of Anse de Porto-Vecchio (42°41′·5N, 9°27′·1E), as shown on the chart.

2 An alternative anchorage can be found approximately 6 miles SSE in Arcu anchorage (7.24).

Pilotage is compulsory, for all vessels of 45 m or greater in length and greater than 150 grt, within the area bounded by 42°31′·4N and 42°42′·6N and a line 1·5 miles off the coast. The pilot embarks 1 mile E of the port.

Regulations concerning entry. Vessels carrying hydrocarbons or other dangerous cargoes should not enter the approach channel without permission from the Harbour Master.

3 There is a speed limit of 20 kn within 1 mile of the Harbour Master's office.

Sailing vessels and small craft under 20 m in length may navigate within the Regulated Area, shown on the chart, to enter or leave the appropriate harbours within the port but are not permitted to stop. Power driven vessels 50 m in length and greater and warships have right of way.

Harbour

7.16

1 **General layout**. Bastia consists of three harbours; Port Saint-Nicolas (Nouveau Port) the commercial harbour, protected by Jetée Saint-Nicolas, occupies the central and principal basin, to the S of it Vieux-Port provides berths for fishing vessels and some small craft. The N harbour, Port de Toga, provides marina facilities for small craft.

Directions for entering harbour

7.17

1 From a position E of the port the chart is sufficient guide to lead through the charted approach channel and regulated area to a position SSE of Jetée Saint-Nicolas Head Light (white tower, dark green band and lantern, 5 m in height) (42°41′·8N, 9°27′·4E).

Basins and berths

7.18

1 **Port Saint-Nicolas**. The basin is formed by Jetée Saint-Nicolas, which protects the NE and E sides of the harbour, and Môle Oblique, also known as Car Ferry Berth, which extends SE from the coast. The harbour entrance, 118 m wide, lies between Jetée Saint-Nicolas Head Light and Môle Oblique, which also exhibits a light (white column, red top, 1 m in height). There are Ro-Ro facilities at the N end of Quai Est and in the NE corner of the basin.

2 **Vieux-Port** lies 2½ cables SSW of the entrance to Port Saint-Nicolas. The outer part of the basin is protected from SE by Jetée du Dragon and NE by Môle Génois. Moles extending NE and SSW from the shore create an inner basin reserved for fishing vessels and small craft, see 7.20. Mediterranean mooring of larger yachts in the outer part of the basin may be approved in good weather.

3 **Toga Marina**, protected by a rubble breakwater, lies 3½ cables N of Port Saint-Nicolas, see 7.20.

Port services

7.19

1 **Repairs**. Urgent small repairs can be undertaken.

Other facilities. Military and civil hospitals in the town.

Supplies. Provisions, water from jetty connections, fuel by bowser only.

Communications. Nearest airport Poretta, 12 miles S of Bastia.

2 **Harbour regulations**. When Quai Nord and Quai Nord-Est are both in use length restrictions for each berth apply; Quai Nord 72 m, Quai Nord-Est 120 m.

3 **Rescue**. There is a lifeboat stationed at Bastia.

Small craft

7.20

1 **General information**. Small craft are prohibited from entering Port Saint-Nicolas. The approach to Bastia is enclosed by a regulated area, see 7.15.

Vieux-Port. The harbour is entered between Jetée du Dragon and Môle Génois, ½ cable NW. Lights are exhibited from each; Jetée du Dragon Head Light (7.10), Môle Génois Head (light grey tower, dark green top, 9 m in height) (42°41′·7N, 9°27′·2E). The harbour accepts vessels with a maximum draught of 5 m.

2 Access to Vieux-Port is not easy and becomes very difficult during the *Libeccio*; E and NE winds can also make manoeuvring within the harbour difficult. The Citadelle, close S of the harbour, Saint-Marie belfry (7.10) and Jetée du Dragon Lighthouse (7.10) are all useful for identifying and approaching the entrance.

A road tunnel crosses the harbour between the root of Môle Génois and the shore S of it, below the Citadelle. Depths over the tunnel vary between 3 m closer to the shores and 6 m over the mid-part.

3 The harbour has 270 small craft and fishing vessel berths, mainly at pontoons. The NE part of the basin is reserved for fishing vessels. Usual small craft facilities including minor repairs.

4 **Port de Toga.** The marina lies 3 cables N of the commercial port and fronts the village of Ville-di-Pietrabugno. The basin is protected by a main rubble breakwater, extending approximately 2 cables NNE parallel to the coast, and a much shorter one extending ESE from the coast close S of Pointe Toga. The N facing entrance, dredged to a depth of 4 m, is marked by lights exhibited from the heads of the breakwaters; E Breakwater Head (white tower, red top, 6 m in height) (42°42′·6N, 9°27′·5E), N Breakwater Head (white masonry support, 4 m in height). The Harbour Master's office stands on the N breakwater head. The narrow entrance is dangerous in strong winds. Vessels up to 30 m in length and maximum draught 4 m are accepted.

5 The marina provides 360 pontoon berths in depths of 2 to 6 m and comprehensive small craft facilities including repairs.

Minor harbours and anchorages

Bastia-Sud Gas Terminal

7.21

1 **General information**. Bastia-Sud Gas Terminal (42°39′·7N, 9°27′·5E) lies 3 cables offshore, E of Furiani. Access to this terminal is regulated and entry controlled by

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the Harbour Master at Bastia. Pilotage is compulsory; the berth lies in the compulsory pilotage area of Bastia.

Prohibited anchorage. Anchoring and fishing are prohibited in an area, close N of the terminal, protecting submarine power cables which land 2 cable NNE of the conspicuous white storage tank within the gas terminal.

2 **Directions**. Gas carriers must approach the terminal through the approach channel shown on the chart. Furiani belfry (7.12) and the white storage tank of the terminal are useful marks. The track leads from the outer end of the approach channel, 6½ miles W, to the vicinity of Bastia-Sud Light-buoy (E cardinal) (42°39′·7N, 9°27′·9E); the berth lies 2½ cables W of this position. Conical buoys are moored close W and ½ cable S of the berth.

3 **Berth**. Four mooring buoys provide a single berth in a depth of about 15 m. The berth is connected to the terminal ashore by submarine pipeline.

Chart 1999

Baie de Tamerone anchorage

7.22

1 Baie de Tamerone (42°58′·4N, 9°27′·5E). Anchorage can be obtained in depths of 11 m, weed, 3½ cables NNE of Punta di a Coscia on the alignment (209°) of the chapel in the N part of Macinaggio with Punta di a Coscia. An old mill and a radio mast (65 m high) stand on the rounded summit of the headland.

The bay affords good shelter from W winds and is more sheltered from them and the *Libeccio* than the anchorage off Macinaggio (7.23).

Macinaggio anchorage

7.23

1 Maccinaggio (42°57′·6N, 9°27′·2E) is a small village in the S part of Baie de Macinaggio. The village is fronted by a large marina (7.25). Anchorage can be obtained in a depth of 7 to 9 m, sand and weed, 2¼ cables ENE of the root of Jetée Est (42°57′·5N, 9°27′·4E). North of this berth vessels are exposed to squalls blowing down a valley extending WSW from Macinaggio; S of the berth the holding ground is poor.

Arcu anchorage

7.24

1 Arcu anchorage (42°36′·7N, 9°30′·8E). Good anchorage can be obtained in depths of about 20 m, weed and muddy sand, good holding ground, 2½ miles NNW of Punta di Arcu. The berth is shown on the chart. The belfry of Sainte-Marie church in Bastia (7.10), and the conical peak of Cime di au Zucharelli (47°37′·7N, 9°23′·1E) are useful marks.

Small craft

Macinaggio Marina

7.25

1 **General information**. Macinaggio Marina (42°57′·7N, 9°27′·3E) fronts the village of Macinaggio which lies in the S part of Baie de Macinaggio. The harbour is protected from the E by a mole, Jetée Est, which extends 2½ cables N from the coast and exhibits a light (white tower, red top, 8 m in height) from its head. A smaller rubble breakwater, Épi Nord, which also exhibits a light (white tower, green top, 2 m in height), extends E from the coast towards the head of Jetée Est. The harbour entrance lies between the heads of the breakwaters, faces NNW, is 50 m wide and has a depth of 3·4 m. The marina accepts vessels up to 40 m in length and maximum draught 3·4 m however mariners should note silting regularly reduces the depth in the entrance to about 2 m; available depth should be confirmed with the Harbour Master.

2 **Berths**. The marina provides 585 Mediterranean mooring berths in depths of 1·5 to 3·5 m, 200 berths are available to visiting yachts.

3 **Facilities**. Comprehensive small craft facilities including some repairs. There is a lifeboat stationed here.

Port de Santa-Severa

7.26

1 **General information**. Port de Santa-Severa (42°53′·2N, 9°28′·5E) is a small craft haven and fishing harbour at the head of Marin de Luri. The haven is protected by two breakwaters, the entrance between them is 30 m wide, faces SW and has depths of 3 to 4 m. The entrance becomes difficult in onshore winds and mariners should beware of rocky shoals that extend mainly E of the harbour. The haven accepts vessels up to 12 m in length.

2 **Anchorage** can be obtained in depths of 3 to 4 m, sand, S of the harbour however mariners should beware of rocky shoals in the S part of the bay.

Berths. The harbour provides 80 berths at quays and pontoons, 20 for visiting yachts, in depths of 0·5 m to 2·0 m.

Facilities. Limited small craft facilities.

Marine de Porticciolo

7.27

1 **General information**. Marine de Porticciolo (42°52′·6N, 9°28′·5E) contains two small craft havens and a third lies close S of the S headland of the bay. The latter, at the foot of a village, has depths of 1·5 m to 2·0 m. Within the bay the haven on the S coast is protected by a short stone jetty and used by a few local fishing vessels. The haven in the SW corner of Marine de Porticciolo consists of two very small basins; it can only accept vessels of less than 1·5 m draught.

2 **Anchorage** can be obtained in depths of 3 to 4 m, sand, 1 cable off the beach fronting the village of Porticciolo.

Facilities. There are few facilities in the village.

Marine de Pietracorbara

7.28

1 **General information**. Marine de Pietracorbara (42°50′·3N, 9°29′·0) is entered close N of the ruined Tour de Castellare. A small mole in the SW part of the bay provides shelter for a few small craft.

Marine de Sisco

7.29

1 **General information**. Marine de Sisco (42°48′·7N, 9°29′·5E) is a boat haven at the mouth of Ruisseau de Sisco, a stream entering the N part of the bay. The haven is protected by short rubble breakwaters extending from the the river mouth. Within the narrow entrance the banks of the stream are quayed. There is a small boatyard.

2 **Anchorage** can be obtained in depths of 3 to 4 m, sand, approximately 1 cable SE of the river mouth.

Port d'Erbalunga

7.30

1 **General information**. Port d'Erbalunga (42°46′·5N, 9°28′·7E), a boat haven and small fishing haven, lies close N of a rocky headland on which stand a ruined tower and some of the closely spaced older buildings of the village of Erbalunga. The rest of the village lies on the SW side of the haven; a mole protects the N side of the haven. The church, with a triangular Grecian facade is a useful mark.

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A fleet of about ten small fishing vessels work from Erbalunga; in E winds they are beached at the head of the haven. Rocks lie off the point on the S side of the entrance and submerged blocks lie close off the breakwater head.

2 Fresh provisions available from the village. Small craft fuel available from nearby garage.

Anchorage can be obtained in good weather in a depth of 5 m off the haven.

Other names

7.31

1 Allticone, Mont (42°51′·7N, 9°24′·2E).
Biguglia (42°37′·7N, 9°25′·0E).
Brando (42°46′·8N, 9°27′·7E).
Castello, Sommet (42°55′·2N, 9°26′·1E).
Cornichiola, Sommet (42°44′·2N, 9°27′·0E).
Crosciano (42°49′·0N, 9°28′·1E).
Guinco, Sommet de (42°51′·4N, 9°28′·4E).
Ortale (42°36′·0N, 9°27′·0E).
Pietre Scritte, a ruined watch tower (42°47′·3N, 9°28′·1E).
Saint Antonio Chapel (42°48′·6N, 9°26′·7E).

PUNTA DI ARCU TO TOUR D'ALISTRO

General information

Chart 1999

Routes

7.32

1 The coastal route leads, from a position E of Punta di Arcu (42°33′·8N, 9°31′·6E), 19 miles S to a position E of Tour d'Allistro (42°15′·0N, 9°33′·3E).

An inshore route leads through the approach channel, shown on the chart, to Lucciana Oil Terminal (42°33′·0N, 9°32′·5E).

Topography

7.33

1 The low, flat coast in the vicinity of Punta di Arcu continues S to the mouth of Fleuve Golu (Golo), 2 miles S, and on to the mouth of Rivière de Fium'Altu, 7 miles S; here the mountains approach the coast briefly before receding a short distance to back the narrow coastal plain that extends 10 miles S to the vicinity of Tour d'Alistro.

Principal marks

7.34

1 **Landmarks:**
Mont Sant'Angelu (Angelo) (42°27′·8N, 9°24′·5E) square summit, perpendicular N face.
White dome (42°25′·9N, 9°32′·3E).
Monte San Petrone (42°23′·8N, 9°19′·6E).
Punta di Caldane (42°19′·7N, 9°20′·8E).
Rocher de Muteri (42°18′·0N, 9°24′·2E).

2 **Major light:**
Alistro (grey eight-sided tower, red house, black lantern, 27 m in height) (42°15′·6N, 9°32′·5E).

Directions

(continued from 7.11)

7.35

1 From a position about 12 miles E of Punta di Arcu (42°33′·8N, 9°31′·6E) the track leads S passing, with positions relative to Alistro Lighthouse (42°15′·6N, 9°32′·5E):
E of Lucciana Oil Terminal Light-buoy (E cardinal) (17 miles N), thence:
E of Marine de Padulella (7 miles N). The village is conspicuous on this part of the coast. Thence:

2 E of Porto Campoloro (4 miles N). Mont Castello d'Osari, the most prominent peak in the range extending NNW to Mont Sant'Angelu, stands 3 miles W of the harbour. Thence:

3 E of Marine de Prunete (3¾ miles N) a small fishing village. Maison Arbres, which stands amongst the trees 7 cables WSW of the village, is similar in appearance to Maison de la Nuit, see 7.36, and mariners should beware of confusing them. Thence:

4 E of Alistro Lighthouse. A modern signal station, white with a black top, stands close E of the light.

The track continues approximately 1 mile further S to a position about 11 miles E of Tour d'Alistro.

(Directions for Tour d'Alistro to Punta Capicciola continue at 7.49)

Useful marks

7.36

1 Cima di Taffoni, (elevation 1117 m) (42°33′·7N, 9°23′·0E). The summit has three peaks, the central and highest resembles a citadel.
Borgo belfry (42°32′·3N, 9°25′·6E).
Bastia-Poretta Airport control tower (42°32′·9N, 9°32′·7E).
Lucciana Power Station (42°31′·9N, 9°27′·2E).
Pero Casevecchie belfry (42°24′·8N, 9°28′·0E).
Saint-Nicolao belfry (42°22′·2N, 9°30′·0E).
Maison de la Nuit, yellow (42°20′·4N, 9°31′·9E).
Radio mast (42°17′·1N, 9°33′·0E).
Tour Falcone, ruined (42°16′·0'N, 9°31′·5E).
Punta Campana (Mont Saint Appiano) (42°16′·2N, 9°26′·7E).

Minor harbours and anchorages

Lucciana Oil terminal

7.37

1 **General information**. Lucciana Oil Terminal (42°32′·8N, 9°32′·5E) lies 3 cables offshore, 1½ miles SE of Punta di Arcu and supplies the power station 4 miles WSW. Access to the terminal is regulated; tankers must approach the terminal through the channel shown on the chart. Entry to the channel is controlled by the Harbour Master at Bastia. Pilotage is compulsory within 1 mile of the terminal.

2 **Directions**. The approach channel, shown on the chart, leads 6 miles W to the vicinity of Lucciana Light-buoy (E cardinal) (42°32′·9N, 9°33′·1E). The berth lies 2 cables W of the light-buoy.

Berth. Mooring buoys provide a single berth, in a depth of 9·9 m, for discharging cargo. Vessels berth on a heading of 068° secured between two buoys forward and two buoys aft. The berth is connected by submarine pipeline to the terminal ashore.

Small craft

Port de Campoloro

7.38

1 **General information**. Port de Campoloro, also known as Taverna Marina (42°20′·5N, 9°32′·5E), is a formed by two breakwaters. The S breakwater, Jetée Est, extends 1 cable NE then 1½ cables NNW; a sectored light (white column, red top, 5 m in height) is exhibited from its head. Digue Nord extends 1 cable ENE from the coast then ½ cable SE towards Jetée Est; a light (white tower, green

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top, 2 m in height) is exhibited from its head. A dangerous wreck lies 1 cable S of Jetée Est elbow. Outfalls extend 4 cables E of Digue Nord and 3 cables E of a position 2 miles further S; anchoring and fishing are prohibited within 100 m of them.

2 The harbour entrance lies between the breakwater heads, faces NE and is about 50 m wide. The harbour is divided into two basins by Môle Nord, which extends E from the shore. Avant Port, to the N, is often silted and full of weed; a channel leads through the E side from the harbour entrance into the marina, which lies S of the mole. The channel is regularly dredged to a depth of 3 m but is subject to silting and depth should be confirmed with the Harbour Master before entering. Silting also occurs on the W side of Jetée Est, adjacent to the head of Môle Nord. A white warehouse on the W side of Avant Port is a useful mark when approaching the harbour.

3 **Berths**. The marina provides 460 Mediterranean mooring berths at pontoons in depths of 0·5 to 2·8 m; 120 berths are reserved for visiting yachts.

Facilities. Comprehensive small craft facilities including repairs.

Other names

7.39

1 Alésani, Rivière de (42°17′·2N, 9°33′·5E).
Florentine, Tour (42°16′·7N, 9°32′·6E).
Loreto-di-Cascinca (42°28′·6N, 9°25′·8E).

TOUR D'ALISTRO TO PUNTA DI U CAPICCIOLU

GENERAL INFORMATION

Charts 1999, 1992

Area covered

7.40

1 This section covers the E coast of Corse between Tour d'Alistro (42°15′·0N, 9°33′·3E) and Punta di u Capicciolu (41°25′·8N, 9°15′·9E). It is arranged as follows:

Tour d'Alistro to Punta Capicciola (7.44).
Punta Capicciola to Punta di u Capicciolu (7.61).

Topography

7.41

1 The coast between Tour d'Alistro and Solenzara, 25 miles SSW, is low and marshy with a wide sandy beach. There are no natural harbours or sheltered anchorages.

Depths

7.42

1 This coast is steep-to and free from isolated dangers to seaward of the 50 m depth contour. Between Marine d'Aléria (42°06′·2N, 9°33′·0E) and Solenzara 16 miles SSW) a narrow coastal bank keeps the 50 m depth contour approximately 3 miles offshore; elsewhere it lies between 1 and 2 miles offshore.

Local magnetic anomaly

7.43

1 A local magnetic anomaly may be experienced E of Étang de Diane (42°08′·1N, 9°32′·4E), the area is shown on Chart 1999. Deviations of up to 5° have been reported off the E coast of Corse.

TOUR D'ALISTRO TO PUNTA CAPICCIOLA

Chart 1999

General information

Routes

7.44

1 The coastal route leads, from a position E of Tour d'Alistro, 9 miles S to a position E of Aléria. Thence 30 miles SSW to a position E of Punta Capicciola.

An inshore route leads through the approach channel to Solenzara Oil Terminal (42°55′·2N, 9°25′·2E).

Firing range

7.45

1 The Diane firing range lies between 42°05′N and 42°14′N and the meridian of 9°38′E. The mid-part of the range is marked by four crosses which stand on the beach. Inland the range control tower is clearly visible (7.47).

Prohibited area

7.46

1 The Riva Bella shell fish bed (42°08′·7N, 9°35′·2E) is established during the summer months to keep mussels grown in Étang Diane. The bed is marked by four buoys (special) and shown on the chart. Navigation within 50 m of the perimeter is prohibited; fishing and diving are prohibited within it.

Exercise area

7.47

1 Plage de l'Orvu Santu (41°42′·5N, 9°24′·0E) is a beach of coarse sand used for military amphibious landing training.

Principal marks

7.48

1 **Landmarks:**

Diane Range control tower (42°10′·9N, 9°32′·3).
Aléria water tower (42°06′·3N, 9°28′·4E).
Tour Calzarello (Calsarello) (41°59′·4N, 9°26′·3E) white building with round tower above. The building stands on the S side of Foce di u Fium'Orbu (Rivière de Fiumorbo).
Punta di a Cappella (41°59′·8N, 9°13′·1E).
Mont Calva (41°43′·4N, 9°13′·4E).
Île de Pinarellu tower (41°40′·3N, 9°23′·6E).

Directions

(continued from 7.35)

Chart 1999

Tour d'Alistro to Foce di Tavignano

7.49

1 From a position about 11 miles E of Tour d'Alistro (42°14′·9N, 9°33′·3E) the track continues S passing, with positions relative to Tour d'Alistro:

2 E of Maison Giustiniana (1¼ miles SSW), a square, crenellated building with a flat roof, which stands amongst trees on top of a small hill. Rocks extend 4 cables NE from the coast, 7½ cables S of Maison Giustiniana. Thence:

3 E of Tour Bravone (3 miles S). The ruined tower stands on small hill on the S bank of the marshy mouth of Rivière Bravone. Thence:

4 E of Diane Range control tower (4 miles SSW) (7.45), thence:

5 E of Étang de Terrenzana (5½ miles S). A conspicuous building, Maison de Riva Bella, stands

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on the isthmus between the lagoon and the sea. Thence:

6 E of Étang Diane (6½ miles S); part of a wall, which is the remains of the ruins of Tour de Diane, stands on the S bank of the entrance to the lagoon. Thence:

E of Foce di Tavignano (9¼ miles S). The hamlet of Padulone stands 5 cables N of the river mouth; the tanks of the co-operative cellar and the few houses are visible from NE but obscured by trees to the SE.

Foce di Tavignano to Punta Capicciola

7.50

1 The track continues SSW passing, with positions relative to Calzarello Tower (41°59′·4N, 9°26′·3E):

ESE of Casabianda Prison (6¼ miles NE), an old prison with an entrance surmounted by a conspicuous bell turret. The farm buildings of the prison can be seen amongst the trees. Thence:

Chart 1992

ESE of Étang d'Urbino (4¼ miles NE), thence:

ESE of a dangerous wreck (3¼ miles NE), thence:

2 ESE of the remains of the stranded wreck *Niagara* (3½ cables S). Navigation within 1 cable of the wreck is prohibited. Thence:

ESE of Solenzara air station (4 miles SSW), thence:

ESE of Solenzara Light-buoy (E cardinal) (4 miles S), thence:

ESE of Maison de Sepalu (7¼ miles SSW), thence:

3 ESE of Solenzara (8 miles SSW). the light coloured buildings of the marina are easily recognised from offshore. Thence:

ESE of Rocher de Mozza (9¼ miles SW), a massive column of rock standing on the summit of Punta Mozza, thence:

ESE of L'Incudine (13¼ miles SW), thence:

ESE of Monte Santu (Santo) (10 miles SSW,), thence:

4 ESE of Anse de Cannella (11½ miles SSW). The bay can be recognised by some reddish cliffs backing a beach at its head. Thence:

ESE of Anse de Favone (13 miles SSW). A chapel with a belfry stands on the N shore of the bay. Thence:

ESE of a radio mast (15 miles SSW), thence:

ESE of Pointe de Fautéa (16¼ miles SSW), a rounded, rocky promontory on which stands a conspicuous round tower. Île de Fautéa lies close off the point. Thence:

5 ESE of Golfe de Pinarellu (18½ miles SSW). Île de Pinarellu, on which stands a large square tower, (7.48) lies in the SE part of the bay.

To a position E of Punta Capicciola (20½ miles SSW). The headland slopes gradually to the sea and is the extremity of a narrow, red coloured tongue of land which extends 3 cables SE from the coast. A rock lies close off the point.

(Directions for Punta Capicciola to Punta di u Capicciolu continue at 7.65)

Useful marks

7.51

1 Aléria belfry (42°06′·3N, 9°30′·7E). The belfry is part of Fort d'Aleria which dominates the village and stands on a hill with a sheer N side.

Prunelli-di-Fiumboro (42°00′·7N, 9°19′·4E).

Serra-di-Fiumorbo belfry (domed) (41°59′·1N, 9°20′·2E).

Ventiseri belfry (square) (41°56′·6N, 9°20′·0E).

Sari-di-Porto-Vecchio (41°50′·3N, 9°22′·4E).

Sommet della Vacca Morta (41°39′·4N, 9°09′·9E). A rugged, dark summit with a prominent white house 1¼ miles ENE.

Minor harbours and anchorages

Solenzara Oil Terminal

7.52

1 **General information**. Solenzara Oil Terminal (41°55′·3N, 9°25′·1E) lies 3½ cables offshore, E of Solenzara air station, which it supplies. Access to this terminal is regulated; tankers must approach the terminal through the channel shown on the chart. Entry to the channel is controlled by the Harbour Master at Bastia. Pilotage is compulsory within 3 miles of the terminal.

2 **Directions**. The approach channel leads 6 miles W to the vicinity of Solzenara Light-buoy (E cardinal) (41°55′·3N, 9°25′·4E). The berth lies 2 cables W of the light-buoy. A buoy (conical, black and yellow) marks the seaward end of the pipeline.

3 **Berth**. Mooring buoys (white) provide a single berth for discharging cargo. The berth is exposed and becomes untenable in some conditions, mariners should seek the advice of the pilot.

Plage de l'Orvu Santu anchorage

7.53

1 Plage de l'Orvu Santu (41°42′·5N, 9°24′·0E). A safe anchorage can be obtained in depths of about 5 to 8 m off the beach however it is used for military training, see 7.47.

Golfe de Pinarellu anchorage

7.54

1 Golfe de Pinarellu (41°40′·8N, 9°23′·2). Anchorage can be obtained by smaller vessels, as shown on the chart, in depths of 12 to 15 m, poor holding ground, within the bay.

The N side of the entrance is encumbered by Rochers de la Roscana, a group of red rocks and islets with whitish tops, the largest of them is Îlot Roscana (19 m high). Small craft moorings are laid along the shores and from May to October three pontoon landings are also moored within the bay. Mariners should also note that unmarked floating fish farms are frequently reported in Golfe de Pinarellu.

2 Small craft can obtain anchorage in depths of 4 to 6 m off the SW shore of the bay.

Small craft

Port de Solenzara

7.55

1 **General information**. Port de Solenzara (41°51′·5N, 9°24′·3E) is a fishing harbour and marina on the S side of the mouth of Rivière de la Solenzara. Small craft can enter the river in good weather; the deepest water lies close off the S bank.

2 The main basin of the harbour is formed by Digue du Large which extends 1 cable ENE from the S side of the river mouth, then curves 2 cables S; a light is exhibited from its head. Two short breakwaters extend E from the shore towards the head of Digue du Large forming the S facing entrance. The outer breakwater, Épi Sud, is unmarked; the inner mole exhibits a light from its head and there is a conspicuous mobile telephone mast sited on it. The area W of the entrance channel, between Épi Sud and the inner mole, is encumbered by rocky shoals, a buoy (port-hand) marks the E extent of these dangers. The

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approach channel is 40 m wide and regularly dredged to a depth of 3 m. In strong winds between NE and S the approach becomes dangerous because of the dangers close W of it.

3 **Berths**. The harbour provides 450 berths at pontoons and quays in depths of 1·2 m to 3·0 m; 150 berths are reserved for visiting yachts.

Facilities. Comprehensive small craft facilities including repairs. There is a lifeboat stationed here.

Anse de Cannella anchorage

7.56

1 Anse de Cannella (41°48′·0N, 9°23′·8E). Anchorage can be obtained at the N end of the bay in depths of about 5 m. The anchorage is sheltered from the *Libeccio*.

Anse de Favone anchorage

7.57

1 Anse de Favone (41°46′·6N, 9°24′·0E). Anchorage can be obtained in depths of 3 to 4 m, sand, in the S part of the bay. Shoals with a depth of 0·3 m over them fringe the bay but particularly the NW coast. The bay is exposed to swell from the SE.

Anse de Tarcu anchorage

7.58

1 Anse de Tarcu (Tarco) (41°45′·0N, 9°24′·3E). Anchorage can be obtained in good weather by small craft in depths of about 1 m. A small quay lies amongst the rocks off the S headland.

Pointe de Fautéa anchorages

7.59

1 Pointe de Fautéa (41°42′·9N, 9°24′·4E). Small craft can obtain temporary anchorage in the small bays N and S of the headland.

Other names

7.60

1 Batarchione, Punta (Sommet) (41°46′·9N, 9°18′·9E).
Caterragio (42°07′·0N, 9°30′·9E).
Cola, Anse de (41°39′·9N, 9°23′·2E).
Fornello, Sommet del (41°50′·3N, 9°14′·2E).
Isolaccio (42°00′·7N, 9°16′·8E).
Manichino, Marine de (Anse de) (41°50′·5N, 9°24′·3E).
Tavignano, Fleuve (42°06′·2N, 9°33′·0E).
Travo, Rivière de (41°54′·5N, 9°24′·6E).

PUNTA CAPICCIOLA TO PUNTA DI U CAPICCIOLU

General information

Chart 1999

Routes

7.61

1 The coastal route leads, from a position E of Punta Capicciola (41°38′·8N, 9°23′·2E), 14 miles SSW to a position on the NE limit of the Bonifacio VTS, see 6.180, E of Punta di u Capicciola (41°25′·8N, 9°15′·9E).

An inshore route leads from the outer end of the charted approach channel, through Golfe de Porto-Vecchio (41°36′·5N, 9°21′·0E) to Porto Vecchio, which occupies the SW part of the bay.

Restricted area

7.62

1 A dangerous wreck, enclosed by an area within which anchoring, fishing and diving are prohibited, lies 6½ cables NE of Punta di Rodinara.

Nature reserve

7.63

1 Îles Cerbicales (41°32′·8N, 9°22′·0E), comprising; Île Forana, the most N, Île de la Vacca, also known as Rocher de Vacca, which lies E of the main group, Île Maestro Maria, Île Piana and Île Pietricaggiosa, the S island of the group, are enclosed by a nature reserve. Landing on the islands is prohibited 1 April-31August. The landing of motor vehicles is forbidden at all times.

Principal marks

7.64

1 **Landmark:**
Sommet Cerchio (41°34′·4N, 9°18′·9E).
Major lights:
Punta de a Chiappa (white square tower, red lantern, 21 m in height) (41°35′·8N, 9°22′·0E).
Punta di Fozzoli Direction Light (white truncated tower, black top) (41°36′·6N, 9°17′·5E).

Directions

(Directions continued from 7.49)

7.65

1 From a position about 10 miles E of Punta Capicciola (41°38′·8N, 9°23′·0E) the track leads SSW passing, with positions relative to Punta di a Chiappa Lighthouse (41°35′·8N, 9°22′·0E):

2 ESE Baie de San Ciprianu (Golfe de Saint Cyprien) (2¼ miles NNW), which lies between Punta d' Arasu (Pointe de Araso) and Punta San Ciprianu (Pointe Saint Cyprien), thence:
ESE of Punta San Ciprianu (1½ miles NNW). A sectored light (white square tower, black lantern, 13 m in height), is exhibited from the headland. Thence:
ESE of Roches de Pecorella (1¼ miles NNE). The danger is marked by a light, Tourelle Pecorella, (white tower, green top, 14 m in height). Thence:
ESE of Punta di a Chiappa Lighthouse, see 7.64, thence:

3 ESE of Sommet Cerchio (2¾ miles SW), thence:
ESE of Vacca Light-buoy (E cardinal) (3½ miles SSE). The light-buoy marks Danger de la Vacca, a dangerous rocky bank with a least depth of 5·1 m over it, E of Îles Cerbicales. Thence:
E of Île du Toro (5 miles SSE). The island is surrounded by rocks. Haut-Fond Toro, with a least depth of 2·7 m over it, is the most E danger of the group and marked by Toro Light-buoy (S cardinal). Thence:
ESE of Golfe de Santa Guilia (5¾ miles SW). The bay is encumbered by numerous rocks and shoals. Thence:

4 ESE of Golfe de Porto Novo (Nuovo) (6½ miles SSW), thence:
ESE of Punta di Rondinara (8¾ miles SSW). The reddish, rounded headland is the extremity of a narrow isthmus separating Golfe de Rondinara (Port de Rodinara), a shallow rocky cove, from Golfe de Sant'Amanza on its S side. A dangerous

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Punta di a Chiappa Lighthouse from E (7.64)

(Original dated 1992)

(Photograph – SHOM)

wreck (7.62) lies 6½ cables NE of Punta di Rondinara. Thence:

5 E of Golfe de Sant'Amanza (10½ miles SSW) to a position about 9 miles E of Punta di u Capicciolu.

(Directions continue, for the Bonifacio Strait at 6.186 and the E coast of Sardegna at 10.13)

Port-Vecchio

Chart 1425 Porto-Vecchio

General information

7.66

1 **Position and function**. Porto-Vecchio (41°35′·3N, 9°17′·5E) is commercial port and yacht harbour at the head of Golfe de Porto-Vecchio.

2 **Topography**. The N side of Golfe de Porto-Vecchio is a low plain indented by three large bays; Baie de San Ciprianu, to the E, Anse de Tramulimacchia, (Anse de Timbro le Machie) and Baie de Stagnolu, into which Rivière de l'Osu flows. The S side of the bay, between Punta di a Chiappa and Punta di l'Arena, 2¼ miles W, is much more rugged and the coast consists of high cliffs broken by sandy beaches. The head of Golfe de Porto-Vecchio is also low lying and Rivière Le Stabiacciu enters the sea close SE of the commercial port.

3 **Approach and entry**. The port is approached through Golfe de Port-Vecchio which is entered W of a line joining Punta San Ciprianu Lighthouse (41°37′·1N, 9°21′·4E), Roches de Pecorella (7 cables ESE) and Roches de Chiappino (1¼ miles SSE).

Limiting conditions

7.67

1 **Controlling depth**. The approach channel has a least depth of 5·2 m close NE of the commercial berth.

Deepest and longest berth. The pier and dolphin berth extending NE; length 200 m, depth alongside 4·8 to 7·0 m.

Abnormal levels. Meteorological conditions can cause variations of up to 0·6 m.

Arrival information

7.68

1 **Port operations**: day only.

Notice of ETA: 24 hours in advance.

Outer anchorage. Anchorage within the approach channel is prohibited. Anchorage can be obtained in depths of 10 to 20 m, sand and weed, N of the regulated area shown on the chart, between Punta San Ciprianu (41°37′·1N, 9°21′·4E) and Punta di Benedettu, 1¼ miles W. The anchorage is untenable in strong E winds.

2 **Pilotage** is compulsory for all vessels 60 m or greater in length. The compulsory pilotage is bounded by the lines of latitude 41°40′·3N and 41°35′·7N and the meridian 9°25′·0E. The pilot is provided from Ajaccio.

3 **Regulations concerning entry**. Vessels of 1600 grt and greater carrying hydrocarbons or other dangerous cargoes must approach the port through the charted approach channel; they must maintain VHF contact with La Chiappa Signal Station when within the Approach Channel.

4 Sailing vessels and vessels under 20 m in length may enter the regulated area, shown on the chart, to enter or leave appropriate parts of the port or approved anchorages. These vessels are not permitted to stop within the regulated area and must give way to warships and power driven vessels 50 m in length or greater.

Harbour

7.69

1 **General layout**. The town of Porto-Vecchio stands on a hill on the W side of the head of Golfe de Porto-Vecchio.

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Porto–Vecchio, Port de Commerce from ESE (7.66)

(Original dated 1992)

(Photograph – SHOM)

Close SE of the town is an area of salt pans and marsh, the commercial quays front this area; the yacht harbour lies close NW, below the town.

2 The main anchorage for commercial vessels is described at 7.68. Small craft are permitted to anchor, clear of the channel, NW of Punta di l'Arena (41°36′·3N, 9°19′·0E) or NNW of Îlot Ziglione (41°35′·7N, 9°18′·3E), as shown on the chart.

3 **Seaplane operating area**. Seaplanes, used to fight forest fires, may operate in an area indicated on the chart, SW of Punta San Ciprianu. The area may be needed at short notice and all other vessels must then clear it immediately.

4 **Landmarks:**

Punta di a Chiappa Lighthouse, see 7.64, marked "Chiappa" on its N, E and S sides.

Punta di a Chiappa Signal Station (41°35′·8N, 9°21′·8E).

Major lights:

Punta di a Chiappa Light (7.64).

Punta di Fozzoli Direction Light (7.64).

Directions for entering harbour

7.70

1 **Approach**. From a position 9 miles ENE of Punta di a Chiappa Light (41°35′·8N, 9°22′·0E) the track leads WSW passing, with positions relative to the light:

SSE of Roches de Pecorella (1 mile NNE). Rocher Pecorella Light (7.65) stands on the danger which is also covered by a green sector (281°–299°) of Punta San Ciprianu Light (7.65). Thence:

NNW of Roches de Chiapino (4 cables NE) to a position S of Punta San Ciprianu Light (1¼ miles NNW).

2 Mariners should note inbound vessels are to keep to the NW side of the approach channel until S of Roches de Pecorella.

Entrance channel. The white sector (272°–275°) of Punta Fozzoli Direction Light (7.64) leads through the outer part of Golfe de Porto-Vecchio; dangers N and S of the track are covered respectively by the coloured sectors (green 259°–272°, red 225°–240°). Passing, with positions relative to the light:

3 N of Marina d'Arje (2½ miles ESE), a shallow bay with a small jetty extending from the NW headland. Thence:

4 N of Marina Vizza (2 miles ESE), thence:

5 S of Banc de Benedettu (1½ miles ENE). The shoal has a least depth of 0·2 m over it and extends 4 cables S of Punta de Benedettu (Pointe de Benedetto). The track continues to a position SE of Benedettu Light-buoy (lateral, starboard-hand).

6 The white sector (223½°–225½°) of the direction light on Quai Syracuse (rectangular stone tower, 12 m in height) (41°35′·3N, 9°17′·5E) leads through the channel, also marked by buoys (lateral), to the commercial port. The inner part of the channel and a turning area off the berths have been dredged to a depth of 5·5 m. The track passes, with positions relative to the light:

7 NW of Punta di l'Arena (1½ miles NE). A sandy spit extends up to ½ cable NNW of the headland which should be given a wide berth as depths in its vicinity are unreliable. The headland climbs quickly from the coast to Punta di a Varra. Thence:

NW of Îlot Ziglione (wooded, 13 m in height) (7½ cables NE), thence:

8 SE of "Bifurcation" Light-buoy (lateral, starboard-hand) (5 cables NE), thence:

SE of La Cioccia Light-beacon (red truncated tower, 5 m in height) (2½ cables N).

Berths

7.71

1 Quai Syracuse, at the head of the commercial harbour, extends 150 m NW, the longest and deepest berth extends NE from it. The outer 100 m of this berth is constructed of dolphins and has an alongside depth of 7 m; both sides of the outer pier can be used. There are Ro-Ro facilities on Quai Syracuse.

Port services

7.72

1 **Facilities**. Water available from jetty connections.

Rescue. An inshore lifeboat is stationed at Porto-Vecchio.

Small craft

7.73

1 **Porto-Vecchio Marina** lies 3 cables NW of the commercial berths. The marina is protected by two breakwaters, Digue de Ficaja to the NE and Digue du

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Dispensaire to the E; lights are exhibited from the head of both; NE (white tower, green top, 2 m in height) E (white tower red top, 4 m in height). The entrance faces E, is 30 m wide and dredged to a depth of 3·5 m. A channel leads from "Bifurcation" Light-buoy (lateral, starboard-hand) (5½ cables ENE of the marina), then N of La Cioccia and S of a beacon (lateral, starboard-hand) marking the E limit of shoals lying E and NE of the N breakwater. Dangerous shoals also lie E and SE of the E breakwater.

2 The marina accepts vessels up to 15 m in length and provides 540 berths at quays and pontoons in depths of 1 to 3 m; 150 berths are reserved for visiting yachts. The marina has comprehensive small craft facilities including repairs.

3 **Baie de Stagnolu anchorage** (41°37′·0N, 9°18′·7E). Anchorage can be obtained in depths of 3 to 4 m, sand and weed. Mariners should beware of the reefs extending approximately 1 cable from each side of the entrance and the rocks and shoals which encumber much of bay.

Punta Fozzoli (7.70). A jetty, with an alongside depth of 1 to 2 m, lies 2 cables E of the direction light.

Marina Vizza (41°36′·2N, 9°19′·8E). Anchorage can be obtained in depths of 2 to 3 m, sand.

4 **Marina d'Arje** (41°35′·8N, 9°20′·5E). Anchorage can be obtained by small craft within the bay. However the anchorage becomes dangerous in NE winds.

Minor harbours and anchorages

Chart 1992

Colombara anchorage

7.74

1 Punta di Colombara (Columbara) (41°33′·0N, 9°19′·2E). Anchorage can be obtained in depths of about 15 m, good holding ground, 1 mile ENE of the headland and SSE of Cala Forana, a bay on the SW side of Pointe Cerbicale, (41°33′·7N, 9°20′·7E); a group of rocks 0·6 m high lies close off the beach 7½ cables W of the headland.

Chart 1213

Golfe de Sant'Amanza anchorage

7.75

1 Golfe de Sant'Amanza (41°26′·0N, 9°15′·0E) lies between Punta di Rodinara (Pointe di Rodinara) (41°27′·9N, 9°16′·7E) and Punta di u Capicciolu, 2¼ miles SSW. Plage de Santa Manza lies at the head of the SW arm of the bay.

2 Anchorage can be obtained in depths of 20 to 30 m, sand and weed, good holding ground, approximately 1 mile WNW of Tour de Sant'Amanza (41°25′·1N, 9°15′·3E). The tower is ruined and not conspicuous. Anchorage can be obtained closer to the shore in the SW arm but mariners should beware of floating fish farms which encumber the shoaler water.

3 The white cliffs of Capu Biancu 1½ miles W of Punta di u Capicciolu contrast well with the reddish cliffs of Punta di Rodinara. A rocky spit, with a least depth of 3·5 m over it, extends 5 cables NE from Cap Biancu.

Small craft

Chart 1425

Baie de San Ciprianu

7.76

1 Baie de San Ciprianu (41°38′·0N, 9°21′·4E). Anchorage can be obtained in depths of about 3 to 7 m, poor holding ground, WSW of Île San Ciprianu. An alternative anchorage can be obtained in depths 3 to 4 m, sand, good holding ground, 1½ cables NW of Île San Ciprianu.

During the summer months anchorage and mooring areas are established in the W part of the bay.

Other names

7.77

1 Acciaju, Capu di (Asciajo, Pointe d') (41°32′·8N, 9°18′·6E).
Arje, Marina (Arghi, Marine d' (41°35′·8N, 9°20′·5E).
Farina, Île de (Îlot) (41°34′·9N, 9°21′·4E).
Folaca, Île de la (41°33′·0N, 9°18′·9E).
Georges-Ville, Château de (41°36′·0N, 9°17′·0E).
Sommet Compolelli (41°37′N, 9°08′E).
Sommet Rafaello (41°30′·7N, 9°16′·0E).
Sponsaglia, Pointe de (41°29′·2N, 9°17′·3E).

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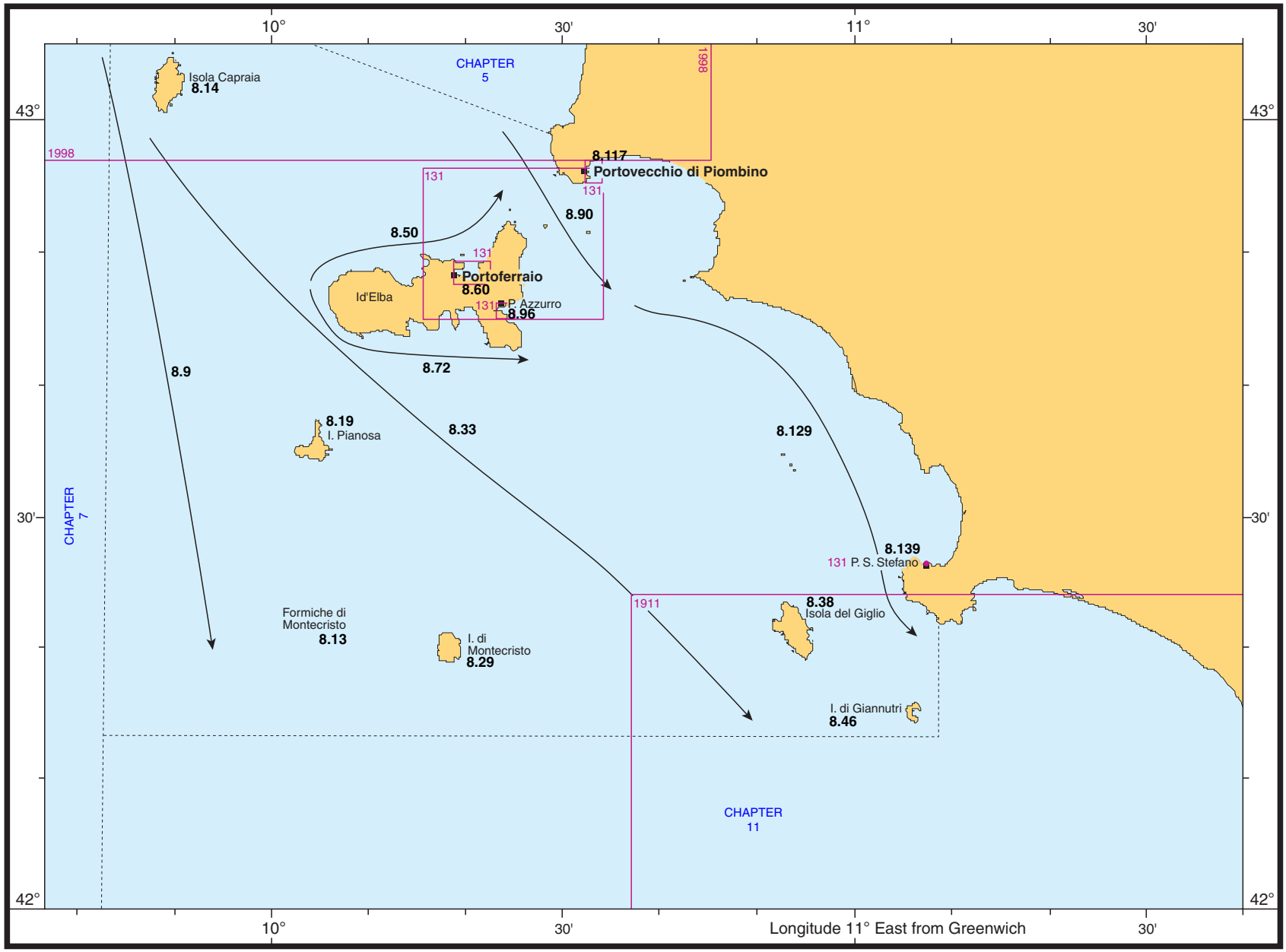
Chapter 8 - Promontorio di Piombino to Promontorio Argentario including Arcipelago Toscano



March 2004

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CHAPTER 8

WEST COAST OF ITALY – PROMONTORIO DI PIOMBINO TO PROMONTORIO ARGENTARIO INCLUDING ARCIPELAGO TOSCANO

GENERAL INFORMATION

Charts 1999, 131

Scope of the chapter

8.1

1 This chapter describes the W coast of Italy between Promontorio di Piombino (42°58′·0N, 10°29′·0E) and Punta di Torre Ciana (42°21′·7N, 11°09′·2E), the S point of Promontario Argentario, 47 miles SE. The islands and main passages through Arcipelago Toscano, which lie between the mainland and the E coast of Corse, are also covered. The sections are arranged as follows:

Arcipelago Toscano (8.6).
Promontorio Piombino to Promontorio Argentario (8.88).

Through route

8.2

1 An ocean route, between the Gulf of Genoa and the E Mediterranean, leads from the N part of the Corsican Channel through Arcipelago Toscano, passing SW of Isola Capraia (43°02′N, 9°49′E), SW of Isola d'Elba (42°46′N, 10°16′E) and SW of Isola del Giglio (42°21′N, 10°51′E).

Topography

8.3

1 The mainland coast between Promontorio di Piombino and Promontorio Argentario leads SE in a series of wide bays with the majority of the islands of Arcipelago Toscano extending from the two headlands in a circular formation which lies up to 47 miles offshore.

Much of the mainland coast is low-lying, consisting of sandy beach backed by pine woods. However the headlands of Promontorio Piombino, Punta Ala (42°48′·3N, 10°43′·7E), Capo d'Uomo (42°33′·3N, 11°07′·8E) and Promontorio Argentario and their vicinity are elevated; they can have a similar appearance to the offshore islands when seen from distance.

Depths

8.4

1 The mainland coast is relatively steep-to with the 50 m depth contour lying approximately 2½ miles offshore except within Canale di Piombino (42°53′·1N, 10°29′·0E) between Promontorio di Piombino and Isola d'Elba; here depths of less than 50 m extend across the channel.

2 Generally the islands of Arcipelago Toscano and the channels between them are steep-to however depths of less than 50 m and some dangerous shoals lie up to 7½ miles WNW of Isola d'Elba (42°46′N, 10°16′E), within 4 miles of Isola Pianosa (42°35′N, 10°04′E), on Formiche di Montecristo (42°22′N, 10°05′E) and Secca di Mezzo Canale, 3 miles SW of Promontorio Argentario.

Submarine cables and pipelines

8.5

1 **General information**. Submarine power and telegraph cables and a water pipeline are laid between the Italian mainland and Isola d'Elba and Corse; the areas containing them are shown on the charts.

Prohibited anchorages. Anchoring, fishing and salvage within areas containing pipelines and cables are prohibited.

Local magnetic anomaly. High tension cables extending W from the mainland, N of Isola d'Elba can cause a magnetic variation of up to 2½° within the area shown on the charts.

2 **Submerged buoys**. Mariners should note that submerged buoys and chain moorings associated with the power cables laid N of Isola d'Elba may rise to the surface, constituting a danger to navigation. Areas of particular concern lie approximately 5 miles and 17½ miles W of Promontorio di Piombino; both are shown on the charts.

ARCIPELAGO TOSCANO

GENERAL INFORMATION

Chart 1999

Area covered

8.6

1 This section covers the main channels through Arcipelago Toscano. The section is arranged as follows:

The Corsican Channel (8.9).
Isola Capraia to Isola Giannutri (8.33).
Isola d'Elba, West and north coasts (8.50).
Isola d'Elba, South coast (8.72).

Topography

8.7

1 Arcipelago Toscano comprises Isola Gorgona (43°26′N, 9°54′E), Isola Capraia (43°02′N, 9°49′E), Isola d'Elba (42°46′N, 10°16′E), the smaller islands of Palmaiola and Cerboli, which lie within Canale di Piombino (42°53′·1N, 10°29′·0E), Isola Pianosa (42°35′N, 10°04′E), Formiche di Gosseto (42°34′N, 10°53′E), Formiche di Montecristo (42°22′N, 10°05′E), Isola di Montecristo (42°20′N, 10°19′E), Isola del Giglio (42°21′N, 10°54′E) and Isola di Giannutri (42°15′N, 11°06′E).

2 The major islands, with the exception of Isola Pianosa, are mountainous and rugged in appearance.

Tuscan Archipelago National Park

8.8

1 The islands of Arcipelago Toscano lie within Parco Nazionale dell'Arcipelago Toscano. Zones have been established within the park for the protection of wildlife

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around the islands of Gorgona, Capraia, Pianosa, Montecristo and Giannutri. There are two categories:

Zone	*Description*
1	Navigation, stopping, anchoring, landing, fishing and diving are prohibited.
2	Any area within the national park not designated as Zone 1. Navigation, stopping, landing, fishing and diving are restricted and except for emergencies may only be conducted with approval from the park authority.

The areas are indicated on the chart.

THE CORSICAN CHANNEL

General information

Routes

8.9

1 The Corsican Channel (43°00N, 9°40′E) provides an offshore route between the E coast of Corse and the W side of Arcipelago Toscano (8.7).

An ocean route between the Gulf of Genoa and the E Mediterranean leads through the N part of the channel SW of Isola Capraia (43°02′N, 9°49′E).

Depths

8.10

1 There is deep water, free from isolated dangers, throughout the channel. Mariners should however note the current meter (43°02′N, 9°41′E) with a least depth of 50 m over it.

Current

8.11

1 Mariners should note the E-going current, particularly in the vicinity of Formiche di Montecristo (42°22′·3N, 10°05′·4E) (8.13).

Principal marks

8.12

1 **Landmarks:**

Monte Castello (43°03′·0N, 9°48′·9E).

Monte Arpagna (43°01′·2N, 9°48′·4E), a disused signal station stands on the summit.

Sommet Toricella (42°57′·8N, 9°23′·1E) (7.10).

Monte Capanne (42°46′·3N, 10°10′·0E), the highest peak on Isola d'Elba. A radio station and several masts stand on the summit.

Serra di Pigno (42°41′·6N. 9°24′·0E) (7.10).

Mont Sant'Angelu (42°27′·8N, 9°24′·5E) (7.34).

Picco del Segnale (Fortezza, Monte) (42°20′·3N, 10°18′·6E).

Punta di Caldane (42°19′·7N, 9°20′·8E) (7.34).

Rocher de Muterei (42°18′·0N, 9°24′·2E) (7.34).

2 **Major lights:**

Punta del Ferraione (white square tower and dwelling, 12 m in height) (43°03′·0N, 9°50′·6E).

Île de La Giraglia (43°01′·6N, 9°24′·4E) (6.12).

Punta Polveraia (white eight-sided tower, 10 m in height) (42°47′·7N, 10°06′·6E).

Jetée du Dragon, Bastia (42°41′·6N, 9°27′·3E) (7.10).

Isola Pianosa (white round tower on white two-storey dwelling, 19 m in height) (42°35′·1N, 10°06′·0E).

Directions

(continued from 5.103)

8.13

1 Directions for the E coast of Corse from Pointe d'Agnello to Tour d'Alistro (7.11 and 7.35) should also be consulted.

From a position 15 miles NE of Pointe d'Agnello (43°00′·6N, 9°25′·6E) (7.11) the track leads SSE passing, with positions relative to Jetée du Dragon Light (42°41′·6N, 9°27′·3E) (7.10):

ENE of Île de La Giraglia (20 miles NNW) (6.13), thence:

2 W of Isola Capraia (26 miles NE) (see 8.14 Isola Capraia). Lights are exhibited from Punta del Ferraione (8.12) and Punta del Trattorio (white hut, 3 m in height) (43°01′·4N, 9°47′·5E).

(Directions for the route through Arcipelago Toscano are given at 8.36 and for the coastal route N of Isola d'Elba at 8.57)

Thence:

E of Finocchiarola Light-buoy (18 miles N) (7.11), thence:

W of Punta Polveraia Light (29½ miles ENE) (8.12) Depths of less then 50 m lie 7 miles W of the light. Thence:

3 E of Jetée du Dragon Light, thence:

W of Banco di Mezzo Canale (26½ miles E), which extends 4 miles NNW of Isola Pianosa (28½ miles WSW). The bank has a least depth of 23 m over it. Thence:

W of Isola Pianosa (see 8.19, Isola Pianosa), which exhibits a light (8.12). Thence:

To a position W of Formiche di Montecristo (34 miles SW) on which stands Scoglio Africa, a rock 2 m high from which a light is exhibited (round stone tower, 16 m in height) (42°21′·6N, 10°03′·8E). Numerous rocks and dangers lie within 1 mile of Scoglio Africa. A dangerous shoal with a least depth of 6 m over it lies at the N end of Formiche di Montecristo.

(Directions continue, for the E coast of Corse S of Tour d'Alistro at 7.49)

Isola Capraia

Chart 1999 (see 1.13)

General information

8.14

1 **Description**. Isola Capraia (43°02′N, 9°49′E) is of volcanic origin; the W coast being steep and barren whereas the E side slopes gradually and is cultivated. A chain of rocky mountains runs parallel to and within 5 cables of the W coast, Monte Castello (43°03′·0N, 9°48′·9E) and Monte Arpagna (43°01′·2N, 9°48′·4E) (8.12) are the highest peaks.

2 **West coast**. The W coast extends, in a series of small bays and coves, 3¼ miles SSW from Punta della Teia, also known as Punta della Teglia (43°04′·3N, 9°49′·5E), the N extremity of the island, to the high, steep headland Punta del Trattorio, from which a light (8.13) is exhibited. The coast then continues SSE for a further 1½ miles to Punta dello Zenobito, the S extremity of Isola Capraia. A small, ruined, square fort stands on Punta della Teia and a round tower stands above a ridge of light coloured rock on Punta dello Zenobito; the cliffs NE of this tower are red in colour when seen from the SE.

3 Le Formiche, a group of rocks, the largest of which is 2 m high, lies 2½ cables NE of Punta della Teia. A rock

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with a least depth of 0·3 m over it lies within the passage between Punta della Teia and La Formiche, 1½ cables NE of the headland. A small above water rock lies close off Punta della Manza (43°03′·2N, 9°48′·0E). La Peraiola dei Gabbiani (Isolotto La Priaiola) (43°01′·9N, 9°47′·8E) is a high, rounded island connected to the coast by a ridge of rocks.

4 **East coast**. Between Punta della Teia (43°04′·3N, 9°49′·5E) and Punta del Ferraione (1½ miles SSE), which exhibits a light (8.12), the coast is indented with a series of three bays, the most S of which contains Porto Capraia.

5 Capraia, the major settlement of the island, stands on the SW part of Punta del Ferraione (43°03′·0N, 9°50′·6E); Forte di Capraia, a prominent, ancient building with a slender tower stands on the E side of the village. A white church with a low belfry stands close to the shore. To the S of Punta del Ferraione the coast continues bare, rocky and moderately steep-to for 1½ miles to Punta della Civitata before leading SSW in a series of small bays and coves to Punta dello Zenobito. The coast is free from isolated dangers to seaward of the 20 m depth contour, which lies approximately 1 cable from the coast. Closer inshore mariners should beware of isolated rocks fringing the shore.

Prohibited area

8.15

1 Isola Capraia lies within Parco Nazionale dell'Arcipelago Toscano, see 8.8. A Zone 1 area, extending 7 cables offshore, has been established on the W coast of the island between Punta della Manza (43°03′·2N, 9°48′·0E) and Punta del Trattorio, 2 miles S.

2 **Restricted area**. Isola Capraia is almost entirely surrounded by a national park Zone 2, see 8.8, which extends 3 miles offshore. The approach to Porto Capraia, bounded by lines extending 047° from Punta Porto Vecchio (43°03′·4N, 9°50′·2E) and 087° from Punta della Fica (43°02′·8N, 9°50′·9E), is free from national park restrictions.

Fishing

8.16

1 Tunny fishing nets extend ½ cable E from the vicinity of Punta del Porto Vecchio (43°03′·4N, 9°50′·2E).

A marine farm has been established in position 43°03′·6N, 9°50′·3E and is marked by yellow buoys; a light-buoy (E cardinal) marks the E extremity of the farm.

Anchorages

8.17

1 **General**. With permission from the National Park Authority anchorage can be obtained at Isola Capraia. The NW coast offers temporary anchorage in depths of about 15 m.

Prohibited anchorage. Anchorage is prohibited in an area extending SE from the island, shown on the chart, which contains submarine cables.

Cala del Moreto (Cala il Moreto) (43°00′·4N, 9°48′·5E), lies between Punta dello Zenobito and Punta delle Linguelle, 5 cables NW. Temporary anchorage can be obtained in depths of about 12 m, sand and weed. The shores of the bay are rocky and inaccessible.

Porto di Capraia

8.18

1 **General information**. Porto di Capraia (43°03′·0N, 9°50′·3E) is a boat harbour protected from the E by an L-shaped mole, Molo Nord, and from the S by a breakwater, Molo Sud, also known as Inner Mole. The E facing entrance lies between the elbow of Molo Nord and the head of Molo Sud. Lights are exhibited from both; Molo Nord Elbow (green metal column, 4 m in height) (43°03′·0N, 9°50′·2E), Molo Sud (red metal column on pedestal, 7 m in height) (70 m S of Molo Nord Elbow Light). There are depths of 3·5 to 4·0 m in the middle of the basin. The harbour has a speed limit of 3 kn.

2 During strong NW, SW and SE winds unpredictable and sometimes violent squalls develop in the harbour.

Prohibited anchorage. Anchorage between the mole heads is prohibited.

Berths. Small local ferries berth at a jetty ½ cable NE of the root of Molo Nord. The jetty has depths alongside of 5 m.

3 Small craft berth can berth alongside in depths of 0·1 to 3·0 m on the inner face of Molo Nord and at the quays of the basin in the N part of the harbour.

Repairs. There is a slipway at the S end of the quay on the W side of the harbour.

Supplies: fuel; water; provisions, all in limited amounts.

Isola Pianosa

General information

8.19

1 **Description**. Isola Pianosa (42°35′N, 10°04′E) is low-lying and of uniform appearance, rising to no more than 30 m elevation. The island is occupied by a penal establishment which maintains a large part of the land under cultivation.

8.20

1 **North-east coast.** Punta del Marchese (42°37′·1N, 10°04′·8E) is the N extremity of Promontorio del Marchese, the N part of the island. Podere del Marchese, an isolated building, which has the appearance of a castle with hexagonal tower, stands at an elevation of 21 m, 2½ cables SE of the point. La Scarpa (Scoglio Scarpa), a dark rock, lies 2 cables N of Punta del Marchese. Dangerous shoals lie within 3 cables NW, 3½ cables N and 6 cables ENE of the point; mariners are advised to give the area a wide berth.

2 From Punta del Grottone (43°36′·9N, 10°05′·4E), the E extremity of the head of Promontorio del Marchese, the rock fringed coast extends SSE for 1¼ miles to Punta dei Bagni. A relatively shallow bank, with depths of less than 10 m extends 2½ cables from this coast. A masonry obelisk (14 m in height) stands on the coast close S of Punta dei Bagni. Close W of the obelisk lies a conical shaped mound (elevation 29 m) (42°35′·5N, 10°05′·4E), known as Belvedere. The submerged Roman marble ruins of Bagni di Caligola lie close off the obelisk. Cala Giovanna lies between Punta Bagni and a steep, rocky point 4 cables SE on which stands a barracks. Secca San Giovanni, consisting of rocks awash, extends 1½ cables NE from the unnamed headland; breaks form over the bank. A detached rocky shoal, with depths of less then 2 m over it, lies ¾ cable further ENE of Secca San Giovanni.

3 **Clearing bearings**. The line of bearing 267° of Punta dei Bagni obelisk passes N of Secca San Giovanni and the associated danger.

The line of bearing 325° of Podere del Marchese (42°36′·9N, 10°05′·0E) may be used to clear these dangers when approaching from the S until E of the obelisk.

8.21

South-east coast. The village of Pianosa, within which stands Pianosa Light (8.12), lies behind a fine sandy beach in the S part of Cala Giovanna; a boat harbour (8.27) occupies the small natural cove on the unnamed headland

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on the SE side of Cala Giovanna. Another boat haven, La Darsenetta (8.28), lies at the E end of the headland

1 South of Secca San Giovanni the coast extends SSW in two wide bays to Punta Brigantina (elevation 28 m), the S point of the island; a small yellow house with two sloping roofs stands on Punta Brigantina. The bays are separated by Punta Secca (42°34′·6N, 10°06′·2E) from which a rocky spit, with a least depth of 0·4 m over it, extends 1 cable E; breaks form over the shoal. Isolotto La Scola (elevation 34 m) lies 5 cables NNE of Punta Secca and being of greater elevation than Isola Pianosa is prominent; it is flat topped and surmounted by a triangulation beacon. The islet stands on a shoal bank with a least depth of 2·2 m over it; mariners are advised to remain at least 1 cable clear of the islet. A rocky shoal with a least depth of 3 m over it lies 2 cables SSE of Isolotto La Scola.

8.22

1 **South and west coasts**. From Punta Brigantina (42°34′·0N, 10°05′·4E) the S coast extends 2¼ miles W to Punta Libeccio. Cala della Ruta lies between Punta del Segnale (42°34′·3N, 10°04′·0E) and a point 3½ cables W. The shores of the bay are relatively steep-to and rock fringed although landing is possible at the head. West of Torre San Marco (square, white, elevation 27 m) (42°34′·5N, 10°03′·3E) to Punta Libeccio the coast is steep and fronted by a bank with depths of less than 9 m over it, extending 3½ cables offshore.

The W coast of Isola Pianosa is low, sheer and unremarkable. A wide bay, Golfo della Botte, extends NNE from Punta de Pulpito (42°35′·4N, 10°03′·4E) to Punta del Marchese. The shore of the bay is fringed by a bank extending up to 2 cables offshore with depths of less than 10 m over it. Porto Romano (Cala dell' Arco) (42°37′·0N, 10°04′·8E), a cove on the S side of Punta del Marchese, within Golfo della Botte, is encumbered by dangers and only accessible to small craft; local knowledge is essential.

Anchorages

8.23

The island lies within a restricted area (8.25).

South coast. Anchorage can be obtained in depths of about 18 m, sand, 3½ cables SSE of Punta del Segnale (42°34′·3N, 10°04′·0E). The yellow house on Punta Brigantina bearing 083° and Torre San Marco (8.19) bearing 305° are useful marks.

Cala della Ruta. Small vessels can obtain anchorage in depths of 11 m within Cala della Ruta (42°34′·4N, 10°03′·8E).

West coast. Anchorage can be obtained in depths of about 12 m, sand and weed, 4 cables E of Punta del Pulpito (42°35′·4N, 10°03′·4E).

Prohibited area

8.24

1 Anchoring and fishing are prohibited within an area, shown on the charts, extending NNE to Isola d'Elba which contains submarine cables.

Restricted area

8.25

1 Isola Pianosa lies within Parco Nazionale dell'Arcipelago Toscano, see 8.8. A Zone 2 area extends 1 mile from the coast of the island. Navigation, anchoring, fishing, swimming and diving within the area are normally prohibited.

Local weather

8.26

1 The prevailing winds are NE or NW. Winds from S or SE bring mist and fog.

Porticciolo di Pianosa

8.27

1 **General information**. Porticciolo di Pianosa (42°35′·3N, 10°06′·0E) occupies a small cove 2¼ cables NE of Pianosa Light. The village of Pianosa, which stands above the cove, is distinctive in appearance with crenellated buildings painted in various colours. The harbour is protected from the N by a short mole extending from the E side of the cove. A light (red mast, 5 m in height) is exhibited from the mole head. Several shoals lie in the approach to the haven. Access to the harbour is only by arrangement with local authorities. Local knowledge is essential.

2 **Berths**. Limited, in depths of about 2 m. A steel pier, 25 m in length, used by local ferries, lies 150 m WNW of the mole head light.

Supplies. Small amounts and only by arrangement with local authorities.

La Darsenetta

8.28

1 **General information**. A boat haven ½ cable ESE of Porticciolo di Pianosa, protected from the SE by a rough mole utilising a natural rock formation. The haven is open to the S with depths of less than 1 m. Il Marzocco, an unusual obelisk shaped rock stands at the S end of the mole.

Isola di Montecristo

General information

8.29

1 **Description**. Isola di Montecristo (42°20′N, 10°19′E) is a bare, conical island of granite with a high, precipitous and steep-to coast. The N part of the island is dominated by Picco del Segnale (42°20′·3N, 10°18′·6E) (8.12). Vegetation on the island is sparse.

2 **West and south coasts.** Punta del Diavolo (42°21′·0N, 10°17′·9E) is the NW extremity of the island; the coast extends 1 mile SSW from it in a series of small coves to Punta Maestra. Cala del Santo lies S of Punta Cappel di Prete, a headland 3 cables SW of Punta del Diavolo. A ruined monastery stands at the head of the cove.

3 Cala Maestra, entered N of Punta Maestra, is easily identified by the houses occupying the head of the bay; they are the only houses on the island. Landing can be made, except during NW winds, at a rough stone hard inside a short jetty NW of the houses, a slipway lies SE of the hard. A submarine telephone cable lands in Cala Maestra, it is not marked.

Cala Santa Maria lies 3½ cables S of Punta Maestra. Cala Mendolina, a small cove 2 cables S of Cala Santa Maria, is sometimes used as a refuge by fishing vessels.

4 The S coast of the island lies between Punta alle Grotte (42°18′·9N, 10°17′·8E) and Punta Rossa (Punta della Piana), 9 cables E and is occupied by two bays; Cala Grande and Cala dei Ladri, respectively 2½ cables and 7 cables E of Punta alle Grotte. Punta Rossa is easily identified by its bare yellow rock and as the only headland of the island to slope gradually into the sea.

Cala Corfu, the largest bay on the island's coast, lies between Punta Rossa and Punta Forata, 5 cables NE. Punta Forata has a natural arch, visible only from the E.

5 **East and north coasts**. The coast extends 1½ miles N from Punta Forata in a series of three bays. Cala Sirocco a

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Giunchi, the most S, has a small beach at its head where landing is possible. Cala della Fortezza (42°21′·6N, 10°19′·3E), the only bay on the NE coast, has smooth light coloured cliffs on each headland; green slopes occupy the head of the bay.

The NE coast of the island, between Cala della Fortezza and Punta della Fortezza, 7 cables NW, is the most barren, smooth and inaccessible of Isola Montecristo. Punta della Fortezzo presents a remarkable vertical cleft when seen from NE. Cala del Diavolo occupies the N coast between Punta della Fortezza and Punta del Diavolo, 6½ cables W. The shores of the bay are smooth granite slopes.

Prohibited and restricted areas

8.30

1 Isola di Montecristo lies within Parco Nazionale dell'Arcipelago Toscano, see 8.8. The island is enclosed by a Zone 2 area which extends up to 4 miles from the island. A Zone 1 area extending up to 6 cables offshore also surrounds Isola di Montecristo. In exceptional circumstances the park authority may permit navigation or other normally prohibited activity within these areas.

Anchorages

8.31

1 **General information**. The steeply shelving seabed and rock fringed nature of the coast can only provide safe anchorage for the smallest vessels. The island lies within a prohibited area (8.30).

Cala Maestra. With local knowledge anchorage may be obtained in depths of 10 m within the cove (8.29) with the stern secured to rings ashore. However care must be taken to avoid the submarine cable which lands here.

Cala della Scoglio. With local knowledge anchorage can be obtained in depths of 10 m in the middle of the cove (42°20′·1N, 10°19′·7E) ½ cable from an isolated, smooth, light coloured rock which lies close inshore in the middle of the head of the cove; the rock is difficult to distinguish. Mariners are advised to buoy the anchor due the rocky bottom.

Other names

8.32

1 Carbicina, Cala della (Carbicina, La) (43°01′·1N, 9°49′·7E).
Ceppo, Cala (43°01′·5N, 9°50′·2E).
Porto Vecchio, a bay (43°03′·5N, 9°50′·2E).
Mortola, Cala (Mortola, Cala della) (43°04′·0N, 9°50′·0E).

ISOLA CAPRAIA TO ISOLA GIANNUTRI

General information

Chart 1999

Routes

8.33

1 An ocean route leads, from a position about 5 miles SW of Isola Capraia (43°02′N, 9°49′E), 63 miles SE through Arcipelago Toscano (8.7) to a position about 15 miles WSW of Isola di Giannutri (42°15′N, 11°06′E).

Coastal routes lead E from the ocean route passing N and S of Isola d'Elba (42°46′N, 10°16′E).

Restricted areas

8.34

1 Restrictions on navigation and other activities apply in areas established around Isola Pianosa (42°35′N, 10°04′E) (8.19), Isola di Montecristo (42°20′N, 10°19′E) (8.29) and Isola di Giannutri (42°15′N, 11°06′E) (8.46). See 8.8, Parco Nazionale dell'Arcipelago Toscano.

Principal marks

8.35

1 **Landmarks**:
Monte Arpagna (43°01′·2N, 9°48′·4E) (8.12).
Monte Capanne (42°46′·3N, 10°10′·0E) (8.12).
Isola di Montecristo (42°20′N, 10°19′E) (8.29).
Faro delle Vacarelle (42°22′·5N, 10°53′·8E), a disused lighthouse
Giglio Castello (42°21′·9N, 10°54′·0E) a hilltop village within which stands a large castle. A disused signal station, with a tall framework mast, stands close to the village.
Poggio della Pagana (42°21′·0N, 10°54′·1E).

2 **Major lights**:
Punta del Ferraione (43°03′·0N, 9°50′·6E) (8.12).
Punta Polveraia (42°47′·7N, 10°06′·6E) (8.12).
Isola Pianosa (42°35′·1N, 10°06′·0E) (8.12).
Punta del Capel Rosso (Isola del Giglio) (white tower, red bands, 20 m in height) (42°19′·2N, 10°55′·1E).
Monte Poro Light (white framework tower and base, 2 m in height) (42°43′·7N, 10°14′·3E).
Punta del Fenaio Light (white eight sided tower, red band, red dwelling, white band, 10 m in height) (42°23′·3N, 10°52′·8E).

Directions

(continued from 8.13)

8.36

1 From a position 5 miles SW of Punta del Trattorio Light (43°01′·4N, 9°47′·5E) (8.13) the track leads SE passing, with positions relative to Isola Pianosa Light (42°35′·1N, 10°06′·0E):
S of Isola Capraia (28 miles NNW) (8.19), thence:
W of Punta Polveraia Light (12½ miles N) (8.12). Seamounts with depths of 38 to 49 m over them rise between 8 miles N and 6 miles W of Isola d'Elba.
(Directions for the coastal routes N and S of Isola d'Elba continue at 8.57 and 8.79)
Thence SW of the disused signal station standing on the flattish summit of Campo alle Serre (11¼ miles N), thence:

2 SW of Monte Capanne (11½ miles NNE) (8.12), thence:
NE of Banco di Mezzo Canale, which has a least depth of 23 m over it (6 miles NNW), thence:
Between the SW part of Isola d'Elba (9 miles NNE) and Isola Pianosa. Thence:
E of Isola Pianosa Light, thence:
NE of Isola di Montecristo (17 miles SE) (8.29), thence:
SW of Punta del Capel Rosso Light (Isola del Giglio) (39½ miles ESE) (8.35), thence:
To a position about 15 miles WSW of Isola di Giannutri (42°15′N, 11°06′E).
(Directions for the W coast of Italy continue at 11.13)

Useful marks

8.37

1 Punta di Fetovia (42°43′·6N, 10°09′·4E) (elevation 37 m), the headland of a narrow peninsula which has the appearance of a mole extending SSE from Isola d'Elba.

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Poggio Zuffolone (42°20′·4N, 10°52′·3E), a monument comprising a pillar, surmounted by a bronze statue of a sheep, stands on the summit.
Punta Mezzogiorno (42°14′·6N, 11°06′·4E) a small tower stands on the summit.
Punta del Capel Rosso Light (Isola di Giannutri) (white, eight-sided tower, red bands, red dwelling, white band, 9 m in height) (42°14′·4N, 11°06′·5E).

Isola del Giglio

Chart 1999 (see 1.13)

General information

8.38

1 **Description**. Isola del Giglio (42°21′N, 10°54′E) is a high, steep, granite formation which lies approximately 8 miles from the Italian mainland. The island is little cultivated and has a number of granite and alum quarries. With the exception of Isola d'Elba it is the most populous island of Arcipelago Toscano. A ridge of hills extends between Punta del Fenaio and Punta del Capo Rosso, respectively the N and S extremities of the island. Poggio della Pagana, the highest point (8.35), stands in the middle of the island. To the N of it the hills lie closer to the E coast whereas S of the peak they extend along the midpoint. Faro delle Vacarelle (8.35), Giglio Castello (8.35) and Poggio della Pagana (8.35) are all landmarks standing on the ridge. A broad, elevated promontory extends from the W coast.

8.39

1 **West coast.** Punta del Fenaio (42°23′·3N, 10°52′·8E), is the NW extremity of the island and exhibits a light (8.37), a shoal with a depth of 10 m over it lies 1 cable NNW of the light; Punta delle Secche (Punta le Secche) lies 4 cables S of it. A rocky shoal, with a least depth of 1·6 m over it, extends 1½ cables NNW of Punta delle Secche. Within the bay Secca I Pignocchi, a rocky shoal with a least depth of 2 m over it, lies 1 cable offshore, 5 cables S of Punta delle Secche

2 **Clearing bearings.** The shoal off Punta delle Secche can be avoided by remaining W of a line joining Punta del Fenaio Light and Punta Faraglione, 1½ miles SW. Secca I Pignocchi can be cleared with Punta del Fenaio Light (8.37) bearing more than 010° and open W of Punta delle Secche.

8.40

1 Seno del Campese, a wide bay with the village of Campese at its head, lies between Punta delle Secche and Punta del Faraglione; Il Faraglione a tall pillar of rock lies close off the headland and easily identified. Torre del Campese (42°22′·1N, 10°52′·9E) a large, round tower with grey walls and a red roof stands on a small rocky peninsular at the NE end of Spiaggia del Campese, the sandy beach fronting the village.

2 South of Punta Faraglione the coast continues high, bare and rocky to Punta di Mezzo Franco, forming the head of the broad, elevated promontory which extends from the W coast. Poggio Zufflone (elevation 207 m) (8.37) with an unusual monument on its summit occupies the S part of this promontory. The coast is fronted by a rocky bank, with depths of less than 10 m over it, which extends up to 2 cables offshore. Scoglio Mezzo Franco, rugged, dark green in colour and presenting a domed appearance when seen from the NNW, stands on the bank 2 cables NNW of Punta di Mezzo Franco.

3 Scoglio della Cappa (La Cappa), a large, light-yellow rock, which is difficult to distinguish against the similarly coloured coast, lies 8 cables ESE of Punta di Mezzo Franco. The coast between La Cappa and Punta del Capel Rosso, the S extremity of the island 2½ miles SE, is light-coloured, bare, rocky and unremarkable. Except for above water rocks close inshore the coast is steep-to and free from dangers. Punta del Capel Rosso exhibits a light (8.35).

8.41

1 **East coast.** The coast extends 4½ miles SE from Punta del Fenaio, in a series of small bays and coves, to Punta di Castellari (42°21′·4N, 10°55′·6E); Poggio di Castellari (elevation 67 m) with an old guardhouse on its summit and a cemetery with a chapel on its SW slope, stands 1 cable NW of the point. Scoglio Le Scuole, a group of dark rocks, lie within 1½ cables of Punta di Castellari.

Punta della Croce, 1 mile ESE of Punta del Fenaio, ends with a smooth grey rock within which are two clefts forming a cross; Secca della Croce, a rocky shoal with a least depth of 4·5 m over it, lies 2½ cables N of the headland on the alignment 187° of Punta dell Croce with Giglio Castello (8.35). The landmarks of Faro delle Vacarelle (8.35) and Giglio Castello overlook this coast. Torre Lazaretto stands on a hill 1 cable SW of Punta del Lazaretto, a rounded headland joined to the coast by a short, narrow isthmus, 1¼ miles SE of Punta della Croce.

The village and small craft harbour of Giglio Porto (Giglio Marina) (8.44) lie 3 cables NW of Punta di Castellari.

The coast S of Punta di Castellari is unremarkable.

Submarine cable

8.42

1 A submarine telephone cable lands 2 cables SE of Giglio Porto (42°21′·6N, 10°55′·3E); the landing is marked by two beacons. Anchoring and fishing within the area enclosing the cable, shown on the chart, is prohibited.

Anchorages

8.43

1 **Seno del Campese** (42°22′·0N, 10°52′·7E). Good anchorage can be obtained in depths of about 15 m off Spiaggia del Campese (8.38). Torre del Campese (8.38) bearing 061° and Poggio della Pagana (8.38) bearing 135° are a useful guide to the anchorage. Smaller vessels can obtain anchorage closer inshore, in depths of about 7 m, using the same marks. The pylons of a disused iron ore transporter stand close inland. Mariners should note there is no shelter from W winds which can sometimes be violent. Small craft use a slipway close E of Torre del Campese.

2 **Cala dell' Allume** (42°21′·0N, 10°52′·9E). With local knowledge temporary anchorage for small vessels can be obtained in depths of 10 to 14 m in the middle of the entrance to the cove. Punta Salto del Cane, the E headland of the cove, is steep, rocky and light-coloured, and green in parts. The headland is fronted by two rocky shoals lying ½ cable offshore. Alum quarries occupy the upper part of the E side of the cove.

Giglio Porto

8.44

1 **General information**. Giglio Porto (42°21′·6N, 10°55′·3E) is a small harbour with facilities for small craft and yachts. The harbour is protected by moles extending E (Molo di Ponente) and NNW (Molo de Levante) from the coast. Lights are exhibited from the heads of the moles; Molo Ponente (green tower, 6 m in height), Molo de Levante (red tower, 6 m in height). The entrance is 50 m wide, faces N and has a depths of about 6 m. The square, light-coloured belfry of the church within the village and

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Torre Medicea, at the root of Molo de Levante, may be useful marks. The harbour accepts vessels up to 20 m in length.

2 **Regulations**. Anchoring, stopping, fishing, bathing and water skiing are prohibited within the approach to the entrance; the area extends 2 cables from the harbour entrance.

Vessels leaving harbour have right of way.

There is a speed limit of 2 kn within the harbour.

Alongside berths, anchorages and moorings within the harbour are allocated and controlled by the Harbour Master. Full details of regulations governing the harbour should be obtained from the Harbour Master.

3 **Directions**. The entrance becomes difficult in strong NE winds.

Berths. The harbour provides berths at quays in depths of 3·5 to 4·5 m. Nuovo Pontile, a quay extending 45 m N from the S shore of the harbour is reserved for passenger vessels and naval tankers; it has an alongside depth of 4·5 m. There are 196 small craft berths.

Supplies; fuel; water; provisions.

Small craft

8.45

1 **Cala delle Cannelle** (42°21′·1N, 10°55′·4E) lies between Punta di Castellari and, 4½ cables SSW, Punta di Capo Marino. The shore of the bay is rocky, sheer and fringed with rocks except for an area S of Giglio Porto (8.44) where there is a beach; a rubble breakwater shelters a small craft quay.

2 **Cala Saracinesca** (42°19′·0N, 10°55′·2) landing can be made within this small cove.

Sbarco dei Turchi a natural quay ½ cable NNE of Cala Saracinesca, a pathway leads from it to Punta del Capel Rosso lighthouse.

Isola di Giannutri

Chart 1999 (see 1.13)

Description

8.46

1 Isola di Giannutri (42°15′N, 11°06′E) is relatively low-lying and covered with sparse vegetation. The coasts are rocky, steep-to and clear of isolated dangers. The island has no natural water supply other than rainwater collected in reservoirs. Numerous ruins and fragments of marble from the Roman Empire are scattered across the island.

Punta Secca, the N extremity of the island, is low, flat and formed of black porous rock; a spit with a least depth of 4 m over it extends ½ cable NW of the point.

2 Poggio Cannone, also known as Monte Mario (elevation 78 m) (42°15′·3N, 11°06′·0E), has a building on its summit. The building has the appearance of a small fort and is easily identified from seaward.

Poggio Capel Rosso (Punta Mezzogiorno) (elevation 88 m) (42°14′·5N, 11°06′·4) is the highest point of the island. A square red-coloured hut stands on the summit and from a distance has the appearance of a tower. Punta del Capel Rosso, the S extremity of the island, lies 3 cables S of the hill. A light (8.37) is exhibited 1 cable NNW of the headland.

3 The W side of the island is irregular in shape and indented by three bays. The E side of the island is almost entirely occupied by Golfo deglia Spalmatoi, entered between Punta San Francesco (42°15′·1N, 11°07′·0E) and Punta del Calettino, 6 cables SSW. Cala Maestra, which lies between Punta Scaletta (42°15′·4N, 11°05′·8E) and a point 2½ cables SW, is a small cove with rocky shores and a stony beach at its head. The inlet lies 1¼ cables W of Poggio Cannone.

Prohibited and restricted areas

8.47

1 Isola di Giannutri lies within Parco Nazionale dell' Arcipelago Toscano (8.8). Zone 1 areas extend up to 7 cables from the NW, NE and S coasts of the island. Zone 2 areas extend from the W and N coasts. The approaches to and waters of Cala Maestra and Golfo deglia Spalmatoi are outside the prohibited and restricted areas.

Anchorages.

8.48

1 **Cala Maestra** (42°15′·3N, 11°05′·8E). With local knowledge, and in calm weather, anchorage for small craft can be obtained within the cove. A mooring buoy lies in the middle of the inlet. The shores of the cove are rocky and a stony beach occupies the head.

2 **Cala Spalmatoi** (42°15′·2N, 11°06′·3E), a deep narrow cove in the NW part of Golfo degli Spalmatoi. A grey building stands at the head of the cove and a group of red coloured buildings stand nearby on the E slope of Poggio Cannone.

3 Good anchorage can be obtained, with local knowledge, in depths of 13 m close within the entrance; there is only sufficient room for one small vessel. The remainder of Golfo degli Spalmatoi, although sheltered, does not afford good anchorage because of the depth of water and rocky bottom.

Other names

8.49

1 Corvo, Cala di (42°20′·3N, 10°53′·6E).
Corvo, Il (42°20′·3N, 10°53′·4E).
Morto, Punta (42°23′·4N, 10°53′·4E).
Penna, Punta (42°20′·3N, 10°53′·5E).
Radice, Punta (42°22′·8N, 10°54′·4E).
Scalettino, Lo (42°22′·1N, 10°52′·8E).
Scoglio, Cala dello (Spogno, Cala dello) (42°15′·4N, 11°07′·0E).
Secca, Spiaggia di Punta (42°15′·5N, 11°10′·2E).

ISOLA D'ELBA – WEST AND NORTH COASTS

General information

Chart 1999

Routes

8.50

1 The coastal route leads E along the N coast of Isola d'Elba between Punta Nera (42°46′·0N, 10°06′·1E) and Capo della Vita, the N extremity of the island, 15 miles ENE. Several inshore routes lead to anchorages and harbours along this coast.

Topography

8.51

1 Isola d'Elba is the largest island of Arcipelago Toscano. The interior of the island consists of three distinct mountain ranges of which the W is the highest and contains Monte Capanne (42°46′·3N, 10°10′·0E). The W coast is steep, rocky and without harbours however the N coast is indented by two large bays with numerous smaller bays and coves which afford shelter.

2 The NW coast from Punta Polveraia (42°47′·7N, 10°06′·6E) to Marciana Marina, 4 miles ENE, remains high,

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rocky and unremarkable. To the NE of Marciana Marina a wide bay, indented on its E side by three smaller bays, extends 3 miles ENE to Capo d'Enfola. The countryside behind the smaller bays is less elevated and there is considerable development close inland of Golfo di Procchio, the most S bay. The coast then leads 3¼ miles ESE to Punta Falcone (42°48′·9N, 10°20′·0E) the W headland of Rada Portoferraio; the town and port occupy much of the headland and the relatively low lying area close S and W of it.

3 From Rada Portoferraio the coast extends 5 miles NE to Capo della Vita, the N extremity of the island. The coast once again becomes high and rocky reflecting the more rugged nature of the mountain range running parallel to it through the NE part of the island.

Depths

8.52

1 This coast is generally steep-to and free from isolated dangers to seaward of the 50 m depth contour, which lies within 8 cables of the shore.

Tunny nets

8.53

1 Mariners should beware of tunny nets laid in the following locations:

Punta Schioppo (42°48′·1N, 10°12′·8E), extending 3¼ cables NNE from a point 4 cables SE and 1½ cables N from a point 7 cables SE of the headland.

Capo d'Enfola (42°49′·7N, 10°15′·8E), close E of the headland extending 3½ cables N and from a point 2 cables E of the headland extending ½ cable N.

Scoglio Mezzogiorno (42°49′·4N, 10°15′·7E), close S of Capo d'Enfola, extending ½ cable S from the coast.

Punta Penisola (42°48′·7N, 10°15′·8E), extending ½ cable N from the headland.

Tuscan Archipelago National Park

8.54

1 The islands of Archipelago Toscano lie within Parco Nazionale dell'Arcipelago Toscano, see 8.8. Areas surrounding the following rocks are subject to national park restrictions, details of which must be obtained from the park authority:

Formiche della Zanca (42°48′·3N, 10°07′·6E).

Scoglietto di Portoferraio (42°49′·7N, 10°19′·9E).

Local magnetic anomalies

8.55

1 Local magnetic anomalies are frequently encountered off the coasts of Isola d'Elba, particularly when approaching the island from the NE, see 8.5, Submarine cables.

Principal marks

8.56

1 **Landmarks**:

Campo alle Serre, disused signal station (42°46′·5N, 10°07′·0E) (8.36).

Monte Capanne (42°46′·3N, 10°10′·0E) (8.12).

Cima del Monte (42°47′·7N, 10°23′·4E).

Monte Grosso (42°51′·1N, 10°24′·0E), a disused signal station and some small houses with red roofs stand on the rounded summit. A conspicuous grey granite obelisk stands on the N slope. A high, sheer, violet-coloured cliff fronts the hill; the area is known locally as I Rossi.

Monte Letisco, monument (42°51′·9N, 10°24′·8E).

2 **Major lights**:

Punta Polveraia (42°47′·7N, 10°06′·6E) (8.12).

Portoferraio, Forte Stella (white round tower, 25 m in height) (42°48′·9N, 10°20′·0E).

Directions

(continued from 8.13)

Chart 1999 (see 1.13)

8.57

1 From a position approximately 5 miles NW of Punta Nera (42°46′·0N, 10°06′·1E), the track leads ENE passing, with positions relative to Punta Polveraia Light (42°47′·7N, 10°06′·6E):

NNW of Punta Nera, (1¾ miles SSW), the headland can be identified by a number of light-coloured rocky patches on it. Thence:

NNW of Punta del Colle d'Orano (6 cables SW), a rocky shoal with a least depth of 2 m over it lies 1 cable NW of the headland. Thence:

NNW of Campo alle Serre, a disused signal station stands on it (1¼ miles SSE) (8.56), thence:

NNW of Punta della Fornace (2½ cables SW). A bay with a small sandy beach lies NE of the headland. A small fishing village stands at the head of the bay. Thence:

2 NNW of Punta Polveraia, also known as Punta Forana. The headland is sheer and exhibits a light (8.12), thence:

N of Formiche della Zanca (1 mile NE), a group of four rocks over which the sea often breaks. The outer rock is clearly visible, an adjacent rock shows a black head and the remainder are awash. See 8.54, Toscano National Park. Thence:

N of Capo Sant' Andrea (1½ miles NE), although rugged the headland is not prominent, thence:

N of Marciana (2½ miles ESE). The village stands on a green hill and has a belfry E of it. Thence:

N of Mont Capanne (2¾ miles ESE) (8.56), thence:

N of Poggio (3¼ miles ESE). The village, which stands on a green hill, resembles a pyramid with a belfry at the apex. Thence:

N of Marciana Marina (4 miles ENE) (8.70), thence:

3 N of Golfo di Procchio (5¾ miles E) (8.59), the head of the bay has been heavily developed with houses, hotels and blocks of flats. Thence:

N of Golfo della Biodola (6¾ miles ENE), the village of Biodola (42°47′·9N, 10°16′·0E) lies on the NE side of a rounded headland at the head of the bay, thence:

N of Golfo di Viticcio (8½ miles ENE) (8.58), the red-coloured houses of the village of Viticcio lie in the SE corner of the bay. Thence:

Chart 131

N of Capo d'Enfola (7 miles ENE), a conical hill with bare, steep, rocky sides; vegetation covers the upper part. Scoglio la Nave lies close off the N part of headland and Scoglio di Mezzogiorno, conical and light coloured, lies off the SW side. A tunny processing plant, stands on the NE side of the isthmus connecting Capo d'Enfola with Isola d'Elba. See 8.53, Tunny nets.

4 The track continues ENE passing, with positions relative to Portoferraio Forte Stella Light (42°48′·9N, 10°20′·0E):

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N of Secca di Santa Lucia (1½ miles WNW), a rock with a least depth of 8·8 m over it, thence:

N of Secca di Capo Bianco (9 cables NW), a rocky spit with a least depth of 0·6 m over it which extends 3 cables NNE from Punta Capo Bianca. A light-beacon (N cardinal) marks the seaward end of the danger. The red sector (100°–131°) of Forte Stella Light also covers the spit. Passage between the coast and the light-beacon is prohibited. Punta Capo Bianca is relatively steep, of moderate elevation and has several white patches on it, especially on the W side; a red house stands on it. Thence:

N of Scoglietto (7½ cables NNW) a bare, rocky, light-coloured island standing on a rocky bank which extends 1 cable from it. The island is marked by a light (castellated tower on a dwelling, 8 m in height). Thence:

5 N of Rada di Portoferraio (6 cables SE), thence:

NNW of Monte Grosso (3¾ miles NE) (8.56) thence:

N of Capo della Vita (5 miles NE). A rocky shoal with a least depth of 6 m over it lies 7 cables N. A small monument stands amongst the vegetation close to the shore on the N point of the headland. Thence:

To a position approximately 4 miles NNE of Capo della Vita.

(Directions continue, for Canale di Piombino at 8.95 and for the S coast of Isola d'Elba at 8.79)

Anchorages

Chart 1999 (see 1.13)

Golfo di Viticcio anchorage

8.58

1 Golfo di Viticcio (42°49′·1N, 10°16′·0E) (8.57), lies between Punta Penisola (42°48′·6N, 10°15′·8E) and Capo d'Enfola, 1 mile N. Temporary anchorage can be obtained in depths of 10 m, rock and weed, poor holding ground, S of the isthmus connecting Capo d'Enfola to Isola d'Elba. However the bay shoals rapidly with depths of about 5 m 1 cable from the shore. Mariners should also beware of tunny nets in this area, see 8.53. Use of an anchor buoy is advised.

Golfo di Procchio anchorage

8.59

1 Golfo di Procchio (42°47′·7N, 10°14′·0E) (8.57) lies between Punta Schioppo (42°48′·1N, 10°12′·8E) and an unnamed, rock fringed, rounded headland 1½ miles E. The E side of the bay is a wide sandy beach. Anchorage can be obtained in depths of 10 to 20 m, sand, 1 mile SE of Punta Schioppo. A shoal, with a least depth of 2·9 m over it, lies 1¾ cables SE of the berth. An outfall pipeline extends 4 cables WNW from a position close S of the unnamed E headland. Mariners should also beware of tunny nets, see 8.53.

Rada di Portoferraio

Chart 131

General information

8.60

1 **Position and function**. Portoferraio (42°48′·6N, 10°19′·5E) occupies the NW part of Rada di Portoferraio. It is the main commercial port of Isola d'Elba, handling general cargo, ferries and cruise vessels. The port also provides facilities for yachts.

2 **Topography**. Rada di Portoferraio lies between Punta Falcone (42°49′·0N, 10°20′·0E), towards the E end of the promontory on which Portoferraio is built, and Punta Falconaia, a high rugged headland 1¼ mile E. The rocky, rugged nature of the coast continues S into Rada di Portoferraio for about 7½ cables before giving way to the lower lying shore and sandy beach which occupies much of the head of the bay.

The E side of Rada di Portoferraio is indented by Cala Bagnaia, entered between Punta degli Scarpellini (42°48′·7N, 10°21′·5E) and Punta Pina, 2 cables SSW. Cala dell Concia lies between Punta Pina and Punta Ottone, 5 cables S. Villa Ottone (Toscanelli) is conspicuous on the S shore of the bay.

3 Lo Schiopparetto, an area 5 cables WSW of Punta Ottone, is the centre part of a sandy beach, backed by pine woods, extending from Punta Ottone to the vicinity of Punta della 1 mile W; numerous rocks front this shore.

The coast W of Punta della Grotte is flat and covered with salt pans. San Giovanni, a village 3 cables W of Punta della Grotte, is protected by a breakwater ¾ cable long lying ½ cable offshore parallel to the coast.

8.61

1 **Port limits**:

Rada di Portoferraio lies S of a line joining Punta Falcone (42°49′·0N, 10°20′·0E) and Punta Falconaia, 1¼ miles E, and the limits of Porto di Portferraio.

Porto di Portoferraio lies W of a line joining Punta del Torrione (42°48′·6N, 10°19′·8E) and Punta della Grotte, 5½ cables S.

2 **Approach and entry**. The port is approached through Rada di Portoferraio and entered S of Punta Torrione (42°48′·6N, 10°19′·8E).

Port Authority. Capitaneria di Porto di Portoferraio, Calata Buccari No 10, Portoferraio.

Limiting conditions

8.62

1 **Controlling depth**. Rada di Portoferraio has a least depth of 7·3 m, as shown on the chart, 3 cables SSE of Punta del Torrione (42°48′·6N, 10°19′·8E).

The port is subject to silting and depths are affected by the disturbance from ferries manoeuvring within the harbour. Mariners are advised to contact the Port Authority for detailed depth information.

Deepest and longest berth. Pontile No 3 S side; length 130 m, depth alongside 6 to 7 m.

Maximum size of vessel handled; maximum draught accepted 6·3 m.

Arrival information

8.63

1 **Port operations**:

Date	*Hours*
16 June-15 September	0700–2300
16 September-15 June	0700–1900

2 **Outer anchorage**. Anchoring is prohibited within an area, shown on the chart, enclosing Port di Portoferraio.

Anchorage can be obtained in depths of about 17 m, soft mud and weed, as shown on the chart, 7 cables ESE of Punta del Torrione (42°48′·6N, 10°19′·8E). Vessels waiting to enter harbour may anchor anywhere within Rada di Portoferraio S or E of the prohibited anchorage.

Mariners should note that the holding ground throughout Rada di Portoferraio is not good and in strong SE winds vessels are liable to drag even with a second anchor let go.

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3 **Pilotage** is compulsory and available 24 hours a day for all vessels of 500 grt and greater.

4 **Traffic regulations**. Vessels entering harbour are to remain at least 200 m from Punta del Torrione. Vessels proceeding to sea from the harbour are to remain within 150 m of Punta del Terrione. Consequently vessels passing within the approach to Porto di Portoferraio will do so starboard to starboard.

Harbour

8.64

1 **General layout**. Port di Portoferraio consists of Darsena Medicea (La Darsena), the basin N of Punta del Torrione, and Porto Commerciale, the area of piers and quays close W of it.

A private harbour lies 6 cables WSW of Punta del Torrione.

2 **Local weather.** Cloud covering the mountains around Rada di Portoferraio indicate SE winds; if the water level within the port rises and remains above normal a strong SE wind should be expected.

Monte Capanne (8.56) covered with cumulus cloud indicates a strong NW wind; when covered with cirrus a SW wind should be expected.

Principal marks

8.65

1 **Landmarks**:

Capo d'Enfola (42°49′·7N, 10°15′·9E) (8.57).
Monte Poppe radio mast (42°48′·6N, 10°17′·5E).
Monte Bello (42°49′·1N, 10°18′·0E).
Castello Inglese (42°49′·0N, 10°19′·0E).
Forte Falcone (42°49′·0N, 10°19′·7E).
Scoglietto (42°49′·7N, 10°19′·8E) (8.57).
Forte Stella (42°48′·9N, 10°20′·0E).
Forte Stella Lighthouse (42°48′·9N, 10°20′·0E) (8.56).

2 **Major lights**:

Forte Stella Light as above.
Isolotto Palmaiola Light (42°51′·9N, 10°28′·5E) (8.94).

Directions

8.66

1 **Rada di Portoferraio**. The town of Portoferraio is obscured from seaward however the forts standing on the N side of the peninsula (8.65) can be distinguished. At night Isolotto Palmaiola Light (42°51′·9N, 10°28′·5E), which is not obscured by the N part of Isola d'Elba until bearing less than 095°, and Fort Stella Light bearing 180° may be useful guides for approaching Rada di Portoferraio.

2 From a position 3 mile W of Capo della Vita (42°52′·3N, 10°24′·8E) (8.57) the track leads S passing, with positions relative to Forte Stella Lighthouse (42°48′·9N, 10°20′·0E):

W of Monte Grosso (4½ miles NE) (8.56) thence:
E of Scoglietto (8 cables N) (8.57), thence:
E of Secca di Capo Bianco (8 cables NW) (8.57), thence:
E of Forte Stella Lighthouse to pass between Punta Falcone and Punta Falconaia into Rada di Portoferraio.

3 **Port di Portoferraio**. The entrance to the port is enclosed by an area within which anchoring and stopping is prohibited, see 8.63 Traffic regulations, and leads from the entrance of Rada di Portoferraio to the entrances of Darsena Medicea and Porto Commerciale.

From a position E of Fort Stella Lighthouse (42°48′·9N, 10°20′·0E) the track leads SW passing, with positions relative to the light:

SE of Fort Stella, thence:
SE of Punta del Torrione (3 cables SW), thence:
To a position S of a light (green post, 1 m in height) (42°48′·7N, 10°19′·8E), marking the E side of the entrance to Darsena Medicea.

Mariners should note the bank extending 50 m from Punta del Terrione has a least depth of 2 m over it.

Clearing bearing. The light (metal bracket on wall of tower, 7 m in height) (42°48′·7N, 10°19′·7E) exhibited from the head of Moletto della Sanità is obscured over the bank when bearing less than 320°.

Basins and Berths

8.67

1 **Darsena Medicea** (La Darsena), the rectangular E basin of the port, is lined with quays and has depths of 14 m in the middle reducing to 3 m alongside.

Porto Commerciale. Banchina Alti Fondali (Alto Fondale), 1½ cables NW of Darsena Medicea, is used by cruise vessels. Pontile G. Massimo provides ferry berths. The main commercial berths are Pontiles 3 and 1 which lie on the W side of Porto Commerciale; both have Ro-Ro ramps.

Port services

8.68

1 **Repairs**: small vessels only.

Other facilities: There is a small hospital in Portoferraio.

Supplies: fuel; water; provisions.

Small craft

8.69

1 **Darsena Medicea** (8.67) provides 150 small craft berths. vessels up to 70 m length are accepted.

Esaom Cesa (42°48′·5N, 10°19′·0E) a boatyard and yacht harbour close W of Porto Commerciale. The harbour is protected by two moles which exhibit lights; the SE facing entrance lies between the mole heads. Vessels up to 22 m in length are accepted.

The harbour provides 140 berths in depths of 2·5 to 5·0 m; 20 berths are reserved for visiting yachts. There are comprehensive small craft facilities.

Small craft

Chart 1999 (see 1.13)

Marciana Marina

8.70

1 **General information**. Marciana Marina (42°48′·4N, 10°12′·0E) is a yacht harbour and fishing port.

The harbour is formed by Molo di Sopraflutto which extends 1½ cables SE then ½ cable E from a rocky promontory. The longest arm is lined with a quay; the shorter arm is of rubble construction and has a pontoon secured to its S face. A light (green metal pillar, 5 m in height) is exhibited from the head of the mole. Three piers and a rubble breakwater extend NE into the harbour.

Torre Medicea, white and round, stands close to the root of the mole, at the W end of the village. The E end of the village is bounded by a hill. Villa Spinola (Anselmi) stands on the hill close N of a small wood.

Mariners should note the fish havens 7 cables NW and 4 cables E of the harbour.

2 North winds raise a swell in the harbour. Vessels up to 35 m in length are accepted.

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Directions. The entrance faces E and has depths of 4·7 to 9 m.

Berths. The basin provides 150 berths at the quays lining the inner part of the harbour and mooring buoys in depths of 1·5 to 8·4 m. Yachts can also berth at the pontoon on the seaward end of Molo Sopraflutto.

Facilities. Comprehensive small craft facilities including some repairs.

3 **Other facilities**. There is a pharmacy in the village.

Supplies: fuel; fresh water, can be restricted in the summer; provisions.

Communications. Nearest airport Campo Nell'Elba.

Other names

8.71

1 Acquaviva, Punta (42°49′·3N, 10°17′·3E).
Linguella, a promontory (42°48′·7N, 10°19′·9E).
Scaglieri (42°48′·3N, 10°16′·2E).

ISOLA D'ELBA – SOUTH COAST

General information

Chart 1999 (see 1.13)

Routes

8.72

1 The coastal route leads E along the S coast of Isola d'Elba between Punta Nera (42°46′·0N, 10°06′·1E) and Punta dei Ripalti, the S extremity of the island, 14½ miles ESE. Inshore routes lead to anchorages and harbours along this coast.

Topography

8.73

1 The mountainous and rugged S coast of Isola d'Elba is similar in appearance to the N coast (8.51). The W end of the island is dominated by Monte Capanne and the associated mountain range. Similarly, at its E end, the foothills or spurs from the mountain ranges associated with Cima del Monte and, in the SE part of the island, Monte Calamita (42°43′·9N, 10°23′·8E), provide the main headlands. Three large bays indent the S coast; the two most W have areas of relatively low, flat land at their head.

Depths

8.74

1 The S coast of Isola d'Elba is steep-to and free from isolated dangers to seaward of the 50 m depth contour, which generally lies within 4 cables of the headlands, except in the vicinity of Punta delle Ciarpe (42°43′·1N, 10°22′·5E) where a rocky spit extends 8 cables SW; Isolotti Corbelli stands on the outer end of the spit.

Tunny nets

8.75

1 Mariners should beware of tunny nets laid in the following locations:

Spiaggia del Maggitore (42°45′·5N, 10°19′·3E), extending up to ½ cable from the shore and SW headland of the bay.

Golfo della Lacona (42°45′·0N, 10°18′·2E), nets extend up to ½ cable from the E part of Spiaggia della Lacona, a sandy beach at the head of the bay.

Prohibited anchorages

8.76

1 Anchoring and fishing are prohibited in an area extending SSW from the vicinity of Punta di Fetovaia (42°43′·6N, 10°09′·4E) which contains submarine power cables. The area is shown on the chart.

2 Anchorage within the 40 m depth contour in the vicinity of Isolotti Gemini (42°43′·1N, 10°22′·3E) is reported dangerous due to unexploded mines.

Local magnetic anomaly

8.77

1 A magnetic anomaly causing appreciable variation has been reported in the vicinity of Punta della Calamita (Capo della Calamita) (42°42′·7N, 10°23′·6E). This anomaly was not apparent in 1969 to a vessel passing between 3 and 7 cables off the headland.

Principal marks

8.78

1 **Landmarks:**

Campo alle Serra, disused signal station (42°46′·5N, 10°07′·0E) (8.36).

Monte Capanne (42°46′·3N, 10°10′·0E) (8.12).

Monte Castello (42°47′·0N, 10°23′·1E), elevation 390 m. The mountain has twin peaks; a square building stands on the NW peak.

Cima del Monte (42°47′·7N, 10°23′·4E) (8.56).

Monte Calamita (42°43′·9N, 10°23′·8E), a radio mast stands near the summit but is obscured from the SE when close to the coast.

Directions

(continued from 8.36)

8.79

1 From a position approximately 5 miles S of Punta Nera (42°46′·0N, 10°06′·1E), the track leads E passing, with positions relative to Monte di Poro Light (42°43′·7N, 10°14′·2E):

S of Campo alle Serra disused signal station (6 miles WNW) (8.78), thence:

S of Scoglio Oligera (5¼ miles WNW), an above water rock 1 cable offshore. Shoals with a least depth of 13·6 and 13·9 m lie, respectively, 3 cables WSW and 2 cables SSW of Scoglio Oligera. An outfall extends 3 cables from the coast close N of Scoglio Oligera. Thence:

S of Punta Fetovaia (3½ miles W) (8.37), thence:

2 S of Capo di Poro, a steep, high and rocky headland which is the E extremity of Monte Poro. A light is exhibited from Monte Poro (8.37). Thence:

S of Capo di Fonza (2¼ miles ENE), a rugged, mountainous headland with distinctive white and grey striations. Secca di Capo Fonza, a rocky shoal with a least depth of 3·3 m over it, lies 2½ cables SSW of the headland; there are depths of about 15 m in the narrow passage between the coast and the shoal. Thence:

S of Capo della Stella (3¾ miles ENE) the S extremity of a narrow, high and steep-sided promontory extending 1½ miles S from the coast. Isolotto Corbella, a bare, dark rock with smaller rocks close around it, lies 1 cable S of the headland. There is no passage between them. Thence:

3 S of Isolotto Corbelli (5½ miles ESE) (8.74). Isolotti Gemini, lie amongst a group of dark, above water rocks 5 cables NE of Isolotto Corbelli. The outer

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islet (42 m high) of Isolotti Gemini is cone shaped, the inner islet (23 m high) narrow and elongated. The passage between Isolotti Gemini and Isolotto Corbelli has a least depth of 21 m; it is only suitable for small vessels and local knowledge is essential. Thence:

4 S of Punta della Calamita (Capo della Calamita) (7 miles ESE). The headland is the S extremity of a range of of high, steep, rugged mountains extending S from Monte Calamita (8.78). The reddish rock is rich in iron ore, see 8.77 Local magnetic anomaly. Wide terraces resulting from iron ore extraction are clearly visible. A stone jetty (8.85) with an ore transporter on it lies close W of the headland. Thence:

S of Poggio Polveraio (7¼ miles ESE) (elevation 285 m), a tall slender building stands close W of it. Thence:

5 S of Punta dei Ripalti (Punta dei Riparti) (8¼ miles ESE), steep and rocky with large caves at its base. Torre Giove (42°49′·8N, 10°25′·4E) (8.94), is immediately visible E of Punta dei Ripalti. Thence:

To a position SE of Punta dei Ripalti.

(Directions for Promontorio di Piombino to Punta Ala, including the E coast of Isola d'Elba continue at 8.95)

Anchorages and harbours

Chiessa anchorage

8.80

1 Chiessa (42°45′·5N, 10°06′·7E). With local knowledge anchorage for small vessels can be obtained in depths of about 11 m, 1½ cables off the village. A cemetery standing on Punta della Testa, the small point 5 cables SSE of the village, may be a useful mark.

Golfo di Campo anchorage

8.81

1 **General information**. Golfo di Campo (42°44′·2N, 10°15′·0E) lies between Capo di Poro (8.79) and Punta di Mele, 1½ miles ENE. A rocky shoal with a least depth of 3 m over it extends 2½ cables SSW from Punta di Mele; Scoglio Triglia, a small, light-coloured rock stands at the seaward end of the shoal.

The shores of the bay are rocky and inaccessible except for the head which is sandy beach. Marina di Campo lies at the SW end of the beach close N of a rocky point, elevation 34 m, on which stands a red-coloured, round tower, 10 m in height. A small craft harbour (8.86) protected by breakwaters lies close N of the tower. A light (white cone on yellow single storey building) (42°44′·4N, 10°14′·3E) stands 38 m S of the tower. Two small areas used for scientific research lie close to Marina di Campo. Navigation is prohibited within 50 m of the buoys (special, diamond topmark) marking the areas.

2 **Anchorage** can be obtained throughout the bay in good holding ground however a recommended berth, in depths of about 13 m, lies 3½ cables ENE of the light.

Clearing bearing. The line of bearing 075° of the S extremity of Capo della Stella (8.79) open N of the N side of Capoliveri (42°44′·7N, 10°22′·7E) (8.83) leads S of Scoglio Triglia and Secca di Capo Fonza (8.79).

Golfo della Lacona anchorage

8.82

1 Golfo della Lacona (42°45′N, 10°18′E) lies between Capo di Fonza (8.79) and Capo della Stella (8.79), 1½ miles E. The bay is surrounded by high land except at its head where Spiaggia della Lacona, a wide sandy beach, extends between the NE corner of the bay and a low, dark, rocky point fringed with detached rocks, 6 cables W, see 8.75, Tunny nets. A small mole lies at the E end of the beach.

Anchorage can be obtained in depths of 5·5 to 16·5 m, good holding ground, in the N part of the bay.

Golfo Stella anchorage

8.83

1 **General information**. Golfo Stella (42°45′N, 10°20′E) lies between Capo della Stella (8.79) and Punta Morcone, 2 miles ESE. The E shore of the bay is rocky and fringed with rocks close inshore. A shoal, with a least depth of 17·9 m over it, lies 1¼ miles ENE of Capo Stella. Outfalls extend 6 cables SE from the NW shore and 3 cables SW from the NE shore. The village of Capoliveri, 1 mile NNE of Punta Morcone, overlooks the bay, a large isolated school building (yellow, red roof) stands W of the town. A grey, square belfry is prominent within the town. Capo Pini (42°45′·5N, 10°20′·0E), a small rugged, rock fringed promontory lies at the head of the bay.

2 **Anchorage** can be obtained, with local knowledge, in depths of 11 m, sand 3¼ cables WSW of Capo Pini. See 8.75 Tunny nets.

Cala dell' Innamorata

8.84

1 **General information**. Cala dell' Innamorata (42°43′·3N, 10°22′·6E) is a cove entered between Isolotti Gemini (8.79) and, 5 cables N, Punta Pareti (Capo Francese). The S part of the cove is sheltered by the shoal bank surrounding Isolotti Gemini.

Anchorage can be obtained in depths of about 26 m, weed, on the alignment of the W island of Isolotti Gemini and Punta Morcone (8.83), 9½ cables NNW.

2 **Berth**. A metal pier, constructed for loading iron ore from the mines at Punta della Calamita (8.79), extends ¾ cable from the S shore of the cove. The pier has a T-shaped head with an alongside depth of 2 m. Mooring and warping buoys are laid close off the pier.

Punta della Calamita

8.85

1 **General information**. Punta della Calamita (42°42′·6N, 10°23′·8E) (8.79).

Berths. Close W of the headland a stone jetty, extending 40 m from the coast, carries an ore transporter. Mooring buoys laid close off the jetty provide a berth in a depth 7 m; vessels up to 5000 grt are accepted.

2 Another berth for handling iron ore lies at the head of the bay between Punta della Calamita and, 1 mile ESE, Punta dei Riparti. Punta Rossa a small headland, lies 5 cables NE of Punta della Calamita; a shoal with a least depth of 6·5 m over it lies 1 cable S of Punta Rossa. Scoglio Remailo, a rock, lies on the E side of the bay; there are depths of about 10 m in the passage between Scoglio Remailo and the coast. A pier, with depths of about 5 m at its head and several mooring buoys in its vicinity, lies at the head of the bay E of Punta Rossa.

Small craft

Marina di Campo

8.86

1 **General information**. Marina di Campo (42°44′·5N, 10°14′·3E) is a yacht harbour and fishing port also used by small local ferries. The harbour consists of two basins open

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N and NE. An outer mole extends NE from the coast, W of it Molo Elba extends NNE. Lights are exhibited from both; Outer mole (red mast, 6 m in height) Inner mole, also known as Molo Elba (red mast 5 m in height). The W basin lies between Molo Elba and Moletto del Pesce. The harbour is subject to silting.

2 **Berths**. The E basin provides berths at the quays lining it in depths of 1 to 4 m. There are depths of about 2 m in the W basin.

Facilities. There is a pharmacy in the village. A small patent slip; fixed 4 ton crane.

Supplies: fuel; water; provisions.

Communications. Nearest airport Campo Nell'Elba.

Other names

8.87

1 Barbtoia, Golfo di (42°43′·8N, 10°08′·3E).
Pomonte (42°44′·9N, 10°07′·3E).
Pomonte, Capo di (42°44′·7N, 10°07′·3E).
Seccheto, Spiaggia di (42°44′·0N, 10°10′·7E).
Tombe, Punta le (42°43′·9N, 10°08′·2E).

PROMONTORIO DI PIOMBINO TO PROMONTORIO ARGENTARIO

GENERAL INFORMATION

Chart 1999

Area covered

8.88

1 This section covers the mainland coast of Italy between Promontorio di Piombino (42°58′·0N, 10°29′·0E) and Promontorio Argentario 45 miles SE including the channels between Arcipelago Toscano and the mainland. The section is arranged as follows:

Promontorio Piombino to Punta Ala (8.90).
Punta Ala to Punta di Torre Ciana (8.129).

Topography

8.89

1 Promontorio di Piombino (42°58′·0N, 10°29′·0E) is backed, to the E, by a low plain which gives the promontory the appearance of an island when viewed at distance from the N or S. The high rocky nature of the W coast of the promontory continues SW to Isola d'Elba. The island is in effect the highest part of a submerged tongue which extends W from the mainland creating the relatively shallow Golfo di Follonica and Canale di Piombino. The latter separating Isola d'Elba from Promontorio di Piombino.

2 The shore of the mainland coast is generally low, sometimes marshy, but often sandy and backed by pine woods; hills and mountains rise within 10 miles of the coast. Promentorio Argentario is much higher and more prominent than Promontorio di Piombino.

The islands of Arcipelago Toscano are mainly high, rocky and conspicuous.

PROMONTORIO DI PIOMBINO TO PUNTA ALA

General information

Chart 1999

Routes

8.90

1 A coastal route leads, from a position W of Promontorio di Piombino (42°58′·0N, 10°29′·0E), 18 miles SE to a position SW of Punta Ala (42°48′N, 10°44′E).

Inshore routes lead into Porto Azzurro (42°46′N, 10°24′E) and Golfo di Follonica (42°54′N, 10°40′E).

Topography

8.91

1 The relatively shallow Canale di Piombino passes between Isola d'Elba and the mainland. Within the channel lie the islands of Palmaiola (42°51′·9N, 10°28′·5) and Cerboli (42°51′·4N, 10°32′·9E). The island is steep-sided and conical. Isolotto Palmaiola is steep-to except on its N side where dangers extend 3 cables NNE.

2 Isolotto Cerboli is steep-to, has precipitous coasts and an irregular outline when viewed from NW or SE. A cultivated area with two small white houses lies in the NE part of the island. A tower stands on the summit and a rocky pinnacle, on the W extremity of the island, resembles an inclined tower.

3 The E coast of Isola d'Elba, although much less indented than th S coast, provides several harbours now mainly associated with ferry services to and from the mainland of Italy. Due to the high iron ore content of land at the E end of Isola d'Elba the mountains and hills are varying shades of red in colour.

Depths

8.92

1 Depths within Canale di Piombino are irregular and less than 50 m throughout the channel. Once S of Isolotto Cerboli (42°51′·4N, 10°32′·9E) depths increase steadily towards the 100 m depth contour which lies 4½ miles SW of Punta Ala and extends WSW to the vicinity of Punta dei Ripalti, the SE extremity of Isola d'Elba.

Natural conditions

8.93

1 **Current**. During the winter currents within Canale di Piombino are generally weak and follow the prevailing winds. However during the summer strong and persistant prevailing W or NW winds will increase the mean rate of E or SE currents from ½ kn to a maximum rate of 2½ kn in the centre of the channel. The E current can develop sufficiently to persist against a SE wind.

2 A strong current sets SE towards Scogli Porcellini

Local weather and sea state. In the winter the *Sirrocco* (SE wind) creates heavy seas within Canale di Piombino and is usually accompanied by rain.

In the spring the *Libeccio* (SW wind) creates violent squalls.

Principal marks

8.94

1 **Landmarks:**

Monte Massoncello (42°57′·8N, 10°29′·9E).
Monte Grosso (42°51′·1N, 10°24′·0E) (8.56).
Torre del Sale, low, light coloured and attached to a house (42°57′·3N, 10°35′·9E). A tall chimney (red and white bands), two large blue buildings and several white silos stand near the tower.
Torre Mozza, dark and square with the upper part broken away, stands on the beach (42°56′·8N, 10°41′·6E).

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Torre Giove, a massive rectangular tower, which appears to have a hole in the middle when seen from E, stands on a dark green conical peak (42°49′·8N, 10°25′·4E).
Rio Marina tower, tall, eight-sided, surmounted by a small, yellow, crenellated clock tower (42°48′·8N, 10°25′·8).
Rio Marina factory, yellow, four storey (42°49′·0N, 10°25′·7E.
Capo Ortano radio mast (42°47′·8N, 10°26′·0E).
Cima del Monte (42°47′·7N, 10°23′·4E) (8.56).
Monte Castello (42°47′·0N, 10°23′·1E) (8.78).
Follonica, tall building 78 m high, light blue in colour (42°55′·3N, 10°45′·5E).
Follonica, yellow building with red roof (42°54′·9N, 10°46′·1E).
Pontile Montecatini-Edison three chimneys, two grey, one red and white bands (42°54′·3N, 10°46′·9E).
Monte Mar di Capanna metal cross (42°46′·7N, 10°23′·5E).
Monte Calamita (42°43′·9N, 10°23′·8E) (8.78).
Forte Punta Ala, a square, red, four storey building with windows, surmounted by a large square tower (42°48′·1N, 10°44′·1E).

2 **Major lights:**
Isolotto Palmaiola (square tower on white building, 14 m in height) (42°51′·9N, 10°28′·5E).
Capo Focardo (red tower on wall of fort, 6 m in height) (42°45′·2N, 10°24′·6E).

Directions

(continued from 8.79)

8.95

1 From a position approximately 5 miles W of Promontorio Piombino (42°58′N, 10°29′E) (8.89) the track leads SE passing, with positions relative to Isolotto Palmaiola Light (42°51′·9N, 10°28′·5E):
N of Capo della Vita (2¾ miles WNW) (8.57), thence:
SW of Monte Massoncello (6 miles NNE) (8.94), thence:
Chart 131
SW of Punta Falcone (4 miles NNE), the headland is high and sheer, a triangular rock lies ¾ cable W of it. The rock should be given a berth of at least ½ cable and there is no passage inshore of it. Thence:
NE of Isolotto dei Topi (2¼ miles WNW), a dangerous wreck lies 1 cable SE of the island, thence:
NE of Porto di Cavo (2¼ miles WSW) (8.106), thence:
SW of La Rocchetta Light (4 miles NNE) (square tower, 5 m in height), thence:
NE of Capo Pero (1¾ miles SW), the headland is steep and rocky. A house with crenellated wall in front of it stands on the summit. The red-brown colour of this part of the coast is a distinctive feature. Thence:
NE of Torre Giove (3 miles SW) (8.94), thence:
NE of Isolotto Palmaiola (8.91). A light is exhibited from the island (8.94). Thence:
(Directions for Portovecchio di Piombino continue at 8.121)
SW of Torre del Sale (7½ miles NE) (8.94), thence:
SW of a light-beacon (3½ miles NE), thence:
SW of Isolotto Cerboli (3¼ miles ESE) (8.91), thence:
Chart 1999
W of Torre Mozza (11 miles ENE) (8.94), thence:
NE of Capo Focardo Light (7¼ miles SSW) (8.94), thence:
NE of Monte Calamita (9 miles SSW) (8.94), thence:
SW of Follonica (13 miles ENE), a conspicuous tall building stands in the town (8.94), thence:
SW of Scoglio della Sparviero (11¼ miles ESE), a rocky and generally steep-sided island surmounted by a round tower. The island lies 5 cables WSW of the outer rocks of Scogli Porcellini, which extends 3½ cables W of Punta Ala (12¼ miles ESE). A spit with depths of less than 2 m over it extends ½ cable E from the islet. The passage between Scogli Porcellini and Scoglio della Sparviero should only be attempted with local knowledge. Thence:
To a position SW of Punta Ala (12 miles ESE), on which stands a conspicuous fort (8.94).
(Directions continue at 8.135)

Porto Azzurro

Chart 131 Plan of Porto Azzurro

General information

8.96

1 **Position and function**. Porto Azzurro (42°45′·7N, 10°23′·8E) is a small commercial and ferry port with facilities for yachts.

Topography

8.97

1 Porto Azzurro lies at the head of a small cove on the N side of Golfo di Porto Azzurro, entered between Punta San Vincenzo, the SE extremity of an elevated promontory, and Capo Focado 6 cables SSE. Fortezza di San Giacomo, an imposing citadel, stands NW of Punta San Vincenzo. A dangerous wreck, shown on the chart, lies at the head of the bay, 7 cables WSW of Punta San Vincenzo.

Approach and entry

8.98

1 Porto Azzurro is approached from the E through Golfo di Porto Azzurro and entered between Punta San Giovanni (42°45′·7N, 10°23′·7E) and the head of the mole protecting the SE side of the harbour, 1½ cables ENE.

Limiting conditions

8.99

1 **Deepest and longest berth**. Banchia IV Novembre; length 100 m, depth alongside 5 m.

Local weather. An abnormal rise in sea level accompanied by cloud covering the surrounding mountains forecast strong SE winds which are most common in winter.

In strong SW or W winds vessels anchored in Golfo di Porto Azzurro should let go a second anchor.

Arrival information

8.100

1 **Prohibited anchorage**. To avoid obstructing ferries an area, within which stopping, anchoring and fishing is prohibited, has been established S of the harbour entrance; the area is shown on the chart.

Outer anchorage. Anchorage can be obtained in depths of 18 to 27 m to the E of the prohibited area. Mariners should note the outfall pipeline extending 4 cables SSW

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from the root of the harbour mole and 3 cables ENE from the coast NW of Capo Focardo.

During strong SE winds small craft may obtain anchorage in depths of about 10 m W of the prohibited anchorage.

Restricted areas. Mariners should note two circular restricted areas close NNE of Punta delle Cannelle; the areas contain unexploded mines.

2 **Traffic regulations**. Vessels leaving harbour have right of way. Vessels leaving harbour are to remain within 100 m of the mole head; vessels entering harbour must keep at least 150 m from the mole head. Consequently in the approach to the harbour vessels pass starboard side to starboard side.

Harbour

8.101

1 The ferry and commercial berths occupy the SE part of the harbour basin; small craft berths occupy the NE part.

Principal marks

8.102

1 **Landmarks**:

Monte Castello (42°47′·0N, 10°23′·1E) (8.78).
Monte Mar di Capanna (42°46′·7N, 10°23′·5E) (8.94).
Capoliveri (42°44′·8N, 10°22′·5E) (8.83).

2 **Major light**:

Capo Focardo (42°45′·2N, 10°24′·6E) (8.94).

Directions for entering harbour

8.103

1 From a position S of Punta delle Cannelle (Capo d'Arco) (42°46′·5N, 10°26′·0E), a steep rocky headland, the track leads W passing, with positions relative to Capo Focardo Light (42°45′·2N, 10°24′·6E):

S of an unnamed shoal (1¼ miles NNE), with a least depth of 1 m over it. An outfall pipeline extends 2 cables ESE from the coast W of the shoal. Thence:

2 S of Capo Bianco (8½ cables NNE), so named because of some white patches on its lower part. Thence:

N of Capo Focardo Light, thence:
S of Punta San Vincenzo (5½ cables NNW), thence:
S of Fortezza di San Giacomo belfry (7 cables NNW), thence:
S of the light at the head of the harbour mole (green column, 4 m in height) (7¼ cable NW).

3 From a position SSW of the mole head light the track leads N into the harbour entrance passing:

E of Punta San Giovanni Light (white square hut, 3 m in height) (8 cables NW), thence:
W of the mole head.

Port services

8.104

1 **Supplies**: fuel; water from jetty connections; provisions.

Small craft

8.105

1 **General information**. Marina berths for small craft lie in the NE part of the harbour. Maximum size of vessel accepted, length 15 m.

Berths. There are 192 small craft berths in depths of 1·2 to 5·5 m

Facilities. The usual facilities of a small town.

Anchorages and harbours

Porto di Cavo

8.106

1 **General information**. Porto di Cavo (42°51′·6N, 10°25′·4E) is a small craft and yacht harbour. The E side of the harbour is protected by an L-shaped mole with a rubble break water extending from its head. A pier used by local ferries extends NE from the elbow of the mole. A short breakwater extends E then N from the coast protecting the N side of the harbour and forming the N facing entrance. Lights are exhibited from the head of the E breakwater (red framework tower, 6 m in height), the elbow of the N breakwater (green framework tower, 6 m in height) and the head of the ferry pier (red mast, 9 m in height). The entrance has depths of about 3 m. The maximum size of vessel accepted is length 15 m, draught 2 m.

2 **Directions**. The entrance and harbour becomes dangerous in strong N or NW winds. The W part of the harbour is encumbered by drying obstructions.

Berths. Porto di Cavo provides 300 small craft berths in depths of 0·5 m to 2·0 m. The pier outside the harbour is reserved for local ferries operating between Isola d'Elba and the mainland. Two mooring/warping buoys have been laid for their use on the NW side of the pier.

Facilities. Usual small craft facilities.

Supplies: fuel; water; provisions.

Pontile Vigneria and anchorage

8.107

1 **General information**. Pontile Vigneria (42°49′·2N, 10°25′·9E) is a mineral loading berth extending 70 m from the coast. The pier has conveyor belt loading equipment. A light (white mast, 4 m in height) is exhibited from the pier head. Debris from an earlier pier lies on the seabed S of Pontile Vigneria. There are depths of about 7·5 m at the head of the pier.

2 **Anchorage** can be obtained in depths of about 20 m 2 cables NE of Pontile Vigneria. The anchorage is shown on the chart.

Rio Marina

8.108

1 **General information**. Rio Marina (42°48′·9N, 10°25′·8E), originally an important exporting port for locally mined iron ore, is now primarily a local ferry port and small craft harbour. Molo Foraneo protects the S and E sides of the harbour basin; a light (red mast 7 m in height) is exhibited from its head. A conspicuous clock tower (8.94) stands close to the root of the mole. A large rock, Scoglietto, forms the mid point of Molo Foreano, a squat crenellated tower stands on it. South of the mole the landing of the Piombino-Isola d'Elba water pipeline is marked by beacons (yellow post, yellow diagonal cross topmark). Torrente Riale enters the sea close S of the mole causing silting in the vicinity. Small craft should be navigated in the area with caution.

2 **Directions**. The harbour entrance faces N and can become dangerous in strong NE winds. There are depths 5 to 8 m between the short rubble breakwater marking the W side of the entrance and the head of Molo Foraneo. The village of Rio nell'Elba (42°48′·8N, 10°24′·1E) may be a useful mark when approaching the harbour.

Anchorage can be obtained in depths of 20 to 30 m, mud and sand, good holding ground, about 1 cable NE of the Molo Foraneo Light. Mariners should note the

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prohibited anchorage area, shown on the chart, which protects the water pipeline, encloses the E side of the mole.

3 **Berths**. The N part of the quay between Scoglietti and Molo Foraneo Light is reserved for ferries and other vessels providing regular services to and from Rio Marina. The berth has an alongside depth of 6·0 to 6·5 m on the 40 m section immediately S of the mole head.

Small craft berth in the S part of the basin in depths of about 4 m. However the basin is subject to silting.

4 **Facilities** The usual facilites of a small town.

Supplies: fuel; water from jetty connections; provisions.

Golfo di Follonica

Chart 1999

Description

8.109

1 Golfo di Follonica lies between the SE extremity of Promontorio di Piombino (42°58′·0N, 10°29′·0E) (8.89) and Punta Ala, 11 miles SE. Portovecchio di Piombino (8.117) occupies the E side of Promontorio di Piombino.

Topography

8.110

1 The N and NE shores of the bay are low and marshy. However part of the E coast, between Punta Portiglione, a relatively high, steep point with a white two-storey building on the flat summit (42°53′·0N, 10°46′·8E) and Torre Civette (8.114), 2½ miles SSW, is rocky and steep. South of Torre Civette a low sandy beach, backed by green hills sweeps SW for 2½ miles to Punta Hildago, the most N part of Punta Ala.

The town of Follonica (42°55′·5N, 10°45′·2E) stands on a coastal plain amongst trees on the NE shore of the bay.

Depths

8.111

1 The 50 m depth contour lies to seaward of Golfo di Follonica. The shores of the bay are fronted by a bank, with depths of less than 20 m, which extends up to 2 miles offshore. Mariners should note Secca del Pino, a shoal with a least depth of 1·5 m over it, 1½ miles W of Follonica and an unnamed shoal, with a least depth of 2 m over it, reported 7 cables S of Torre Mozza (42°56′·8N, 10°41′·6E) (8.94)

Prohibited area

8.112

1 Entry to an area, shown on the chart, centred on (42°54′·0N, 10°44′·3E) is prohibited. The area encloses a dangerous wreck containing explosives.

Prohibited anchorages

8.113

1 Anchorage is prohibited within the areas indicated on the chart enclosing submarine pipelines and cables laid between the mainland and Isola d'Elba.

Principal marks

8.114

1 **Landmarks**:

Fiume Cornia tower, tall slender column with tank at top, stands close NE of the river mouth (42°56′·6N, 10°32′·7E).

Torre Sale and ENEL facility (42°57′·3N, 10°35′·9E) (8.94).

Torre Mozza (42°56′·8N, 10°41′·6E) (8.94).

Follonica, tall building (42°55′·3N, 10°45′·5E) (8.94).

Follonica, conspicuous red-roofed building (42°54′·9N, 10°46′·1E) (8.94).

Torre Civette, a white villa with square tower, stands amongst vegetation on the S slope of Poggio Carpineta (elevation 143 m) (42°50′·7N, 10°46′·5E).

Forte Punta Ala (42°48′·1N, 10°44′·1E) (8.94).

2 **Offshore marks**:

Light-beacon (special) Piombino-Isola d'Elba submarine water pipeline, (42°54′·0N, 10°32′·4E).

Light-beacon (special) Piombino-Isola d'Elba submarine water pipeline (42°56′·0N, 10°35′·2E).

Light-beacon (special) Piombino-Isola d'Elba submarine water pipeline (42°56′·6N, 10°36′·2).

Wave recorder buoy (42°52′·9N, 10°36′·2E).

Minor harbour and berth

Torre del Sale ENEL

8.115

1 **General information**, Torre del Sale ENEL (42°57′·3N, 10°36′·0E) is a small harbour fronting Torre del Sale (8.94) and used by small tankers to discharge fuel oil to the ENEL plant. The harbour is protected by two moles. Outer Mole, on the W side of the harbour, is marked by lights at its elbow (white mast, 8 m in height) and head (red mast, 6 m in height). Molo Levante, on the E side of the harbour, is also marked by a light (green mast, 6 m in height) at its head.

2 There are depths of 4·5 m in the approach to the harbour and within the basin.

Pilotage and tugs are compulsory and provided by Piombino (8.119).

Follonica, Pontile Montecatini-Edison

8.116

1 **General information.** Follonica (42°55′N, 10°45′E) stands on a coastal plain and is easily identified by its numerous modern buildings including a light-blue coloured tower block (78 m in height) (8.94). Mariners should beware of numerous rubble breakwaters, submerged and awash, which lie approximately 1 cable off this part of the coast.

Pontile Montecatini-Edison (42°54′·1N 10°46′·4E), also known as Scarlino Wharf, is a private pier used for loading sulphuric acid and the extraction of seawater for refrigeration of the industrial plant. Three chimneys (8.94) stand near the root of the pier. Lights are exhibited from the pier head; N and S sides (red concrete masts, green bands, 9 m in height). Lights (2 fixed green, vertical) are also exhibited from the head of the short arm halfway along the N side of the pier.

2 **Pilotage** is compulsory for vessels of 500 grt or greater.

Berth. The pier, standing on reinforced concrete piles, is 640 m in length and 6 m in height. The inner half is 8 m in

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width, the outer half 6 m in width. There are depths of 5 to 6 m on the S side of the pier head and 7 to 8 m on the N side. Warping buoys are moored close off the pier. Vessels can berth to the head and the N or S sides of the pier.

Portovecchio di Piombino

Chart 131 plan of Portovecchio di Piombino

General information

8.117

1 **Position**. Portovecchio di Piombino (42°56′N, 10°33′E) lies on the E side if Promontorio di Piombino, within Golfo di Follonica.

Function. A port has existed here since the fifth century however its development has been most closely linked to the extraction and processing of iron ore from deposits on the mainland as well as Isola d'Elba. The greatest expansion of the port occurred at the turn of the nineteenth century. The port was almost destroyed during the Second World War and underwent considerable rebuilding during the mid 1960s.

The port today is important regionally and nationally handling; bulk raw materials, primarily associated with the iron and steel industry of the area, steel products including cars, general cargo, foodstuffs, oil and petrochemicals. Portovecchio di Piombino is an important ferry port for services to Arcipelago Toscano and Sardegna as well as Naples and Sicily. The port also handles cruise vessels.

2 **Topography**. Portovecchio di Piombino lies on the low, sandy coast between the E side of Promontorio di Piombino and the mouth of Fiume Cornia. Streams from the high land of Promontorio di Piombino join Fiume Cornia and the marshland further E is drained into the river close within its mouth. Extensive reclamation work extends NE along the coast from Fiume Cornia. The buildings and structures associated with the iron and steel and other heavy industries stand close inland of the port and along the coast of Golfo di Follonica and are conspicuous; by day steam and smoke rising from numerous chimneys can be seen from a considerable distance offshore, at night lighting of the plants and factories is a useful guide to the port.

3 **Port limits** extend 1 mile from Molo Batterie Light.

Approach and entry. The port is approached from the S, through the NW part of Golfo di Follonica, and entered E of Piombino disused signal station (42°55′·3N, 10°32′·6E).

Port Authority. Autorità Portuale Piombino, Pizzale Premuda, 57025, Piombino.

Limiting conditions

8.118

1 **Deepest and longest berth**. Pontile Lusid (Italsider), length 480 m, depths alongside 9·7 to 11·5 m.

Maximum size of vessel handled: length 220 m, draught 11·5 m or 80 000 dwt.

Local weather and sea state. A difficult swell sets into the harbour with strong S or SE winds. In this situation berthing may not be possible; although vessels may be permitted to leave harbour it may be necessary to disembark the pilot at Portoferraio (42°48′·6N, 10°19′·5E) (8.66).

Arrival information

8.119

1 **Port operations**: 0700–1900 local time.

Notice of ETA. Normally 1 hour before arrival. Vessels carrying dangerous cargoes must provide ETA 48 hours and 24 hours in advance.

2 **Outer anchorages.** Prohibited anchorages (8.113). To avoid obstructing the harbour entrance anchorage is also prohibited within 1½ cables of a line joining the heads of Pontile Lusid and Molo Batteria.

The following anchorages, shown on Chart 1999, have been established within Golfo di Follonica:

Anchorage	*Remarks*
A	The anchorage lies within Porto di Piombino pilotage area. Restricted to vessels of maximum draught 7 m.
B	The anchorage lies outside the Porto di Piombino pilotage area. Used for tankers awaiting a berth at Torre del Salle ENEL power station.
C	The anchorage lies outside the Porto di Piombino pilotage area. Restricted to vessels with draught greater than 7 m.

3 **Pilotage** is compulsory for all vessels of 500 grt or greater and is available 24 hours a day. The pilot boards within 1 mile of Molo Batteria. Full details of procedures are contained in the relevant volume of *Admiralty List of Radio Signals*, see also 8.118, Local weather and sea state.

Tugs are available.

4 **Traffic regulations**. Vessels carrying dangerous or potentially polluting cargoes are subject to specific restrictions and regulations which must be confirmed with the port authorities. General regulations are:

Vessels entering or leaving the port are to maintain a listening watch on VHF channel 12.

All vessels within 1 mile of the entrance to Porto Vecchio di Piombino are to proceed at the slowest speed consistent with manoeuvrability.

5 Vessels proceeding to sea have right of way.

The order of entry is established by arrival time off Piombino signal station (8.117).

Anchorage within the defined anchorage areas must be approved by the Harbour Master.

The use of a ship's whistle is prohibited except for signalling in accordance with Rule 32 of The International Regulations for Prevention of Collisions at Sea.

6 **Vessel Traffic Service** is available on request, see the relevant volume of *Admiralty List of Radio Signals* for details.

Harbour

8.120

1 **General layout**. The harbour is protected from the SE by Molo Batteria which extends ENE then NE from the coast, a light (red column on pedestal, 5 m in height) is exhibited from its head. Pontile Lusid, a concrete jetty, extends SE from the shore towards the head of Molo Batteria. Lights (green posts, 3 m in height) are exhibited from the head of Pontile Lusid. The main deep water berths are located on these breakwaters; basins and berths line W side of the port.

2 **Development**. Considerable development of the port is in progress and will include an extension to the outer breakwater, the construction of a new basin, replacing Daresena Italsider, on the SW side of Pontile Lusid and improvements to the quays and basins on the W side of the port. Much of the planned development will provide larger berths in deeper water. The plan also aims to further

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concentrate functions of the port into zones and will see improvements to ship repair and shipbuilding facilities.

3 **Local weather**. The *Maestrale* (NW wind) prevails in late winter and spring. During the autumn and early winter the *Scirocco* (SE) and *Grecale* (NE) predominate.

If the mainland coast and the islands of Arcipelago Toscano are clearly visible winds from the S should be expected.

Directions for entering harbour

(continued from 8.95)

8.121

1 From a position SSE of the port the chart is sufficient guide to lead through W part of Golfo di Follonica to the entrance (8.120).

Basins and berths

8.122

1 **General information**. The N part of the harbour is used primarily for handling raw materials for the iron and steel industry however there are also berths handling general cargo and manufactured goods.

Pontile Lusid the main deep water berth for bulk vessels also accepts Ro-Ro traffic.

2 **Darsena Magona** provides berths and facilities for the fishing industry as well as repair berths.

Molo Magona d'Italia. Ro-Ro berths on the outer end of the wharf handle manufactured steel goods.

Ferry and Ro-Ro berths. The S part of the port, between Darsena Capitaneria and the outer end of Molo Batteria, is the main ferry port and all berths have Ro-Ro facilities.

Port services

8.123

1 **Repairs**. Small repairs only.

Other facilities. All the usual facilities of a large town including a hospital.

Supplies: fuel; water; provisions.

Small craft

Chart 1999

Porto di Carbonifera

8.124

1 Porto di Carbonifera (42°57′·0N, 10°40′·9E) is a small craft and fishing haven protected by two moles extending ½ cable from the coast. Lights are exhibited from the mole heads; W head (red post, 3 m in height), E head (green post, 3 m in height). The entrance is 18·5 m wide.

Scarlino, Fiume Pecora

8.125

1 **General information**. Fiume Pecora (42°53′·2N, 10°47′·1E), also known locally as Fiume del Puntone, enters Golfo Follonica 3 cables NE of Punta Portiglione (42°53′·0N, 10°46′·8E). The entrance to the river faces WSW, a training wall, marked by a light (red support), extends from the N bank. Close within the mouth quays line both river banks. Vessels up to 12 m in length are accepted.

2 **Berths**. The haven provides 500 berths in depths of 0·8 to 2·0 m.

Facilities. Comprehensive small craft facilities including repairs. There is a hospital within Scarlino.

Scarlino, Etrusca Marina

8.126

1 Estrusca Marina (42°53′·2N, 10°47′·1E) is a small craft harbour under construction on the S side of the mouth of Fiume Pecora. The harbour, due for completion in 2002, is protected by two moles from which lights are exhibited; W mole (red support), E mole (green support). Navigation in this area is prohibited until the new marina is completed.

Punta Ala Marina

8.127

1 Punta Ala Marina (42°48′·4N, 10°44′·2E) lies between Punta Ala and Punta Hidalgo, a rocky headland on which stands a square truncated tower (42 m in height), 5½ cables NE. The NW side of the harbour is protected by a mole, Diga Foranea, which extends NE, parallel to the coast, from a position 1½ cables NE of Punta Ala. Lights are exhibited from the mole head (white tower, green bands, 7 m in height) and elbow (white tower, 7 m in height) close to the root. A much smaller inner mole extends WNW from the coast towards the NE end of Diga Foranea. A light (white tower, red bands, 7 m in height) is exhibited from its head. The entrance faces E between the mole heads and has depths of about 5 m. The harbour consists of three basins. Vessels up to 32 m in length are accepted.

2 **Berths**. The marina provides 893 berths in depths of 2 to 5 m; 90 berths are reserved for visiting yachts.

Facilities. Comprehensive small craft facilities including repairs.

Other names

8.128

1 Canne, Punta Le (42°51′·0N, 10°46′·3E).
Fontanella, La (42°45′·4N, 10°23′·6E).
Francese, Punta (42°52′·2N, 10°46′·2E).
Martino, Punta (42°51′·6N, 10°46′·1E).
Mola, Spiaggia di (42°45′·5N, 10°23′·2E).
Pozzo, Cala del (42°48′·2N, 10°44′·5E).

PUNTA ALA TO PUNTA DI TORRE CIANA

General information

Chart 1999

Route

8.129

1 A coastal route leads, from a position SW of Punta Ala (42°48′·1N, 10°43′·8E), 35 miles SE to a position S of Punta di Torre Ciana (42°21′·7N, 11°09′·2E), the S part of of Promontorio Argentario.

Topography

8.130

1 The coast extends SE from Punta Ala in a series of four wide bays and is generally low lying, sandy and backed by pine woods. In places the coast is marshy and several rivers draining them enter the sea. The sandy beaches fronting the coastal plain are occasionally interrupted by rocky points or headlands; similarly low hills occasionally rise a short distance inland. There are few natural landmarks along this part of the coast.

2 A small group of rocky islands, Formiche di Grosseto (42°34′·2N, 10°53′·2E), lie 7½ miles offshore. The group comprises Formica Grande, the largest and highest (elevation 12 m); Formicca Picola the middle islet, dark coloured with an above water rock close E of it; Formica III is the most S of the group.

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Depths

8.131

1 This coast is steep-to and, with the exception of Formiche di Grosseto (42°34′·2N, 10°53′·2E), free from isolated dangers to seaward of the 50 m depth contour. Mariners should also note Secca di Mezzo Canale (42°20′·5N, 11°05′·3E), a seamount with a least depth of 24·5 m over it. Between Punta Ala and Capo d'Uomo (42°33′·2N, 11°08′·0E) the 50 m depth contour lies approximately 2 miles offshore. However between Capo d'Uomo (42°33′·5N, 11°07′·4E) and Promontorio Argentario, 6½ miles SSW, the 50 m depth contour lies up to 3¾ miles from the coast.

2 Promontorio Argentario and the islands SW of it are all steep-to with the 50 m depth contour no more than 7½ cables from the shore.

Prohibited areas

8.132

1 Entry to an area extending 2 miles NW of Formiche di Grosseto (42°34′·2N, 10°53′·2E), shown on the chart, is prohibited due to underwater obstructions.

Anchoring and fishing is prohibited within an area, shown on the chart, between Isola del Giglio (42°21′·0N, 10°54′·0E) and Promontorio Argentario enclosing a submarine cable (8.42).

Anchoring and fishing is prohibited within an area, shown on the chart, between Fiume Ombrone (42°39′·4N, 11°00′·6E) due to unexploded ordnance on the seabed.

Natural conditions

8.133

1 **Local wind and weather**. The prevailing wind in the summer is NW. To the N of Promontorio Argentario sea breezes veer N along the coast. A S wind on this part of the coast can change quickly and violently to the NE creating a short, steep sea which can be dangerous for small craft. During the winter severe NE squalls accompany heavy snow fall on the mountains inland.

2 In the summer months this coast is often obscured by heat haze. In the winter Monte Amiata (42°53′·4N, 11°37′·5E) will be clearly visible during fine weather but with winds from the SE the peak is covered with mist.

With strong winds the peak is alternately visible then obscured by cloud. If the peak is obscured then suddenly becomes visible when a S wind is blowing a strong N or NE wind should be expected.

3 **Currents**. Within Baie di Talamone (42°30′·0N, 11°09′·0E) an E-going current, created by the sea breeze, sets into the bay close S of Capo d'Uomo. This current develops sufficiently to overcome the influence of the land breeze. However a moderate and sustained SE wind will cause the current to set at right angles to the wind.

Principal marks

8.134

1 **Landmarks**:

Monte Amiata (42°53′·4N, 11°37′·4E).

Torre Galera, round, partly ruined (42°46′·8N, 10°46′·9E).

Castiglione della Pescaia belfry, square, red (42°45′·9N, 10°52′·7E).

Torre Cala di Forno, conspicuous, square with high windows (42°36′·9N, 11°05′·1E).

Torre Rivolta, round, three storeys with rectangular windows, stands on the summit of Poggio Raso (elevation 280 m) (42°35′·7N, 11°07′·2E).

2 Torre di Capo d'Uomo, round (42°33′·5N, 11°07′·5E).

Albina (Albegna) belfry (42°30′·0N, 11°12′·4E).

Monte Argentario (elevation 635 m) (42°23′·2N, 11°10′·1E).

Poggio Canaloni (elevation 536 m) appears as twin peak with Monte Argentario when seen from W or SW (42°24′·8N, 11°09′·5E).

Radio masts, red and white, red obstruction lights (42°23′·6N, 11°09′·8E).

Torre Argentario slender, square, dark (42°25′·2N, 11°07′·6E).

3 Punta Lividonia, a dark square tower stands on its summit (42°46′·8N, 11°06′·2E). The headland exhibits a light (white round tower and red 2 storey building, 12 m in height) and a disused lighthouse (white) stands close to it.

Punta Calagrande (Cala Grande) disused signal station (42°25′·7N, 11°05′·3E).

Major lights:

Talamone (white square tower on castle wall, 18 m in height) (42°31′·1N, 11°08′·8E).

Punta Lividonia (as above).

Punta del capel Rosso (Isola di Giannutri) (42°14′·4N, 10°06′·5E) (8.35).

Directions

(continued from 8.95)

8.135

1 From a position approximately 5 miles SW of Punta Ala (42°48′·1N, 10°43′·8E) the track leads SE passing, with positions relative to Formica Grande (42°34′·7N, 10°52′·9E):

SW of Torre Galera (13 miles NNW) (8.134), thence:

SW of Castiglione della Pescaia (11¼ miles N). A dangerous wreck, shown on the chart, lies 2 miles SW of the harbour. Thence:

SW of Marina di Grosseto (9½ miles NNE) (8.149), thence:

SW of Fiume Ombrone (7½ miles NE). The river enters the sea through a low beach on which stand the light coloured buildings of a waterworks and a red-roofed house with a small lookout tower. A spit of sand and gravel fronted by ancient ruins bars much of the river mouth. Mariners should give the area a wide berth. Thence:

2 SW of Formiche di Grosseto (8.130). A light is exhibited from Formica Grande (white round masonry tower on house, 12 m in height). The channels between the rocks have depths of less than 10 m and are dangerous. A shoal with a least depth of 3·6 m over it lies close N of Formica Grande. A bank with depths of less than 9 m extends 1½ cables S of the rock; fishing vessels sometimes shelter here. Formica III, the S rock, stands on rocky bank extending up to 1¾ cables from it; the bank has depths of less than 9 m over it. During gales overfalls develop up to 5 cables S of this rock. Thence:

3 SW of Torre di Cala Forno (9¼ miles ENE) (8.134), thence:

Capo d'Uomo (11 miles ESE), a gently sloping headland. Torre di Capo d'Uomo stands on the summit (8.134). Thence:

NE of Punta del Fenaio Light (11¼ miles S) (8.37), thence:

NE of Giglio Castello (12½ miles S) (8.35), thence:

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SW of Punta Lividonia Light (12½ miles SE) (8.134), thence:

NE of Punta del Capel Rosso Light (15½ miles S) (8.37), thence:

SW of Scoglio Argentarola (13 miles SE), the rock is rounded, dark and steep-to except at its N end where a spit, with a least depth of 8 m over it, extends ½ cable from it. There are depths of about 26 m in the passage between the rock and the coast. Thence:

4 SW of Capo d'Uomo (14½ miles SE), the steep bare headland is one of the most distinctive headlands of Promontorio Argentario. Rocky shoals fringe the N side of the headland and extend ½ cable offshore. A dilapidated tower stands 3¾ cables ENE of it. Thence:

SW of Monte Argentario (17 miles SE) (8.134). Mariners should note the track passes close to Secca di Mezzo Canale (16½ miles SE) (8.131), thence:

N of Isola Giannutri (21½ miles SSE) (8.38), thence:

To a position S of Punta di Torre Ciana (17¾ miles SE), the steep, rocky S extremity of Promontorio Argentario on which stands Torre Ciano (8.134).

5 **Useful marks**

Forte Rocchetta, ruined, square tower (42°46′·7N, 10°47′·0E).

Torre di San Rocco, square, red (42°43′·1N, 10°59′·0E).

Torre Castel Marino, round, ruined, stands on a hill (elevation 102 m) (42°38′·8N, 11°03′·9E).

Torre Collelungo, square (42°38′·3N, 11°04′·1E).

Torre Cannelle, squat, square with an enclosing wall on its S side (42°35′·0N, 11°06′·4E).

6 Torre Saline, large, light coloured building with two higher sections, large windows (42°30′·2N, 11°11′·8E).

Orbatello belfry, white, square (42°26′·3N, 11°12′·7E).

Torre Cala Piatti, stands above a light-coloured patch on the steep, rocky coast. (42°24′·3N, 11°05′·5E).

Capo d'Uomo tower, dilapidated (42°23′·8N, 11°06′·2E).

Torre delle Cannelle, grey, square, surrounded by a wall (42°22′·5N, 11°08′·6E).

7 Torre Ciana, round, a short wall stands behind it (42°21′·7N, 11°09′·3E).

(Directions continue 11.13)

Anchorages and harbours

Baia di Talamone anchorage

8.136

1 Baia di Talamone (42°33′·6N, 11°08′·8E) lies between the headland on which the town of Talamone stands and a point, 1½ miles E, on which Torre dell'Osa, grey, square, stands. Anchorage can be obtained in depths of 12 m, mud, good holding ground, about 4 cables ENE of Talamone Light (42°31′·1N, 11°08′·0E) (8.134). Smaller vessels anchor in depths of about 7 m.

2 The shores of the bay are fronted by a bank, clearly marked by discoloured water, which extends up to 3½ cables from the shore. Mariners should also note the dangerous wrecks which lie 7½ cables ESE and 1¼ miles SE of Talamone Light, both are shown on the chart.

Talmone

8.137

1 **General information**. Talamone (42°33′·2N, 11°08′·1E) is a small commercial and fishing port with a large yacht harbour. The harbour is protected from the S by a rubble breakwater, Molo di Sopraflutto, extending 1 cable ENE from the coast; a light (red pillar on pedestal, 5 m in height) is exhibited from the head. The approach and entrance has a least depth of 4·8 m. Talamone Light (42°31′·1N, 11°08′·0E) (8.134) is a useful mark when approaching the harbour.

2 **Directions**. The harbour is approached from the S, passing E of the mole head and entered between two light-buoys (conical) moored 125 m and 200 m NNW of the mole head. The most N buoy marks the shoal area immediately N of it.

Anchorage is prohibited in an area extending 1 cable NE, 5 cables E and 8½ cables S of Talamone Light which contains submarine cables. Anchorage can be obtained within Baie di Talamone, see 8.136.

3 **Berths**. Banchina Commerciale and Banchina Riva, 1½ cables NE of Molo Supraflutto, provide three commercial berths, each is approximately 50 m in length, with depths of 3·0 to 4·5 m alongside.

Small craft. The harbour provides 800 small craft berths at pontoons in depths of 1·8 to 3·0 m N and S of the commercial berths. Small craft up to 14 m in length are accepted. There are comprehensive small craft facilities including repairs.

Talamonaccio

8.138

1 **General information**. Talamonaccio (42°33′·6N, 11°09′·4E) is a private mole in the NE part of Baia di Talamone used by small craft handling explosive cargoes. The berth lies on the NW side of the mole, is 50 m in length and has an alongside depth of 1·2 to 1·7 m. A light (green mast, 5 m in height) is occasionally exhibited from the head of the mole. A ridge of submerged rocks with a large flat rock at its extremity extends 1 cable offshore, 1½ cables SE of the mole. The hamlet of Bengodi lies 4 cables SE of the berth.

Porto Santo Stefano

Chart 131 plan of Porto Santo Stefano

General information

8.139

1 **Position and function**. Porto Santo Stefano (42°26′·3N, 11°07′·4E) is a small commercial, ferry and fishing port with facilities for yachts.

Topography. The port occupies the head of Rada di Santo Stefano which lies between Punta della Madonnetta (42°26′·8N, 11°06′·7E) and Punta Nera, 1 mile ESE. The town of Porto Santo Stefano lies on the the W side of the bay and is overlooked by an old fortress.

2 **Approach and entry**. The port is approached through Rada di Santo Stefano.

Port Authority. Ufficio Circondariale Marittimo, 1–58019 Porto Santo Stefano, Italy.

Local weather and sea state. A NW wind is often strong and will raise a considerable sea within Rada di Santo Stefano. Strong winds between N and E, especially NNE, make the berths within Porto Vecchio (42°26′·4N, 11°07′·0E) dangerous for small craft.

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Limiting conditions

8.140

1 **Controlling depth.** Rada di Santo Stefano has a least depth 12·8 m.

Deepest and longest berth Banchina Toscana, length 120 m depth alongside 8 m.

Maximum size of vessel handled. Tankers of up to 20 000 tons have moored stern-to the seaward side of Porto del Valle E mole.

Arrival information

8.141

1 **Port operations**:

Date	*Hours*
16 June-15 September	0700–2300
16 September-15 June	0700–1900

Outer anchorages. Anchorage and fishing is prohibited anywhere within a line joining Punta della Madonnetta and Punta Nera to avoid obstructing vessels entering or leaving harbour.

Anchorage can be obtained in depths of 20 to 27 m to seaward of the prohibited area. However mariners should note the prohibited anchorage area, shown on the chart, close N of the port, enclosing submarine cables.

2 **Pilotage** is compulsory for all vessels of 500 grt or greater and will be available whenever a vessel is expected.

Regulations. There is a speed limit of 6 kn within Rada di Santo Stefano.

Within the port vessels must proceed at the slowest speed consistent with maintaining steerage way.

Berths and movement within the harbour are authorised by the Harbour Master.

Repairs can only be conducted after approval by the Port Authority.

Harbour

8.142

1 The port consists of two basins. Porto del Valle, the larger of the two, lies in the S part of Rada di Santo Stefano; Porto Vecchio lies 3½ cables NE of it. Small craft berths occupy the SW part of Porto del Valle.

8.143

1 **Landmarks**:

Monte Argentario (42°23′·2N, 11°10′·1E) (8.134).
Torre Argentario (42°25′·2N, 11°07′·6E) (8.134).
Santo Stefano belfry, white (42°26′·3N, 11°07′·0N).
La Fortezza (42°26′·2N, 11°07′·1E).

Directions for entering harbour

8.144

1 The chart is sufficient guide to lead through Rada di Santo Stefano and into the port basins. However mariners should navigate to pass midway through the entrance of Porto del Valle to avoid obstructions close to the mole heads.

Basins and berths

8.145

1 **Porto del Valle** (42°26′·2N, 11°07′·4) is protected by two moles. Molo Garibaldi extends ENE from the shore and E Mole extends WNW; lights are exhibited from the head of both, Molo Garibaldi (white tower, masonry base, 6 m in height), E Mole (red column, 5 m in height).

2 **Porto Vecchio** (42°26′·4N, 11°07′·0E) is entered S of Molo Sanità which exibits a light (green mast, 7 m in height). The basin is exposed, see 8.139, Local weather and sea state.

Port services

8.146

1 **Repairs**. Small repairs undertaken; there are several patent slips, the largest has a capacity of 500 tons.

Other facilities. The nearest hospital is at Orbetello, 4 miles E. Oily waste disposal available.

Supplies: fuel; water; provisions.

Small craft

8.147

1 **Porto del Valle**. Small craft berths occupy the SW part of the basin. Vessels up to a maximum length of 30 m are accepted. There 204 small craft berths in depths of 4 to 8 m.

Porto Vecchio. The W side of the basin provides small craft berths. Vessels up to 40 m in length are accepted. There are 130 small craft berths in depths of 3 to 5 m.

Small craft

Castiglione della Pescaia

8.148

1 **General information**. Gastiglione della Pescaia (42°45′·7N, 10°52′·7E) is a fishing port and small craft harbour at the mouth of Fiume Bruna. The harbour is protected by two moles. The N mole exhibits a light from its head (white tower, red bands, 6 m in height). The S mole is much larger, rubble faced and forms a basin with an entrance on the S side of the entrance canal. A light (white tower, black bands, 6 m in height) is exhibited from its head.

2 The entrance canal is 30 m wide with depths of about 3 m in its deepest part. The harbour is subject to silting and depths should be confirmed with the Harbour Master. A dangerous shoal develops on the S side of N Mole Head and depths are generally reduced close to the N side of the entrance canal. Vessels of up to 13 m in length are accepted.

3 **Directions**. When entering harbour vessels with a draught of 1·5 m or greater are to be kept slightly S of the axis of the channel until abeam the Harbour Master's office. Entry is dangerous in strong SE winds.

Berths in depths of 0·5 to 2·5 m within the canal and the basin on the S side of the harbour.

Facilities. Good small craft facilities including repairs.

Supplies: fuel; water; provisions.

Marina di Grosetto

8.149

1 **General information**. Marina di Grosetto (42°43′·1N, 10°58′·7E) is a small craft haven at the mouth of the San Rocco Channel. A pier extends 100 m from the side of the channel mouth; a light (green mast, 5 m in height) is exhibited from the head. The haven has depths of about 1 m and accepts vessels up to 10 m in length. The haven is under development (2002).

Orbetello

8.150

1 **General information** Orbetello (42°26′·4N, 11°13′·4E) stands on a tongue of land extending SW into Stagno di Orbetello, a shallow lagoon contained by Tombolo della Giannella to the NW and Tombolo di Feniglia to the SE. The town is conspicuous from offshore. Canale di Orbetello leads through Tombolo della Giannella, close N of Promontorio Argentario, then 2 miles ENE to Orbetello. The channel is used primarily to transport phosphates to a factory at Orbetello and export fertiliser. A swing bridge spans the channel close inside the entrance. A low road

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bridge also spans the canal limiting access to vessels with a maximum masthead height of 3 m.

2 **Pilotage** is recommended and available from Porto Santa Stefano.

Directions. The canal is entered between two moles, is about 10 m wide and has depths of about 1·5 m. Within the lagoon the channel is marked by wooden posts (black, concrete bases, 3 m in height) which should be kept to starboard by in-bound vessels and passed at a distance of 5 to 6 m.

3 **Anchorage** can be obtained in depths of 10 m off the canal entrance.

Berth. An arm of the canal leads to a pier at Orbetello.

Facilities. There are numerous lighters and a few small tugs at the canal entrance. There is a hospital at Orbetello.

Supplies. Water can be supplied by boat to vessels anchored off the canal entrance. Provisions available at Orbetello.

Other names

8.151

1 Bove, Punta del (42°24′·3N, 11°05′·2E).
Cacciarella, Punta (42°26′·4N, 11°05′·8E).
Capezzuolo, Punta (42°46′·4N, 10°47′·4E).
Isola Rossa, Scoglio (42°22′·7N, 11°07′·8E).
Maddalena, Torre della (42°23′·2N, 11°06′·8E).
Moresca, Cala (Calamoresca) (42°25′·0N, 11°05′·3).
Ronconali, Costa dei (42°24′·8N, 11°06′·0E).
Santa Liberata, Torre (42°26′·1N, 11°09′·1E).
Uccellina, Torre dell' (42°37′·4N, 11°05′·6E).

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NOTES

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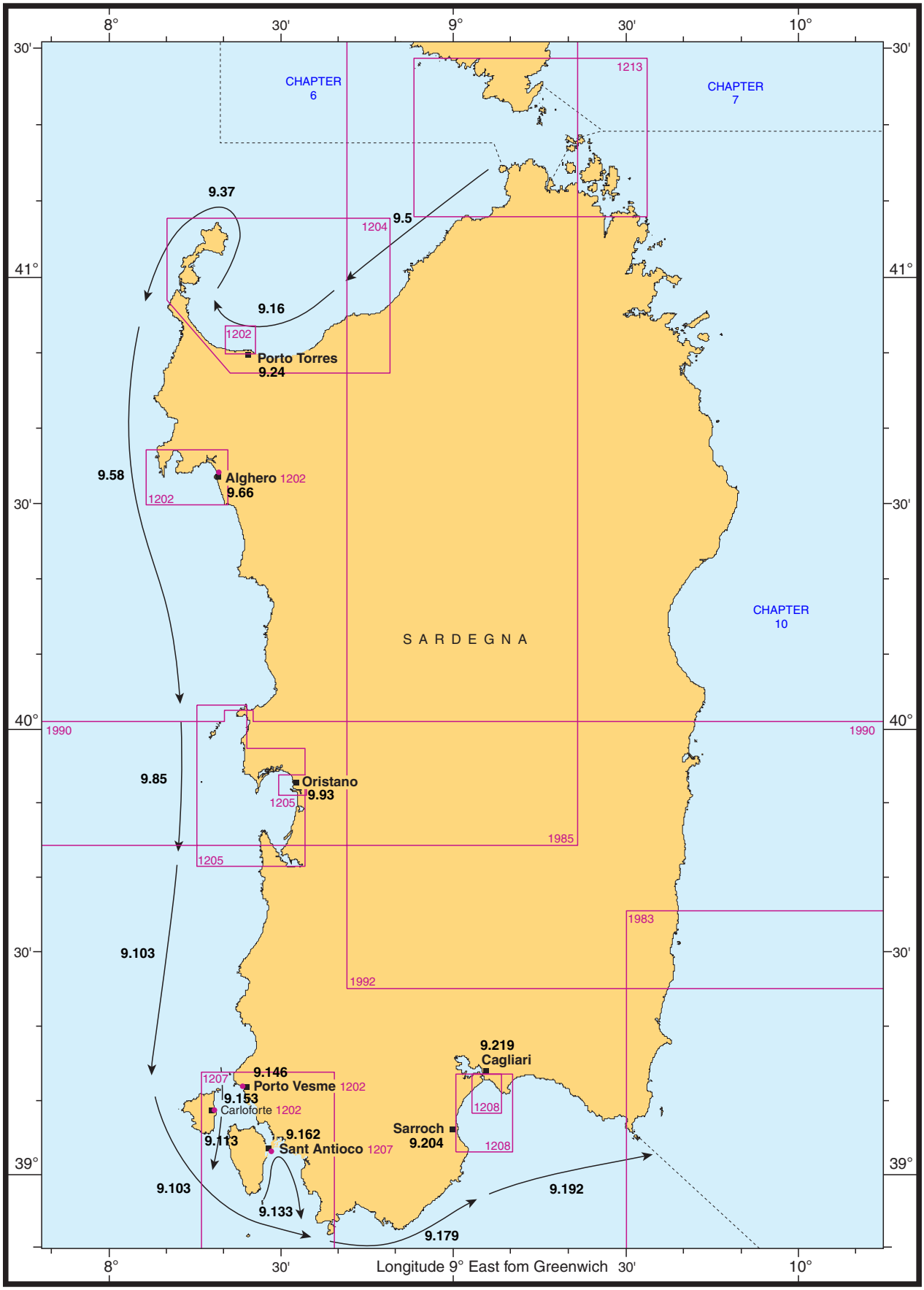
Chapter 9 - Sardegna - North-west, west and south coasts



March 2004

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CHAPTER 9

SARDEGNA – NORTH-WEST, WEST AND SOUTH COASTS

GENERAL INFORMATION

Chart 1780

Scope of the chapter

9.1

1 This chapter describes the NW, W and S coasts of the island of Sardegna (40°12′N, 09°05′E).

The chapter is divided into the following sections:
Capo Testa to Capo Falcone (9.2).
Capo Falcone to Capo Teulada (9.56).
Capo Teulada to Capo Carbonara (9.177).

CAPO TESTA TO CAPO FALCONE

GENERAL INFORMATION

Chart 1985

Area covered

9.2

1 This section describes the NW coast of Sardegna between Capo Testa (41°14′·4N, 9°08′·3E) (6.186) and Punta Falcone, 45 miles WSW, including Isole Asinara (41°05′·0N, 8°18′·0E). The section is arranged as follows:
Capo Testa to Castelsardo (9.5).
Castelsardo to Punta Negra (9.16).
Isole Asinara (9.37).

Topography

9.3

1 Golfo dell' Asinara, entered between Capo Testa and Punta dello Scorno, also known as Punta Caprara, the N extremity of Isola Asinara, 38 miles WSW, forms the NW coast of Sardegna. The E shore of the gulf is high and rocky but the S shore, between Castelsardo (40°55′·0N, 8°42′·8E) and Capo Falcone is low and sandy. The low-lying coast can be marshy, particularly in the vicinity of river mouths, and several lagoons lie immediately behind the shore. Hills and mountains back this part of the coast, some of which are landmarks.

2 Isole Asinara (41°05′·0N, 8°18′·0E) extend NNE from Punta Falcone and effectively form the W side of the gulf. The largest and most N island, Isola Asinara, is separated from Punta Falcone by a submerged rocky ridge on which stand Isola Piana (40°58′·5N, 8°13′·0E) and the remaining islets of the group. Shallow channels lead between Punta Falcone and Isola Asinara passing N and S of Isola Piana.

Porto Torres, a complex of two artificial harbours, occupies the head of Golfo dell' Asinara.

Natural conditions

9.4

1 **Current**. Within Golfo dell' Asinara there is a very weak E-going current; currents induced by prevailing winds are more noticeable.

Wind and local weather. Winds from the NW are often accompanied by unsettled weather. Well offshore NE winds prevail. During the summer land and sea breezes develop predictably. When the coast of Sardegna is clearly visible winds with a N component should be expected. When Punta Scomunica (41°05′·8N, 8°17′·7E) is cloud covered strong winds with a S component are imminent.

CAPO TESTA TO CASTELSARDO

General information

Charts 1985, 1213

Routes

9.5

1 An offshore route leads 40 miles W from the W extremity of the Bonifacio Strait VTSS (6.180), NW of Capo Testa (41°14′·4N, 9°08′·3E), to a position NNW of Punta dello Scorno (41°07′·2N, 8°19′·1E); the route is not described.

A coastal route leads, from a position W of Capo Testa, 25 miles SW to a position NNW of Castelsardo (40°55′·0N, 8°42′·8E).

Topography

9.6

1 The coast between Capo Testa and Capo di Monte Russu (Capo di Monte Rosso), 5 miles S, is fringed with rocks and shoals extending up to 1½ cables from the coast. Capo Testa is a distinctive and easily recognised headland joined to the coast by a low-lying isthmus (6.186). Capo di Monte Russu, a small promontory, stands out clearly from the low-lying land surrounding it.

2 An islet stands on a rocky bank extending 2 cables N of Capo di Monte Rosso. The rugged rock fringed coastline continues for 11 miles SW to Isola Rossa (41°01′·0N, 8°51′·8E); from Isola Rossa to Castelsardo (Castel Sardo), 9 miles SW, the coast is partly rocky but consists mainly of sand dunes about 15 m high. Fiume Coghinas, the second largest river of Sardegna, enters the sea 5¼ miles SSW of Isola Rossa.

Depths

9.7

1 The 20 m depth contour lies generally within 1¼ miles of this coast; numerous rocks and dangers fringe the coast inshore of the depth contour. To the W and SW of Capo Testa several dangers, shown on Chart 1213, lie up to 1¾ miles from Capo Testa Light (41°14′·7N, 9°08′·7E).

2 With the exceptions of Secca di Castelsardo (41°00′·5N, 8°43′·6E), a shoal with a least depth of 11 m over it, and

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Secca di Frigiano (40°55′·3N, 8°41′·6E), a shoal with a depth of 15 m over it, the coast to seaward of the 50 m depth contour is free from dangers. Generally the 50 m depth contour lies within 3¾ miles of the coast however between Capo di Monte Russu (41°09′·2N, 9°07′·4E) and Punta di li Francesi, 3¼ miles WSW, a bank with depths of 22 m to 45 m over it extends up to 7 miles offshore.

Concentration of traffic

9.8

1 Coastal and ocean routes leading to and from the W Precautionary Area of the Bonifacio Strait VTSS (6.180) create a complex concentration of traffic NW of Capo Testa (41°14′·4N, 9°08′·3E).

Asinara National Park

9.9

1 Asinara National Park includes Isola Asinara (41°05′·0N, 8°16′·0E) and the islets and waters within 1000 m of its coasts but excludes Isola Piana (40°58′·5N, 8°13′·0E). The area is divided into three zones within which differing restrictions apply:

Zone A. Unauthorised navigation, stopping, anchoring, fishing and swimming, including diving, are prohibited.

2 Zone B. Unauthorised navigation, anchoring, mooring and fishing are prohibited however the Park Authority may authorise the following: navigation under sail or oars, powered navigation at speeds not exceeding 5 kn by vessels providing guided tours, navigation by local ferries and fishing vessels of Porto Torres and Stintino, commercial fishing for local consumption and sport fishing not less than 150 m from the shore.

3 Zone C. Unauthorised navigation, anchoring, mooring, diving and fishing are prohibited. The following are permitted: navigation under sail or oars, powered navigation at speeds not exceeding 10 kn by vessels providing guided tours, anchoring in permitted areas by vessels under sail or powered by oars.

4 The extent of the zones is as follows:

Zone	*Approximate area*
A	The SW part of Rada della Reale (9.53) lying W of a line drawn from Punta Galetta (41°00′·6N, 8°15′·4E) to the coast about 1½ miles N: The waters around Punta dello Scorno (41°07′·2N, 8°19′·1E) within a line joining Punta dello Scorno, a position 4 cables N, thence 1½ miles SE, thence 7 cables SW to a position on the shore between Punta la Cornetta and Punta dei Corvi: Cala Scombro di Fuori, within a line drawn between Punta Agnadda (41°01′·5N, 8°13′·1E) and Punta Pedro Bianca (about 1½ miles SSW).
B	40°59′·4N, 8°12′·5E (Punta Salippi) 41°04′·4N, 8°12′·5E 41°06′·2N, 8°15′·8E 41°08′·1N, 8°19′·2E 41°06′·3N, 8°21′·3E 41°03′·7N, 8°21′·3E 40°58′·9N, 8°15′·9E 40°59′·0N, 8°15′·4E (Punta Barbarossa)
C	The waters extending approximately 5 cables to seaward of the outer Zone B limit. The waters between the S coast of Isola Asinara and the leading lines through Passaggio dei Fornelli (9.49).

Principal marks

9.10

1 **Landmarks:**

Punta di Li Francesi church belfry (41°08′·2N, 9°03′·1E).

Castelsardo TV mast (40°54′·9N, 8°42′·8E). The white mast stands on an ancient castle.

Castelsardo Cathedral belfry (40°55′·0N, 8°42′·8E). The belfry has a the appearance of a lighthouse particularly when seen from W.

Major light:

Capo Testa (41°14′·7N, 9°08′·7E) (6.184).

Directions

(continued from 6.164)

Chart 1213

9.11

1 From a position approximately 2½ miles W of Capo Testa Light (41°14′·7N, 9°08′·7E) the track leads SW passing, with positions relative to the light:

W of a shoal (1 mile W) with a least depth of 6·5 m over it, thence:

W of La Colba (1 mile SE), the bay contains a tunny fishery in its N part. The net extends 200 m from (41°14′·9N, 9°09′·1E) and is marked with an iron post and board by day; a red light is exhibited at night. Thence:

2 W of of a shoal (1½ miles SW) with a least depth of 7·3 m over it, thence:

W of a shoal (1¼ miles SSW) with a least depth of 7·5 m over it, thence:

NW of Capo di Monte Rossu (5½ miles S). The high, rugged, red-coloured promontory is surrounded by low-lying land and easily identified. There are a number of large white patches of sand visible from the W. An above water rock, surrounded by submerged rocks, and Scoglio di Monte Rossu lie respectively 2½ cables NE and 2 cables N of the headland. Thence:

3 NW of Punta di Vignola (7¾ miles SSW). A round tower (top partly ruined, 19 m in height) stands 2½ cables SSE of the rocky headland. A shoal with a least depth of 9 m over it and a submerged rock lie 9 cables ENE and 2¼ miles ENE of the tower; both are shown on the chart. Thence:

NW of Punta di Li Francesi (7½ miles SSW) a conspicuous belfry (9.10) stands 1½ cables S of the headland. Coasta Paradiso, a conspicuous complex of small villas (white, red roofs) stands 1½ miles S of Punta di li Francesi. Thence:

Chart 1985

4 NW of Isola Rossa (18¾ miles SW). The barren red-coloured island is surrounded by rocks and lies 2 cables W of a point on which stands a tower (round, 23 m in height). A small village stands close to the tower; a small craft harbour (9.14) lies on the S side of the point. Thence:

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Chart 1204

5 NW of Secca di Castelsardo (23½ miles SW). The rocky shoal has a least depth of 11 m over it. With N winds heavy overfalls develop and the area should be avoided. Thence:

NW of Fiume Coghinas (24 miles SW), the mouth is difficult to identify except close-to. Thence:

NW of San Pieto a Mare church tower (24½ miles SW), thence:

6 NW of Castelsardo (27¾ miles SW). The town occupies the seaward side of a small, steep-sided promontory. Isolotto Molino lies close N of the promontory. Within the town is a conspicuous cathedral belfry (9.10) and a TV mast stands on an ancient castle (9.10). A small craft harbour (9.15) lies close W of the town. Mariners should also note Secca di Frigiano, a rocky shoal with a least depth of 15 m over it, 1 mile NW of the castle and Secca di Punta Spinosa, a rocky shoal with a least depth of 4·9 m over it close off Castelsardo.

The track then leads to a position NW of Castelsardo small craft harbour.

(Directions continue at 9.23)

Anchorages

Chart 1985

Isola Rossa

9.12

1 Isola Rossa (40°00′·9N, 8°52′·0E). In offshore winds and with good local knowledge small commercial vessels can obtain anchorage in depths of about 10 m between Isola Rossa and the coast of Sardegna.

Chart 1204

Castelsardo

9.13

1 Castelsardo (40°55′·0N, 8°42′·8E). In good weather anchorage can be obtained in depths of about 28 m, rocks, 2¾ cables NE of the promontory.

Small craft

Chart 1985

Porticciolo dell'Isola Rossa

9.14

1 **General information**. Porticciolo dell' Isola Rossa (41°00′·7N, 8°52′·5E). The harbour is protected from the S by an outer breakwater extending S and SE. An elbowed inner mole, extending SW from the coast, protects the SE side of the basin. The entrance is marked by lights; Outer mole (red post, 1 m in height), Inner mole (green post, 1 m in height) Small commercial vessels sometimes anchor between Isola Rossa and the coast of Sardegna

Berths. The basin provides 280 small craft berths, mainly at pontoons, in depths of about 10 m.

Chart 1204

Castelsardo

9.15

1 **General information**. Castelsardo (40°54′·8N, 8°42′·0E) small craft and yacht harbour is protected from the NW by a mole extending 2½ cables NE from the coast which incorporates Isolotto di Frigiano (Frigianu) at its mid-point. Molo Foraneo, the part of the mole NE of Isolotto di Frigiano, protects the harbour entrance which lies between a short rubble spur extending ESE from Isolotto di Frigiano and a short rubble breakwater extending NW from a rocky point on the coast; Torre Frigiano stands on the point. A light is exhibited from the head of Molo Foraneo (green mast, 5 m in height).

2 The harbour entrance is also marked by lights; Isolotto di Frigiano Breakwater Head (green mast, 5 m in height), E breakwater head (red mast, 5 m in height). The entrance has depths of 10 m. Vessels up to 28 m in length are accepted. The harbour is subject to silting and available depths should be confirmed with the Harbour Master. At night the lights of San Giuseppe and Lu Bagnu, W of Castelsardo, can be confused with Castelsardo and make identification of the harbour entrance difficult.

3 **Berths**. The harbour provides 500 berths at quays and pontoons in depths of 1 to 4 m.

Facilities. Comprehensive small craft facilities including repairs.

CASTELSARDO TO PUNTA NEGRA

General information

Chart 1204

Routes

9.16

1 A coastal route leads, from a position NW of Castelsardo (40°55′·0N, 8°42′·8E), 7½ miles SW to a position N of Platamona (40°49′·1N, 8°28′·0E), then 8 miles W to a position ENE of Torre Saline (40°54′·6N, 8°13′·9E), then 2½ miles NNE to a position E of Punta Negra (40°57′·1N, 8°14′·2E).

An inshore route leads from Porto Torres roadstead at the head of Golfo dell'Asinara to the port.

Topography

9.17

1 The coast between Castelsardo and Punta Tramontana, 4 miles SW, remains relatively high and rugged with a rock fringed shore. Many of the valleys extending to the coast contain streams or small rivers which enter the sea. To the SW of Punta Tramontana the rocky shore gives way to sand dunes and low scattered vegetation which continues, for approximately 9 miles, to the vicinity of Torre Abbacurrente (Abbacorrente) (40°49′·2N, 8°27′·3E).

2 From Torre Abbacurrente the coast extends NW to Punta San Gavino, at the E end of the Porto Torres complex, becoming more elevated and once again fringed with rocks. The buildings and particularly the industrial structures of Porto Torres are conspicuous by day and night.

The W shore of Golfo dell'Asinara from Punta Budagni (40°50′·6N, 8°19′·6E), close W of Porto Torres, to the vicinity of Torre delle Saline, 6 miles NW, is low, sandy and backed by salt-water lagoons. North of Torre della Saline to Punta Negra the coast is once again rocky and indented with numerous small coves.

Depths

9.18

1 Generally the S part of Golfo dell'Asinara lies within the 50 m depth contour and shelves gradually to the 20 m depth contour approximately 1 mile offshore. Close inshore there are numerous dangers and shoals.

Prohibited areas

9.19

1 Navigation and stopping are prohibited in an area, shown on the chart, extending 1 mile N from a church standing on the shore in position (40°50′·8N, 8°36′·1E; the area protects an archaeological site.

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Anchoring and fishing are prohibited in an area containing submarine cables, shown on the chart, extending 2¼ miles N of Platamona (40°49′·1N, 8°28′·1E).

2 Stopping, anchoring fishing and all recreational activities are prohibited in an area enclosing the approach to Porto Torres, the area is shown on the chart.

Entry of an area enclosing seawater intake pipelines in position (40°51′·2N, 8°18′·4E), shown on the chart, is prohibited.

Marine farm

9.20

1 A marine farm, shown on the chart, lies 9½ cables E of Stintino (40°56′·1N, 8°13′·8E). The area is marked by buoys (special).

Two vessels have been sunk in position (40°54′·0N, 8°18′·2) to form a fish haven. The wrecks have a least depth of 28 m over them.

Tunny fishing

9.21

1 Mariners should note tunny nets are laid close N of Torre delle Saline (40°54′·6N, 8°13′·9E).

Principal marks

9.22

1 **Landmarks:**

Nostra Signoria di Bonaria (40°43′·5N, 8°43′·4E). The mountain has twin peaks.

Sorso church dome (40°47′·9N, 8°34′·8E).

Platamona hotel (40°49′·0N, 8°28′·9E).

A farmhouse (yellow) (40°48′·8N, 8°27′·5E).

Torre Abbacurrente (40°49′·2N, 8°27′·3E).

Cappella Balai (40°49′·7N, 8°25′·8E). The small square chapel stands on a sheer rocky rise.

Punta San Gavino (40°50′·5N, 8°25′·0E), a small church stands on the point; the church is only visible from the E.

2 Porto Torres Main Light (white tower on two storey dwelling, 20 m in height) (40°50′·1N, 8°23′·8E).

Porto Torres Harbour Master's Office (red) (40°50′·4N, 8°24′·4E).

ENEL power station chimneys (red and white bands) (40°50′·7N, 8°18′·4E) and (40°51′·0N, 8°17′·9E).

Torre Saline (40°54′·6N, 8°13′·9E).

Tonnara delle Saline chimneys (40°55′·1N, 8°14′·0E). The two chimneys belong to a fish processing plant.

Stintino belfry (grey truncated pyramid) (40°56′·2N, 8°13′·6E).

3 **Offshore marks:**

Oceanographic buoy (spar) (40°52′·2N, 8°19′·5E).

ENEL power station E water intake light-buoy (can, special) (40°51′·2N, 8°18′·8E).

ENEL power station W Water Intake Light-beacon (yellow, 4 m in height) (40°51′·5N, 8°18′·3E).

Major light:

Porto Torres Main Light – as above.

Directions

(continued from 9.11)

9.23

1 From a position approximately 6½ miles NW of Castelsardo (40°55′·0N, 8°42′·8E) the track leads SW passing, with positions relative to Porto Torres Main Light (40°50′·2N, 8°23′·9E):

NW of a submerged coastal protection breakwater (12¼ miles ENE). The breakwater extends NE 135 m from the coast. Thence:

NW of Punta Tramontana, also known as Pedras de Fogu, (11 miles ENE). A tall cylindrical tank, broader at the top, stands on the headland. Thence:

2 NW of a prohibited area (9¼ miles ENE) (9.19), thence:

NW of Sorso (8½ miles ESE). The town stands on the slopes of a hill which rises above an extensive area of sand dunes. A conspicuous church belfry (9.22) stands within the town.

The track then leads W passing:

N of a conspicuous hotel (4 miles ESE) (9.22), thence:

3 N of Platamona (3¼ miles ESE). A conspicuous sail shaped building stands within this resort town. Thence:

N of Torre Abbacurrente (2¾ miles ESE) (9.22), thence:

N of Porto Torres roadstead (2½ miles NNE).

(Directions for Porto Torres continue at 9.28)

Thence:

N of Porto Torres Main Light, thence:

N of Punta Budagni (3¼ miles WNW), thence:

N of an oceanographic buoy (3¾ miles NW) (9.22), thence:

N of the ENEL power station (4½ miles WNW) (9.22), thence:

To a position approximately 3 miles E of Tonnara delle Saline (9 miles NW) (9.22). The track then leads NNE passing:

4 E of Stintino (9¾ miles NW). The town stands on a small peninsula which separates two narrow coves. A mole, which exhibits a light (green post) from its head, extends generally 2 cables SSE from the coast and protects the entrance to the N inlet; both inlets contain small craft harbours. Thence:

To a position E of Punta Negra (10 miles NW). An extensive white painted hotel complex stands close to the headland; the buildings are conspicuous from the E.

(Directions continue at 9.47)

Porto Torres

Chart 1202

General information

9.24

1 **Position and function.** Porto Torres (40°51′N, 8°23′E) is the port of Sassari, a large town 10 miles SE. The port handles textiles, pottery, tobacco, foodstuffs, fish, wine, cattle and bulk raw materials including oil and petroleum products.

Topography. The port lies at the head of Golfo dell' Asinara fronting the town and the extensive industrial area W of it. The buildings of the town and particularly the structures and chimneys of the industrial facilities are conspicuous by day and night against this flat, low lying area.

2 **Approach and entry.** Porto Torres is approached from the N through Golfo dell' Asinara. Porto Industriale, the W part of the port is entered between the heads of Diga Foranea (40°51′·1N, 8°23′·1E) and Molo di Ponente, 7 cables ESE. Porto Commerciale forms the E part of the port; Avamporto, the main basin of this area, is entered between the heads of Molo di Ponente and Molo di Levante, 2 cables S.

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Traffic. In 2002 the port was used by 207 ships with a total of 8 496 163 dwt.

3 **Port Authority.** Capitaneria di Porto, 1–07046 Porto Torres, Sardegna.

Limiting conditions

9.25

1 **Controlling depth.** The approaches to Porto Torres have depths in excess of 20 m. There is a least depth of 15·4 m in the E part of the entrance to Porto Industriale. The entrance to Porto Commerciale has a least depth of 11·5 m.

Deepest and longest berth. Porto Commerciale; Molo di Levante, length 450 m depth alongside 7 to 9 m. Porto Industriale; Pontile ENICHEM No. 1, length 750 m, depth alongside 10 to 16 m.

2 **Tidal levels.** Mean spring range is about 0·3 m. When a period of absolute calm coincides with low water Secche di Gennaio, the Shoals of January, occur. During this period rocks not normally seen will be uncovered.

Maximum size of vessel handled. Length 180 m; draught 13·4 m.

3 **Local weather and sea state.** Cloud developing to the W of the port indicates strong winds from the NW are likely whereas a clear horizon indicates strong NE winds are imminent. In both cases a heavy swell develops in the harbour which can make cargo handling difficult.

Arrival information

9.26

1 **Port operations.** Daily 0800–2100 local time.

Coast and port radio. There is a coast and port radio station at Porto Torres, see the relevant edition of *Admiralty List of Radio Signals.*

Notice of ETA required. Send ETA 72, 48 and 24 hours prior to arrival. See the relevant edition of *Admiralty List of Radio Signals.*

2 **Outer anchorages.** Anchorage within an area, shown on Chart 1204, enclosing submarine cables landed in the vicinity of Platamona (40°49′·1N, 8°28′·1E) is prohibited. Mariners should also note the disused oil pipeline which extends 2 miles NNE from a position close W of Diga Foranea.

Anchorage may be obtained in depths of about 20 m sand, 5 cables NE of Molo di Levante. The anchorage becomes untenable with onshore winds and vessels should shift berth to Isola Asinara.

3 The Waiting Area anchorages, shown on the charts 2 miles NE of the port entrances, are used as follows:

Area	*Reserved for*
BALAI 1	Vessels under controls imposed by the Port Authority, see Regulations concerning entry, awaiting a berth for loading or unloading.
BALAI 2	Vessels awaiting the outcome of examination, see Regulations concerning entry.

4 **Pilotage** is compulsory for vessels of 500 grt and greater. Pilot boards 1 mile from the entrance; 3 miles from the entrance for VLCCs.

Tugs. Available and for some classes of vessel are obligatory, see Regulations concerning entry.

Regulations concerning entry. The following vessels will be examined before authority to enter Porto Torres is given:

All tankers of 3000 grt or greater which are more than 15 years old and not of double hull construction arriving from foreign ports.

5 All vessels more than 20 years old carrying cargoes potentially hazardous to the marine environment and/or have more than 200 tonnes of fuel oil onboard or a substantial quantity of residual oils onboard.

Vessels found to be deficient and considered a potential danger can be subjected to the following:

Tankers may be obliged to take tugs during cargo handling.

6 All vessels may be required to take tugs during entry and departure. The number of tugs may be increased during entry, departure, berthing or unberthing. A tug may be ordered to stand by a vessel in the waiting anchorage.

A pilot embarked beyond the usual pilotage area.

On completion of cargo handling the vessel may be required to leave the berth and proceed to the waiting anchorage.

7 The attendance of tugs is obligatory for all tankers of 2000 grt or greater berthing or unberthing at any of the petro-chemical berths.

All vessels of 50 grt or greater carrying dangerous cargoes are prohibited from from using the entrance channel at the same time as a passenger vessel.

8 **Restricted area.** Navigation, anchoring and fishing are prohibited, except for authorised vessels, in an area, shown on the charts, extending 2 miles N of the entrances to the port. Vessels of less than 50 grt are permitted to cross the area but must remain clear of traffic entering or leaving the port.

Harbour

9.27

1 **General layout.** Porto Torres consists of two areas; Porto Commerciale, a complex of basins lying to the E of Molo di Ponente (40°51′N, 8°24′E), and Porto Industriale, a much larger area protected by Diga Foranea, to the W of Molo di Ponente.

Landmarks:

Porto Torres Main Light (40°50′·2N, 8°23′·9E) (9.22).

Porto Torres Harbour Master's Office (40°50′·4N, 8°24′·4E) (9.22).

Major light:

Porto Torres Main Light – as above.

Directions for entering harbour

(continued from 9.23)

9.28

1 The charts are sufficient guide to enter Porto Torres.

Pontile ENICHEM No. 1. The berth is marked at its head by a light (red post, green bands, 5 m in height). The approach to the pier is indicated by the alignment (180°) of two pairs of leading light-beacons:

E Front (white square with black stripe on metal framework tower, 17 m in height) (40°50′·2N, 8°22′·5E).

E Rear (black square with white stripe on metal framework tower, 15 m in height) (120 m S of front light).

W Front (white rectangle with black stripe on metal post 30 m in height) (40°50′·2N, 8°22′·3E).

W Rear (black rectangle with white stripe on metal post, 28 m in height) (120 m S of front light).

9.29

1 **Useful marks**:

Porto Commerciale, Molo di Levante Head light (red column on hut, 5 m in height) (40°50′·8N, 8°24′·0E).

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Molo di Ponente Head light (green column on hut, 9 m in height) (40°51′·0N, 8°24′·0E).

Diga Foranea Head, also known as Outer Shelter Mole E Head, light (green column, 7 m in height) (40°51′·1N, 8°23′·1E).

Porto Industriale, Molo di Levante Head light (red column, 7 m in height).

Basins and berths

9.30

1 **Porto Commerciale** is protected by Molo di Levante to the E and Molo di Ponente to the W and comprises of four basins; Avamporto, the outer harbour, provides access to the others. The quays on the E side of Avamporto are the main ferry and general cargo handing berths. There are Ro-Ro facilities in the SE corner of Avamporto.

Darsena Nuovo, at the root of Molo di Levante, and Darsena immediately SSW of it, provide berths for small craft and fishing vessels. Porto Interno lies on the S side of the harbour and is primarily used by ferries.

2 **Porto Industriale** is protected from the W and N by Diga Foranea and from the E by Molo di Levante which has two tanker berths at its outer end and two dry cargo berths on its S part. Pontile ENICHEM No. 1 is the main tanker berth, Pontile ENICHEM No. 2 is used for dry goods.

Port services

9.31

1 **Repairs:** a small shipyard can undertake minor hull repairs.

Other facilities: there is a hospital at Sassari; deratting can be carried out, Deratting and Deratting Exemption Certificates issued; no oily waste reception facilities; no garbage facilities.

Supplies: fuel; water; provisions.

Communications: the nearest airport is at Alghero 20 km S.

Small craft

9.32

1 **Porto Commerciale**. Cormorano Marina lies within Darsena Nuova (40°50′·5N, 8°24′·3E). The marina accepts vessels up to 35 m in length and provides 150 berths in depths of 1·5 to 4·0 m. There are comprehensive small craft facilities.

Anchorage

Stintino

9.33

1 Stintino (40°56′·1N, 8°13′·8E). Anchorage can be obtained off the village in depths of about 29 m, sand, good holding ground. Mariners should note the marine farm, shown on the chart.

Small craft

Stintino Porto Minore

9.34

1 **General information**. Porto Minore (40°56′·0N, 8°13′·7E) occupies the inlet S of the fishing village of Stintino. A rocky shoal extends 1¼ cables E of the village. The small craft harbour is protected by a short breakwater extending SSE from the N side of the inlet. A light (green post) is exhibited from the head of the breakwater. The entrance has depths of about 5 m. The maximum draught accepted is 2·3 m. The harbour is exposed to E winds which send in a sea making the outer berths untenable.

2 **Berths**. The harbour provides 300 berths in depths of 0·5 to 2·5 m mainly at pontoons along the S side of the inlet; three short piers extend from the N shore.

Facilities. Comprehensive small craft facilities including mechanical repairs.

Supplies: fuel; water; provisions.

Stintino Porto Mannu

9.35

1 **General information**. Porto Mannu, a small craft and fishing harbour (40°56′·2N, 8°13′·8E), occupies the inlet N of Stintino. A mole extending generally 2 cables SSE from the coast, 1½ cables ENE of the harbour entrance, protects the harbour from the E; a light (9.23) is exhibited from the head. The entrance is protected by two short breakwaters and has a depth of 2·5 m. The harbour accepts vessels up to 13 m in length and maximum draught 2·3 m. Vessels of maximum draught 6 m are permitted to anchor close off the entrance.

Berths. The harbour provides 300 berths at quays and pontoons in depths of 2·2 to 2·5 m.

2 **Facilities**. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Other names

9.36

1 Santo, Fiume (40°50′·6N, 8°18′·8E).
Mannu, Rio (40°50′·2N, 8°23′·5E).

ISOLE ASINARA

General information

Chart 1204

Routes

9.37

1 A coastal route leads, from a position E of Punta Negra (40°57′·1N, 8°14′·2E), 12 miles NNE to a position ENE of Punta dello Scorno, thence 10 miles WSW to a position WNW of Punta Grabara (41°05′·9N, 8°16′·3E), thence 10 miles SSW to a position W of Capo Falcone (40°58′·3N, 8°12′·1E).

2 An inshore route, suitable only for small craft and requiring local knowledge, leads through Passaggio della Pelosa (40°57′·8N, 8°13′·0E).

An inshore route, requiring good local knowledge, leads through Passaggio dei Fornelli (40°59′·0N, 8°13′·1E).

Isola Piana

General information

9.38

1 **Description**. Isola Piana (40°58′·5N, 8°13′·0E) divides the shallow channels separating the NW extremity of Sardegna from Isola Asinara, the largest island of the group. Isola Piana is low lying and fringed by numerous rocks and islets. A round, dark tower, partially ruined, stands on the NE coast of the island.

Isola Asinara

General information

9.39

1 **Description**. Isola Asinara (41°05′·0N, 8°18′·6E) is crescent shaped, extending 9½ miles NNW from the NW extremity of Sardegna in a series of four hilly areas

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separated by low-lying ground. Isola Asinara forms the NW side of Golfo dell' Asinara.

9.40

1 **Topography**. The E coast of the island is indented by numerous small rocky coves, many with sandy beaches, and fringed with rocks. Rada della Reale, which lies between Punta Barbarossa (40°59′·0N, 8°15′·3E), the SE extremity of the island, and Punta Trabuccato, 5¼ miles NE, forms the SE coast; the N part of the bay is encumbered by dangerous rocks and shoals. North of Punta Trabuccato the coast continues in a series of coves and bays to Punta dello Scorno, also known as Punta Caprara, the N extremity of Isola Asinara.

The W coast of the island is rocky, barren and inaccessible.

9.41

1 **Depths**. The coastal route lies to seaward of the 20 m depth contour and is free from isolated dangers. The 20 m depth contour lies up to 2 miles offshore in the N part Rada della Reale (41°02′·0N, 8°17′·0E) but elsewhere on the E coast of Isole Asinara lies within 1 mile of the shore. There are numerous rocks and dangers inshore of the 20 m depth contour. Shoals front Punta dello Scorno.

The W coast is steep-to; the 50 m depth contour lies generally within 1 mile of the coast.

9.42

1 **Submarine cables**. Submarine power cables cross the channels between Sardegna and Isole Asinara. Anchoring and fishing within the area, shown on the chart, is prohibited.

9.43

1 **Asinara National Park**. The waters around Isola Asinara form a national marine park and are subject to a range of restrictions, see 9.9.

9.44

1 **Landmarks:**

Monte Castellaccio Fort (41°00′·0N, 8°14′·0E).
Punta Maestra Fornelli (41°00′·3N, 8°13′·9E).
Punta Tumbarino (41°02′·3N, 8°13′·7E).
Monte Ruda (41°03′·9N, 8°15′·9E).
Punta Scomunica (41°05′·8N, 8°17′·7E).
Torre Arena (41°06′·5N, 8°19′·6E).
Punta dello Scorno Signal Station (round, partly ruined) (41°06′·7N, 8°18′·9E).

9.45

1 **Offshore marks:**

Oceanographic light-buoy (yellow) (41°01′·3N, 8°17′·1E).
Rada della Reale Scoglietti Light (white round tower, 11 m in height) (41°03′·1N, 8°17′·6E).

9.46

Major light:

Punta dello Scorno Light (white round tower on three storey dwelling, 35 m in height) (41°07′·1N, 8°19′·1E).

Directions for passage east of Isole Asinara

(continued from 9.23)

9.47

1 From a position E of Punta Negra (40°57′·1N, 8°14′·2E) the track leads NNE passing, with positions relative to Rada della Reale Scoglietti Light (41°03′·1N, 8°17′·6E):

ESE of Isola Piana (5¾ miles SW) (9.38), thence:
ESE of Punta Barbarossa (4½ miles SSW). A monument stands on the headland. Thence:
ESE of Monte Castellaccio Fort (4 miles SW) (9.44), thence:
ESE of Punta Maestra Fornelli (4 miles SW) (9.44), thence:

2 ESE of Isola Scombro (2¼ miles SW). The islet stands on a bank, with depths of less than 5 m over it, amongst numerous rocks and shoals. thence:
ESE of an oceanographic light-buoy (1¾ miles SSW) (9.44), there are shoal depths of 18 to 20 m within 5 cables of the buoy. Thence:
ESE of Punta Tumbarino (3 miles WSW) (9.44), thence:

3 ESE of Rada della Reale Scoglietti Light (9.44). The light marks Scoglietti, also known as Scogli Neri, a dangerous reef which extends 1 mile SE of the light. The red sector (297°–320°) of the light covers the danger. Thence:
ESE of Monte Ruda (1½ miles NW) (9.44), thence:
ESE of Punta Trabuccato (1¾ miles E), the extremity of a short peninsula. Torre Trabuccato stands 2½ cables NW of the point. Thence:

4 ESE of Punta Cannabilu (2½ miles ENE), thence:
ESE of Cala d'Oliva (2½ miles NE). A tower (20 m in height) stands on a short promontory at the head of the inlet. A conspicuous prison, surrounded by low buildings, and a white belfry stand on the N side of the cove. Foul ground fronts the entrance to Cala d'Oliva. Thence:
ESE of Punta Sabina (3¼ miles NE), thence:
ESE of Punta Scomunica (2¾ miles N) (9.44), thence:

5 ESE of Torre Arena (9.44), thence:
ESE of Punta dello Scorno Signal Station (3¾ miles NNE) (9.44), thence:
E of Punta dello Scorno Light (4 miles NNE) (9.44), thence:
To a position ENE of Punta dello Scorno.

(Directions continue at 9.48)

Directions for passage west of Isole Asinara

(continued from 9.47)

9.48

1 From a position ENE of Punta dello Scorno (41°07′·2N, 8°19′·1E) the track leads WSW passing, with positions relative to Punta dello Scorno Light (41°07′·1N, 8°19′·1E) (9.44):

N of Punta dello Scorno. Shoals with depths of 3·5 m and 4·5 m over them lie at the N end of a dangerous bank extending 1½ cables N of the headland. Thence:
NNW of Punta dello Scorno Signal Station (4¼ cables SSW) (9.44), thence:
NNW of Punta Scomunica (1¾ miles SSW) (9.44), thence:

2 To a position WNW of Punta Grabara (2½ miles WSW). The track then leads SSW passing:

W of Monte Ruda (4 miles SSW) (9.44), thence:
W of Punta Tumbarino (6¼ miles SSW) (9.44), thence:
W of Punta Maestra Fornelli (7¾ miles SSW) (9.44), thence:
W of Monte Castellaccio Fort (8 miles SSW) (9.44), thence:
W of Isola Piana (9½ miles SSW) (9.38), thence:

To a position W of Capo Falcone (10¼ miles SSW), the N extremity of a small peninsula which rises to a summit 1 mile S of the headland. Torre Falcone (white, crenellated) stands on the summit.

(Directions continue at 9.65)

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Passaggio dei Fornelli

Description

9.49

1 Passaggio dei Fornelli (40°59′·0N, 8°13′·1E) leads from the NW part of Rada dei Fornelli between Isola Piana and Isola Asinara. The channel has depths of 3 m but should only be attempted in good weather and with local knowledge. Overhead power cables, with a vertical clearance of 25 m, span the W end of the channel. There is a speed limit of 3 kn throughout the channel.

Directions

9.50

1 **Leading beacons**:

Front beacon (white pillar, black stripes) (40°59′·2N, 8°21′·7E) on Punta di Luzzo. A sectored light is exhibited from the beacon (white 297°–305°).

Rear beacon (white pillar, black stripes) (1½ cables NW of front beacon) on Punta Salippi.

The alignment (301°) of these beacons leads through the E part of the channel to a position N of Isola Piana tower. The track then leads WSW. The alignment (072°), astern, of the leading beacons on Punta Arena leads through the W part of the channel:

2 Front beacon (white pillar, black stripes) (40°59′·2N, 8°13′·5E). A sectored light is exhibited from the beacon (white 068°–076°).

Rear beacon (white pillar, black stripes) (1½ cables ENE of front beacon).

Small craft channel

Passaggio della Pelosa

9.51

1 Passaggio della Pelosa (40°57′·8N, 8°13′·0E) leads between Sardegna and Isola Pianosa (9.38). The channel is shallow, only suitable for small craft and should only be attempted in good weather with local knowledge. Isolotto della Pelosa, on the SW side of the channel, is surmounted by a tower.

Anchorages

General information

9.52

1 The W side of Isole Asinara affords little or no shelter and the coves and bays are only frequented by fishermen.

Rada della Reale

9.53

1 **General information**. Rada della Reale (41°02′N, 8°17′E). In an emergency excellent anchorage can be obtained, in depths of about 10 m, sand and weed, good holding ground, either E or W of Soglietti (41°03′N, 8°18′E); the W anchorage is better.

Useful marks. Three groups of building on the N shore of the bay were formerly a quarantine station. The W group, N of Scoglietti Light (9.44), are conspicuous and contain a church; two stone piers extend from the coast, the largest is 75 m in length and has a T-shaped head with an alongside depth of about 5 m. The second pier, further SE, has alongside depths of less than 2 m.

Small craft

L'Ancora Yacht Club

9.54

1 **General information**. L'Ancora Yacht Club (40°57′·5N, 8°13′·1E) is a small private yacht harbour protected from the E by an angled mole extending ½ cable N from the shore. Another short breakwater extends NE from the coast towards the mole head forming the W facing entrance which has a depth of 2·5 m. The harbour accepts vessels up to 20 m in length.

Berths. The harbour provides 150 berths in depths of 1·0 to 2·8 m.

Facilities. Usual marina facilities.

Supplies: fuel; water; provisions.

Other names

9.55

1 Scombro di Fuori, Cala (41°01′·4N, 8°13′·7E).
Tappo, Cala (41°05′·2N, 8°17′·0E).

CAPO FALCONE TO CAPO TEULADA

GENERAL INFORMATION

Chart 1985

Area covered

9.56

1 This section describes the W coast of Sardegna between Capo Falcone (40°58′·3N, 8°12′·1E) and Capo Teulada, 130 miles S. The section is arranged as follows:

Capo Falcone to Capo Mannu (9.58).
Capo Mannu to Capo Frasca (9.85).
Capo Frasca to Capo Altano (9.103).
Capo Altano to Capo Teulada (9.113).

Topography

9.57

1 The W coast of Sardegna extends S from Capo Falcone in a series of wide bays and gulfs which are further indented by numerous smaller bays and coves; generally this coast presents a more varied topography than the E side of the island.

CAPO FALCONE TO CAPO MANNU

General information

Chart 1985

Route

9.58

1 A coastal route leads, from a position W of Capo Falcone, 24 miles S to a position W of Capo Caccia (40°34′·0N, 8°09′·9E), then 33 miles SSE to a position W of Capo Mannu (40°02′·1N, 8°22′·9E).

Topography

9.59

1 From Capo Falcone to Capo Caccia the coast remains generally high, rocky and inaccessible. The generally rugged nature of the coast continues E into the head of Rada di Alghero however the E side of the bay becomes low and sandy. The town of Alghero stands on a rocky promontory; S of the town the coast remains low but becomes rocky and rock fringed as far S as Punta Poglina (40°30′·2N, 8°20′·5E).

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2 From Punta Poglina to Capo Marargiu, 10 miles S, the coast is rocky and generally unapproachable however there are several coves which have sandy beaches at their heads. Although continuing generally high, rocky and backed by cultivated land the coast slowly decreases in elevation S of Isola Rosa (40°17′·2N, 8°28′·4E) towards a low marshy area in the vicinity of Torre Su Pittu, 12 miles S.

Approximately 3¼ miles SW of Torre Su Pittu the coast once again becomes rocky. Capo Mannu is the W extremity of a rocky peninsular joined to the coast by a low rocky isthmus.

Depths

9.60

1 The coastal route lies to seaward of the 100 m depth contour and is free from isolated dangers. Between Capo Falcone (40°58′·3N, 8°12′·1E) and Capo Caccia (40°34′·0N, 8°09′·9E) the 100 m depth contour lies generally 4 miles offshore and the coast is relatively steep-to; within the 20 m depth contour, generally within 3 cables of this part of the coast, there are numerous rocks and dangers.

2 Between Capo Caccia and Capo Mannu (40°02′·1N, 8°22′·9E) the 100 m depth contour lies up to 14 miles offshore and the seabed shelves more gradually from the coast however the coast remains clear of isolated dangers to seaward of the 20 m depth contour, which lies up to 1 mile from th coast.

Exercise area

9.61

1 An area used for live firing exercises lies S of Alghero (40°33′·7N, 8°19′·2E). Details of the area and its activation are contained in local notices to mariners.

Prohibited area

9.62

1 Navigation, fishing and diving are prohibited within 200 m of Capo Caccia Lighthouse (40°33′·7N, 8°09′·8E) because of the danger of rock falls.

Local weather

9.63

1 Cloud covering Monte Timidone (40°36′·7N, 8°10′·3E) and Capo Caccia indicate strong NW winds which last for 3 to 5 days and are usually followed by several days of strong SW winds.

Principal marks

9.64

1 **Landmarks:**

Capo dell' Argentiera (40°44′·1N, 8°08′·5E).

Monte Doglia (conical peak) (40°37′·7N, 8°14′·8E).

Isolotto Foradada (40°34′·3N, 8°09′·2E).

Capo Caccia (distinctive, dark, sheer-sided promontory) (40°34′·0N, 8°09′·9E).

Alghero Cathedral belfry dome (40°33′·6N, 8°18′·8E), illuminated at night.

Torre Punta Poglina (slender, partly ruined on S side, 65 m in height) (40°30′·2N, 8°20′·5E).

2 Castella di Malaspina (40°18′·0N, 8°30′·4E).

Bosa Marina, Isola Rossa disused lighthouse (black and white bands) (40°17′·1N, 8°28′·4E).

Torre Saline (40°02′·1N, 8°24′·8E).

Offshore marks:

Current Meter light-buoy (special) (40°32′·2N, 8°06′·0E).

Major light:

Capo Caccia (white tower on three storey dwelling, 24 m in height) (40°33′·7N, 8°09′·9E).

Directions

(continued from 9.48)

9.65

1 From a position W of Capo Falcone (40°58′·3N, 8°12′·1E), the track leads S passing, with positions relative to Capo Caccia Lighthouse (40°33′·7N, 8°09′·9E):

W of Punta Scoglietti (22¼ miles N). The rocky headland is fringed with rocks and shoals and should not be approached closer than 5 cables. The headland is pale coloured when seen from S. Thence:

W of Isolotto dei Porri (19¼ miles NNE). The islet appears to be conical and is more easily identified from the S. Thence:

2 W of Capo Mannu (14 miles N), a dark coloured headland, thence:

W of Capo dell' Argentiera (10¼ miles N). The high headland is easily identified. The mining village of Port San Nicolo dell' Argentiera occupies the N shore of an inlet on the N side of the headland, a church stands in an elevated position within the village. Thence:

W of Monte Forte (10½ miles NNE), thence:

3 W of Porto Ferro (7½ miles NNE). Lago Bartaz, a salt water lagoon, lies 1 mile inland of the inlet at the foot of Monte Forte. Thence:

W of Punta Gessiere (3¾ miles NNW), thence:

W of Isolotto Piana (2¾ miles NW), thence:

W of Isolotto Foradada (7½ cables NW), thence:

To a position W of Capo Caccia Light. The track then leads SSE passing:

WSW of a current meter light-buoy (3½ miles WSW), thence:

4 SW of Porto Conte (1½ miles NW), a large inlet which affords a sheltered anchorage (9.75), thence:

SW of Alghero (7 miles E), thence:

WSW of Punta Poglina (8¾ miles ESE). Torre Poglina (9.64) stands on the headland. Thence:

WSW of Capo Marargiu (16½ miles SE). The headland has green coloured rock and is fronted by rocks and shoals extending 5 cables SW of it. Thence:

5 WSW of Castella di Malaspina (22 miles SE), thence:

WSW of Tresnuraghes (25 miles SE). The town contains a prominent cathedral with a dome and two spires. Thence:

WSW of Capella di San Marco (26¼ miles SE). A small house with a red roof stands close to the chapel. Thence:

WSW of Cuglieri Cathedral (29 miles SE), thence:

WSW of Punta Foghe (26¾ miles SSE). The headland forms the N side of the mouth of Fiume Mannu. Torre Foghe stands on the headland. Thence:

6 WSW of Monte Urtigu (32¼ miles SE), thence:

W of Torre Scala e Sale (33 miles SSE). Tunny nets are laid off Isolotto Tonoria (Peloso), 1½ miles W of the tower. Thence:

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To a position W of Capo Mannu (33¼ miles SSE). The rocky headland is of irregular shape and from a distance has the appearance of two islands. A light (white square tower on white dwelling, 11 m in height) is exhibited from the W end of the peninsula. Torre Mora stands close to the light and Torre Capo Mannu 7½ cables NE of it. Vessels are to remain at least ¼ cable off the headland because of the danger of rockfalls.

7 **Useful marks:**

Torre Negra (40°41′·4N, 8°11′·9E).

Torre Bantine Sale (dark red, partly ruined, 20 m in height) (40°40′·7N, 8°11′·9E).

Torre Porticciolo (40°38′·7N, 8°11′·2E).

Torre Pegna (small, truncated, conical) (40°35′·8N, 8°09′·0E). The tower can be confused with the broken crest of the crag on which it stands).

Torre Badde Iana (40°26′·8N, 8°23′·7E).

Torre Argentina (light coloured) (40°19′·3N, 8°26′·7N). A steep sided hill, scored with vertical furrows, close E of it can be easier to see initially.

8 Torre Columbargia (40°13′·9N, 8°27′·8E).

Torre d'Ischia Ruia (40°11′·9N, 8°28′·0E).

Capo Nieddhu tower (ruined) (40°09′·3N, 8°27′·6E).

Torre Pittinuri (29 m in height) (40°06′·4N, 8°29′·3E).

Torre Su Pittu (40°05′·2N, 8°29′·4E).

(Directions continue at 9.92)

Alghero

Chart 1202 approaches to Alghero and plan of Alghero

General information

9.66

1 **Position and function**. Alghero (40°33′·7N, 8°18′·6E) is a medieval walled town, lying in the E corner of Rada di Alghero, occupying a rocky promontory and fronted by its harbour. The small port handles wine, dairy produce, timber and tobacco, is a fishing port and provides extensive small craft facilities. It is also used as a landing for cruise ship passengers.

2 **Topography**. Rada di Alghero is entered between Capo Galera (40°34′·1N, 8°14′·7E) and the rocky promontory on which Alghero stands, 3 miles ESE. Generally the W shore is rocky and the E shore low and sandy fronted by a shoal bank, extending up to 7½ cables offshore, on which stands Isolotto della Maddalena. The rocky, red coloured islet, surmounted by a ruined chapel, shows up well against the sandy background. Capo Galera is the SE extremity of a hilly promontory separating Rada di Alghero from Porto Conte. The head of Rada di Alghero is an extensive, undulating plain within which lies Stagno di Calich, a salt water lagoon. The town of Fertilia lies on the W side of the channel connecting the lagoon to the sea.

3 **Approach and entry**. Alghero is approached through Rada di Alghero and entered between the heads of Molo Sud and Nuovo Molo di Sottoflutto.

Limiting conditions

9.67

1 **Controlling depth**. The entrance has a least depth of 5·8 m.

Longest and deepest berth. Banchina Doganale; 3·6 to 4·4 m.

Tidal levels. The maximum range is 0·3 m.

Maximum size of vessel handled. Maximum draught 3·8 m.

Local weather and sea state. Thickening cloud on the summit of Monte Doglia (40°37′·7N, 8°14′·8E) indicates S or SW winds. Thick mist on the coast indicates W or NW winds.

2 The *Libeccio* (SW wind) prevails along this part of the coast and can be difficult, often lasting up to 8 days. When these conditions are likely mariners should seek shelter at Porto Conte (9.75). During the *Maestrale* (NW wind), which can last up to 3 days, vessels should not be anchored near Alghero.

The shallow harbour can be affected by swell.

Arrival information

9.68

1 **Port operations**. 0800–1900 local time.

Port radio. There is a port radio station see the relevant *Admiralty List of Radio Signals*.

Outer anchorages. Anchorage can be obtained in depths of about 20 m, weed and sand, within Rada di Alghero, 1¼ miles ENE of the harbour entrance, or in depths of about 15 m, sand and weed, 5 cables SW of the harbour entrance. With local knowledge anchorage for smaller vessels can be obtained in depths of about 14 m, sand and weed, 2½ miles WNW of the harbour entrance or in depths of about 9 m, sand and weed, between Isolotto della Maddalena and Alghero.

2 **Pilotage**. No licenced pilots. Mariners with good local knowledge can be employed to provide assistance.

Regulations. Stopping within 500 m of the harbour entrance is prohibited. There is a speed limit of 4 kn throughout the harbour. Vessels must remain 30 m clear of the heads of the moles forming the harbour entrance.

Marine farm. A marine farm lies 1½ mile W of the harbour. The farm is marked by a light-buoy (special) and shown on the chart.

Harbour

9.69

1 **General layout**. Alghero is protected from the W by Molo Sud and from the N by Nuovo Molo di Sottoflutto. The heads of the moles form the N facing harbour entrance and are marked by lights; Molo Sud (green column, 6 m in height), Nuovo Molo di Sottoflutto (red column, 6 m in height).

Molo Lo Frasso and Molo Nord divide the NE part of the harbour; Nuovo Darsena, the fishing port and Darsena Turistica, a small craft marina lie SE of it. Piers and pontoons on the NW side of Molo Lo Frasso and Molo Nord provide further small craft berths.

2 Banchina Sanità and Banchina Doganale, in the S part of the harbour, provide the only berths for commercial vessels.

To the W of the commercial berths four pontoons provide further small craft berths.

Landmarks:

Torre Lazzaretto (40°34′·6N, 8°14′·8E). The disused buildings of a former isolation hospital stand close to the tower.

3 Monte Doglia (40°37′·7N, 8°14′·8E) (9.64).

Monte Palmavera radio mast (40°35′·9N, 8°15′·0E).

Hotel dei Pini (several structures) (40°35′·0N, 8°15′·3E).

Isolotto della Maddalena Light (white truncated conical tower, red bands, 6 m in height) (40°34′·3N, 8°18′·0E).

Fertilia spire (40°35′·6N, 8°17′·0E).

Alghero Cathedral belfry dome (40°33′·6N, 8°18′·8E) (9.64).

Major light:

Capo Caccia (40°33′·7N, 8°09′·9E) (9.64).

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Directions
9.70

1 The chart is is sufficient guide to approach the harbour entrance from Rada di Alghero. However at night care must be taken to correctly identify the lights marking the harbour entrance. When SW of the harbour the light at the head of the pier extending SE from the head of Nuovo Molo di Sottoflutto and Secca delle Murge Light-beacon can be confused with the lights marking the harbour entrance.

Berths
9.71

1 **Anchorages and moorings**. Outer anchorages only, see 9.68. Commercial vessels and larger yachts may be instructed to Mediterranean moor on Banchina Sanità and Banchina Doganale.

Alongside berths. Banchina Doganale; length 165 m, alongside depth 3·6 to 4·4 m.

Port services
9.72

1 **Repairs**. Minor hull repairs, mechanical and electrical repairs available. Divers available.

Other facilities. There is a hospital in the town.

Supplies: fuel; water; provisions.

Communications. Alghero Airport stands near the NW shore of Rada di Alghero

Small craft
9.73

1 **General information**. The harbour provides 800 small craft berths in depths of 3 to 5 m. There are comprehensive small craft facilities, including repairs and supplies.

Anchorages and harbours

Chart 1985

Porto San Nicolo dell' Argentiera
9.74

1 **General information**. Porto San Nicolo dell' Argentiera (40°44′·5N, 8°08′·8E). With local knowledge and only in good weather temporary anchorage for small vessels can be obtained in depths of 5 to 8 m, good holding ground, ½ cable off the short pier extending NW from the coast. A shoal with a depth of 3 m over it lies 1 cable off the N headland of the cove. Vessels must be prepared to weigh anchor as soon as an onshore wind develops.

Chart 1202 plan of approaches to Alghero

Porto Conte anchorage
9.75

1 **General information**. Porto Conte is a large inlet which lies between Capo Caccia (40°33′·7N, 8°09′·9E) and Punta del Giglio, 2 miles ENE, affording sheltered anchorage. The inlet lies within the Capo Caccia-Isola Piana Protected Marine Area and must be approached through the Navigation Channel shown on the chart.

2 **Directions**. The chart is sufficient guide to enter Porto Conte and approach the anchor berths.

Berths. Anchorage can be obtained in the following berths:

In a depth of 23 m, sand weed and mud, good holding ground, on the alignment (054°) of Torre Buru (40°34′·3N, 8°09′·9E) and Torre Nuova (2¼ miles NE).

3 In a depth of 11 m, sand, weed and mud, good holding ground on the alignment (043°) of Capo Caccio signal tower (40°34′·0N, 8°09′·5E) with Torre Buru (4¼ cables NE) and Torre Nuova bearing 098°.

In a depth of 6 m, sand and weed, good holding ground, with Torre Nuova bearing 190°, 3¼ cables distant.

Chart 1985

Bosa Marina Porto Commerciale
9.76

1 **General information** Bosa Marina Porto Commerciale (40°17′·1N, 8°28′·6E) is formed by the causeway connecting Isola Rossa to the coast and by the island itself. A breakwater extending SSE from Isola Rossa provides further protection from the SW; a light (red post, 6 m in height) is exhibited from the head. Bosa Marina church dome, the disused lighthouse (9.64) and Torre Isola Rossa, standing on the island, are useful marks.

Directions. The commercial pier is only usable in good weather during the summer.

2 **Anchorage** can be obtained 2¼ cables NW of the island in depths of about 16 m or E of the commercial pier in depths of about 5 m.

Berth. A concrete pier extends 70 m E from the E side of the island, the head is marked by lights (single post, red and green bands, 6 m in height). The pier has an alongside depth of 2·0 to 2·5 m and depths of about 4 m at the head.

Small craft see 9.83.

Small craft

Chart 1202 plan of approaches to Alghero

Cala Tramariglio
9.77

1 **General information**. Cala Tramariglio (40°35′·5N, 8°10′·4E) lies between Punta Tramariglio and Punta del Frara, 3 cables NNE. Within the bay is a small craft haven comprising of two piers extending from the SW shore. The piers have alongside depths of 0·5 to 3·5 m. Vessels up to 8·5 m in length are accepted. The harbour provides 150 berths; limited small craft facilities.

Base Nautica Porto Conte
9.78

1 **General information**. Base Nautica Porto Conte (40°35′·6N, 8°12′·9E) is a marina in the SW corner of Cala Torre del Conte, a bay on the E side of Porto Conte. The marina is protected from the NW by an outer crescent shaped mole; lights (white posts) are exhibited from each end of it. An angled breakwater, forming the SW side of the marina basin, connects the outer breakwater to the shore. The marina is approached from the NW through a channel with a dredged depth of 4 m. Vessels up to 25 m in length are accepted.

2 **Berths**. The marina provides 250 berths in depths of 1·5 to 3·5 m.

Facilities. Comprehensive small craft facilities including minor repairs.

Supplies: fuel; water; provisions.

Fertilia
9.79

1 **General information**. Fertilia (40°35′·4N, 8°17′·3E). The small town lies NW of Punta Calich and to the W of the channel connecting Stagno di Calich with the sea. The seaward end of the channel is protected from the S by an angled mole extending E from Punta Calich. A second mole extends S from the E side of the entrance to Stagno

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di Calich forming much of the E side of the channel. A masonry bridge spans the channel N of the harbour.

2 Lights are exhibited from the heads of the moles; Outer Mole head (red post, 5 m in height), Inner Mole head (green post, 5 m in height). The entrance to the channel faces E, is 100 m wide and has depths of about 4 m. A small craft harbour lies close within the entrance. Vessels up to 30 m in length are accepted.

Berths. The harbour provides 250 small craft berths in depths of 0·5 to 3·5 m.

Facilities. Good small craft facilities including repairs.

3 **Supplies**: fuel; water; provisions.

Communications. Alghero Airport is nearby.

Chart 1985

Torre Argentina anchorage

9.80

1 **General information**. Torre Argentina (40°19′·3N, 8°26′·7N). With local knowledge anchorage for small craft can be obtained in a cove close E of the tower. The haven is untenable in SW winds.

Bosa Marina

9.81

1 **General information**. Bosa Marina (40°17′·5N, 8°28′·7E) is a coastal hamlet standing on the S bank of Fiume Temo, which enters the sea close NE of Isola Rossa.

9.82

1 **Bosa Marina Porto Fluviale** is the small craft harbour fronting the hamlet close within the entrance to Fiume Temo. The N side of the river mouth is marked by pillar. The entrance has depths of about 3 m over a bar and becomes difficult in strong SW winds. The entrance also becomes difficult when the river floods and generally should not be attempted without local knowledge. Pilots are available. The river is navigable by small boat for 5 km upstream.

2 **Berths**. Porto Fluviale provides 120 berths in depths of 2·0 to 2·5 m. A stranded wreck lies NE of the berths.

Facilities. Good small craft facilities including some repairs and supplies.

9.83

1 **Bosa Marina Porto Commerciale** (40°17′·1N, 8°28′·6E) (9.76). Two pontoon jetties are moored S of the concrete pier between May and September. Limited small craft facilities are available at the harbour.

Other names

9.84

1 Badda Iana (Baddaiena), Torre (40°26′·9N, 8°23′·8E).
Bollo, Cala del (40°34′·6N, 8°10′·0E).
Palosu, Cala su (40°02′·8N, 8°25′·0E).
Poglina, Porto (40°29′·5N, 8°22′·3E).
Quadro, Punta del (40°34′·8N, 8°10′·2E).
Santa Caterina, Baia di (40°06′·2N, 8°29′·3E).
Tanngone, Porto (40°24′·2N, 8°23′·9E).
Tonara, Cala (40°22′·0N, 8°23′·2E).

CAPO MANNU TO CAPO FRASCA

General information

Chart 1985

Routes

9.85

1 A coastal route leads, from a position W of Capo Mannu (40°02′·1N, 8°22′·9E), 16 miles S to a position W of Capo Frasca (39°46′·1N, 8°27′·2E).

An inshore route leads through Golfo di Oristano to Porto di Oristano.

Topography

9.86

1 The coast S of Capo Mannu extends towards Capo San Marco, 10¾ miles SSE, in a series of three wide bays and remains low. Generally this part of the coast is rocky and the shore is rock fringed.

Capo San Marco is the N headland of Golfo di Oristano, the large, partly enclosed, bay within which Porto di Oristano lies; Capo Frasca is the S headland. The shores of the bay are low and sandy backed by extensive lagoons and marshes; the countryside further inland is fertile and cultivated.

Depths

9.87

1 The coastal route remains in deep water, free from isolated dangers, to seaward of the 100 m depth contour. A coastal bank, extending up to 7½ miles offshore, between Capo Mannu and Capo San Marco lies within the 50 m depth contour. Isolotto Mal di Ventre (39°59′·5N, 8°18′·5E) stands on the bank surrounded by numerous rocks and dangers and, 5 miles S, Secca di Mezzo is another area of dangerous rocks and shoals.

Golfo di Oristano lies almost entirely within the 20 m depth contour.

Offshore buoys

9.88

1 Mariners should note a number of superbuoys (special) moored offshore W and SW of Oristano:

39°59′·2N, 7°34′·2E.
39°54′·4N, 7°34′·6E.
39°54′·3N, 8°07′·6E.
39°47′·5N, 7°51′·1E.
39°44′·6N, 8°06′·3E (Oceanor).
39°36′·8N, 8°05′·8E.
39°39′·5N, 7°37′·8E.

The buoys exhibit lights and are used by the Italian Air Force.

Marine reserve

9.89

1 A marine reserve encloses most of the waters within the 50 m depth contour between a position on the coast 2½ miles SSE of Capo Mannu and a position 1½ miles S of Capo San Marco Light and much of the NW part of Golfo di Oristano. The extent of the area is shown on the chart. The area is divided into three types of restricted zone, also shown on the charts;

Zone A. Unauthorised navigation, fishing, swimming, any activity which damages the natural environment, the hunting capture or injury of any animal or plant species and the introduction of any alien species are prohibited.

2 Zone B. Navigation parallel to the coast and fishing are prohibited. Swimming, navigation and berthing within the controlled areas are permitted.

Zone C. Fishing and any authorised maritime activity are permitted.

Mariners must obtain full details of the area and its regulations from local authorities.

Local weather

9.90

1 If Capo Mannu can be clearly seen SW winds should be expected. The evening *Maestrale* (NW wind) indicates

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unsettled weather approaching. Winds blowing down the river valleys indicate fair weather should be expected.

The prevailing wind along this coast is the *Maestrale* which if strong raises a heavy sea. With W winds the S part of this coast is covered by sea mist.

Principal marks

9.91

1 **Landmarks:**

Capo Mannu Lighthouse (40°02′·2N, 8°22′·7E) (9.65).
Oristano Belfry (eight-sided) (39°54′·3N, 8°35′·5E)
Torre Sevo (round) (39°54′·0N, 8°24′·3E).
Torre San Giovanni (round, white, surmounted by two small turrets, 51 m in height) (39°52′·4N, 8°26′·3E).
Arborea silos (39°46′·5N, 8°34′·8E).

2 **Offshore marks:**

Isolotto Mal di Ventre Light (white tower on hut, 8 m in height) (39°59′·6N, 8°18′·3E).
Oceanographic buoy (39°54′·3N, 8°07′·6E).

Major light:

Capo San Marco (round tower on two storey dwelling, 15 m in height) (39°51′·6N, 8°26′·1E). An auxiliary light also exhibits a red sector (097½°–102½°) from the lighthouse.

Directions

(continued from 9.65)

9.92

1 From a position W of Capo Mannu (40°02′·2N, 8°22′·7E), the track leads S passing, with positions relative to Capo San Marco Light (39°51′·6N, 8°26′·1E):

W of Isolotto Mal di Ventre (9¾ miles NNW). The island is low lying and covered with scrub. Its W extremity is steep and rocky. A light (9.91) is exhibited from its summit; the red sector (004°–020°) covers the danger of Secca di Mezzo. Rocks and shoals surround the island extending 1¼ miles SW and 1¼ miles NNE of it. A dangerous wreck lies at the NE extremity of Scoglio del Faro Vecchio, the shoal NE of the island. Thence:

2 W of Capo sa Sturaggia (7¼ miles NNW). The headland is fringed with rocks and islets. A rock with a least depth of 10·5 m over it lies 1 mile W of the headland. Thence;

W of two above water rocks (9¾ miles NW). The rocks stand on a shoal with a least depth of 2·7 m over it. Thence:

W of Secca di Mezzo (7¾ miles NW), a rocky shoal with a depth of 8·5 m over it. This shoal and the dangers SSW of it are covered by the red sector (004°–020°) of Isolotto Mal di Ventre Light (9.91). Thence:

E of a superbuoy (14½ miles WNW), thence:

W of an unnamed dangerous, rocky shoal (7½ miles WNW) with a depth of 1·5 m over it. Thence;

3 W of Il Catalano (7½ miles WNW). The dark coloured rock stands on a shoal. This shoal is also covered by the red sector (097½°–102½°) of Capo San Marco auxiliary light (9.91). Thence:

W of Capo San Marco, the extremity of a small rocky promontory joined to the coast by a low narrow isthmus. San Giovanni di Sinis, the village at the N end of the isthmus, stands amongst the ruins of the ancient city of Tharros. Thence:

4 W of a dangerous wreck (8½ miles W) lying close SW of a rocky shoal with a depth of 12·3 m over it. A stranded wreck lies close S of Capo San Marco. Thence:

W of Golfo di Oristano (3 miles SE), thence:

To a position W of Capo Frasca (5½ miles SSE). The headland, covered with vegetation, is the extremity of Piano di Santandi, the steep sided S headland of Golfo di Oristano. A light (white round tower on square hut, 7 m in height) (39°46′·2N, 8°27′·3E) is exhibited from Capo Frasca.

(Directions continue, for Oristano at 9.97 and for the coastal route at 9.108)

Oristano

Chart 1205

General information

9.93

1 **Position and function.** Oristano (39°52′N, 8°33′E) lies at the head of Golfo di Oristano which is entered between Capo San Marco (39°52′N, 8°26′E) and Capo Frasca, 5½ miles SSE. The recently developed commercial port has two main areas; Torre Grande (39°54′N, 8°31′E) and Porto di Santa Giusta (39°52′N, 8°33′E). The port handles bulk raw materials including oil, grain and feedstuffs and general cargo, primarily servicing local industries.

2 **Topgraphy**. The shores of Golfo di Oristano are mostly low and sandy; behind them lie extensive lagoons and marshes.

Approach and entry. The port is approached through Golfo di Oristano. A dredged channel leads to Porto di Santa Giusta which is entered between Molo Sopraflutto and Molo Sottoflutto.

Traffic. In 2002 the port was used by 238 vessels with a total of 2 711 948 dwt.

3 **Port Authority**. Ufficio Circondariale Marittimo, Oristano, Sardegna.

Limiting conditions

9.94

1 **Controlling depth**. Porto di Santa Giusta dredged channel has a least depth of 11·9 m. Depths within the port should be confirmed with the Harbour Master.

Deepest and longest berth. Banchina Sponda Nord,; length 500 m, depth alongside 11·8 m.

Tidal levels. Mean range 0·3 m. See the relevant *Admiralty Tide Tables* for further details.

Maximum size of vessel handled. The maximum draught accepted is 11·5 m.

Arrival information

9.95

1 **Port operations**, 0800–2000 local time.

Port radio. There is a port radio station, see the relevant volume of *Admiralty List of Radio Signals*.

Notice of ETA required. 72, 48 and 24 hours in advance.

Outer anchorages. Anchorage areas have been established within Golfo di Oristano and are shown on the chart. Authority to use these berths must be obtained from the Port Authority:

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Berth	*Maximum permitted draught*
A	8·0 m
B	8·0 m
C	13·0 m
D	10·0 m

Pilotage is compulsory. The pilot boards 2 miles NW of the entrance to Porto di Santa Giusta.

2 **Tugs**. There is one tug stationed at Oristano. Additional tugs can be provided from Porto Torres or Cagliari; 48 hours notice is required.

Regulations concerning entry. Vessels will only be authorised to move within the harbour during daylight hours. Movement may not be authorised in periods of adverse weather. Visibility must be sufficient for the Porto di Santa Giusta leading marks to be clearly visible before entry or departure will be permitted.

3 **Marine farms**. An area of shellfish beds and a marine farm lie NW of the approach to Porto di Santa Giusta dredged channel. The areas are marked by light-buoys and buoys (special) and shown on the chart. Vessels must remain 100 m clear of the shell fish beds. Another area of shellfish beds lies close off the mouth of Fiume Tirso (39°53′·0N, 8°32′·3E), the largest river on the island.

Harbour

9.96

1 **General layout**. Porto di Santa Giusta is divided into two areas:

Porto Mercantile consisting of Avamporto and the first 500 m of the N side of Canale Industriale.

Porto Industriale the remaining area of Canale Industriale and the turning basin.

2 **Landmarks**:

Torre San Giovanni (39°52′·4N, 8°26′·3E) (9.91).

Torre Grande (round, grey, 16 m in height) (39°54′·4N, 8°31′·0E).

Cabras church dome (39°55′·8N, 8°31′·8E).

Oristano belfry (39°54′·3N, 8°35′·5E) (9.91).

Arborea silos (39°46′·5N, 8°34′·8E) (9.91).

Major light:

Capo San Marco Light (39°51′·6N, 8°26′·1E) (9.91).

Directions for entering harbour

(continued from 9.92)

9.97

1 From a position S of Capo San Marco Light (39°51′·6N, 8°26′·1E) the track leads NE passing, with positions relative to the light:

SE of a stranded wreck (2¾ cables S) thence:

SE of Torre Giovanni (8 cables N), thence:

SE of an area of shellfish beds (2 miles ENE) marked by light-buoys. Thence:

SE of Oristano Approach Light-beacon (2¾ miles ENE) (red and white, buoyant, spherical topmark). Two unlit buoys, shown on the chart, are moored 2 cables S of the light-beacon. Thence:

2 Through the channel, marked by buoyant light-beacons, leading to Porto di Santa Giusta entrance channel.

Chart 1205 plan of Oristano

Leading lights. The alignment (130°) of Porto di Oristano Leading Lights leads through the centre of the entrance channel:

Front light (white post black stripes, 4 m in height) (39°51′·5N, 8°32′·8E).

Rear light (white post black stripes, 4 m in height) (900 m from front light).

3 **Useful marks**:

Molo Sopraflutto Head (green column on hut) (39°51′·9N, 8°32′·2E).

Molo Sottoflutto Head (red column on hut, 8 m in height) (39°51′·9N, 8°32′·6E).

Basins and berths

9.98

1 **Torre Grande**. Pontile Merci (disused) and Pontile Perlite are dry cargo berths. Pontile S.I.P.S.A. (disused) is fitted for handling crude oil.

Porto di Santa Giusta. Ro-Ro facilities in the N corner of Avamporto.

Port services

9.99

1 **Repairs**. Some mechanical and electrical repairs, no shipyard facilities.

Other facilities. There is a hospital at Oristano. Deratting is available.

Supplies: fuel; water; provisions.

Communications. Nearest airport Cagliari (105 km).

Anchorage

Chart 1205

Cala Valdro

9.100

1 Cala Valdro (39°59′·0N, 8°18′·3E). Anchorage can be obtained in depths of about 18 m, mud, weed and sand, 6 cables SE of the cove.

Small craft

Le Baracche Sa Mardini

9.101

1 **General information**. Le Baracche Sa Mardini (39°54′·1N, 8°29′·5E) is a small craft and fishing harbour. The artificial harbour is protected by moles and consists of two basins each with its own E facing entrance. The NE basin is reserved for fishing vessels. A buoyed channel leads towards the S entrance which has depths of 2 to 3 m. Both entrances are marked by lights. The harbour accepts vessels up to 30 m in length.

2 **Berths**. The harbour provides 400 berths in depths of about 3 m.

Facilities. The usual marina facilities.

Supplies: fuel; water; provisions.

Other names

9.102

1 Maimoni, Punta (39°54′·5N, 8°23′·9E).

CAPO FRASCA TO CAPO ALTANO

General information

Chart 1990

Route

9.103

1 A coastal route leads, from a position W of Capo Frasca (39°46′·1N, 8°27′·2E), 32 miles S to a position W of Capo Altano (39°13′·6N, 8°22′·3E).

Topography

9.104

1 The low-lying sandy coast of Golfo di Oristano changes abruptly at the high promontory of Piano di Santadi an

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elevated headland on the S side of the gulf. From Capo Frasca the coast continues S in a series of small, rock fringed coves, some of which contain sandy beaches. Between Porto Palma (39°40′N, 8°27′E) and Capo Pecora, 13 miles S, the coast is fringed with rocks. The N part is fairly fertile but the S part is uninhabited and consists of sand dunes. The whole section of coast is backed by mountains.

2 Between Capo Pecora and Capo Altano the coast is more elevated, steep, rocky and mostly fringed by a shoal bank. There are a few small beaches but generally this part of the coast is inaccessible.

Depths

9.105

1 The coastal route remains to seaward of the 100 m depth contour and is free from isolated dangers. Closer to the coast the 50 m depth contour lies up to 3 miles offshore in places indicating the extent of the coastal bank. Close inshore many parts of the coast are rock fringed.

Tunny fishing

9.106

1 Tunny fisheries are established in the following positions:

Porto Palma (Baia di Flumentogiu) (39°40′·1N, 8°27′·3E).

Porto Paglia (36°16′·5N, 8°25′·7E).

Principal marks

9.107

1 **Landmarks:**

Monte sa Trabina (twin peaks) (39°46′·5N, 8°44′·8E).

Monte Arcuenta, known as Pollice di Oristano, (39°35′·9N, 8°32′·8E).

Capo Altano (39°13′·6N, 8°22′·3E), a high rocky headland.

2 **Offshore marks:**

Oceanor superbuoy (39°44′·6N, 8°06′·3E).

Superbuoy (39°36′·8N, 8°05′·8E).

Directions

(continued from 9.92)

9.108

1 From a position W of Capo Frasca (39°46′·1N, 8°27′·2E), the track leads S passing, with positions relative to Capo Pecora (39°27′·4N, 8°23′·2E):

W of Torre di Flumentogiu (13¾ miles NNE). A shoal with a least depth of 12 m over it lies 6 cables SW of the tower. Thence:

W of Capo Pecora. The low headland has an above water rock lying close off it. Thence:

2 W of Portixeddu (1½ miles SE). Local vessels anchor about 1 cable off the beach to load minerals from lighters. Thence:

W of Cala di Buggeru (3½ miles SSE). A small craft harbour (9.111) lies at the head of the bay. The mining village stands in a gorge at the head of the cove; there are a number of furnace chimneys amongst the buildings. Thence:

W of Cala Domestica (5 miles S). Torre di Cala Domestica stands on the W headland of the cove. Local vessels load minerals at anchor in the cove. Thence:

3 W of Porto Flavia, also known as Porto di Masua, (6¾ miles SSE). The inlet has sheer sides. Local vessels loading minerals anchor close in and secure lines to bollards. Warping and mooring buoys have been laid to assist. The berth is sheltered from the N and has been used in NW winds. Thence:

W of Scoglio Pan di Zucchero (7¼ miles SSE) (132 m in height). The rock can be difficult to distinguish against the coast. Thence:

4 W of Porto Nebida (8½ miles SSE). A small quay lies at the head of the cove, a tall, grey building stands at the root of the quay. Thence :

W of Fontanamare (10 miles SSE), consists of a group of ruined buildings and a prominent white chimney on the slopes of the hills. Thence:

W of Porto Paglia (11¼ miles SSE). The bay contains a tunny fishery, close W of it stands a low red tower. Tunny nets are laid in the area. A rocky bank, extending up to 3½ cables offshore, lies between Porto Paglia and Capo Altano. Thence:

To a position W of Capo Altano (13¾ miles S) (9.107).

(Directions continue, for Passage S of Isola di San Pietro and Isola di Sant' Antioco at 9.120 and for Canale di San Pietro at 9.128 or 9.129)

Anchorages

Cala di Buggeru

9.109

1 **General information**. Cala di Buggeru (39°24·2N, 8°23′·9E). With local knowledge temporary anchorage can be obtained in depths of about 25 m as far as 1 mile off the harbour.

Cala Domestica

9.110

1 **General information**. Cala Domestica (39°22′·4N, 8°22′·6E). With good local knowledge anchorage for small vessels can be obtained in the cove but it becomes dangerous in NW winds.

Small craft

Buggeru

9.111

1 **General information**. Buggeru (39°24·2N, 8°23′·9E) is a small craft haven protected by an angled outer breakwater extending NW from the coast and an inner breakwater extending NE, parallel to the shore. Lights are exhibited from the heads of the breakwaters; Outer Breakwater (red support, 7 m in height), Inner Mole (green support, 7 m in height). The harbour entrance lies between the breakwater heads, faces W and has depths of about 4 m. However the harbour is subject to considerable silting and depths can vary considerably. The harbour accepts vessels up to 10 m in length.

2 **Berths.** The harbour provides 350 berths in depths of 1 to 3 m.

Facilities. Limited small craft facilities, there is a boatyard.

Supplies: fuel; water; provisions.

Other names

9.112

1 Guardianu, Punta del (39°27′·4N, 8°24′·8E)

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CAPO ALTANO TO CAPO TEULADA

General information

Charts 1990, 1207

Routes

9.113

1 Ocean routes between Barcelona and the E Mediterranean and Marseille and the E Mediterranean pass S of the SW coast of Sardegna; they are not described.

A coastal route leads, from a position W of Capo Altano (39°13′·6N, 8°22′·3E), SW of Isola di San Pietro (39°08′·0N, 8°17′·0E), SW of Isola di Sant' Antioco and the offshore islet Isola del Toro (38°51′·7N, 8°24′·6E) then S of Golfo di Palmas, to a position S of Capo Teulada.

Inshore routes lead from the N entrance of Canale di San Pietro to Porto Vesme and Carloforte. Inshore routes also lead from the S entrance of Canale di San Pietro to Carloforte and Porto Vesme.

An inshore route leads through Golfo di Palmas to Porto di Sant' Antioco (39°03′·1N, 8°28′·2E).

Topography

9.114

1 The SW coast of Sardegna is high and cliffy in the vicinity of Capo Altano but descends quickly around Portoscuso to become low and well cultivated. The low lying character remains unchanged as the coastline extends 10 miles SE towards the head of Golfo di Palmas. The head of the gulf is formed by a low, narrow isthmus joining Isola di Sant' Antioco to the coast and presents typical features of a lowland coastal area; marsh, salt-pans and saltwater lagoons, which continue along the E coast of the gulf to the vicinity of Porto Pino. Here the transition to a rocky, more elevated coast is made and Punta di Cala Piombino (38°53′N, 8°36′E) marks the return of a more rugged coastline. Capo Teulada is the extremity of a hilly peninsula joined to the coast by a sandy isthmus.

2 Isola di San Pietro (39°08′N, 8°17′E) and Isola di Sant' Antioco (39°02′N, 8°25′) are the main islands fronting the SW coast of Sardegna and are generally more elevated and rugged in appearance than the coast behind them.

Depths

9.115

1 The coastal route S of the islands remains to seaward of the 100 m depth contour and is clear of isolated dangers other than Isola del Toro (38°51′·7N, 8°24′·6E). The inshore routes are less straightforward.

The SW coasts of Isola di San Pietro and Isola di Sant' Antioco are relatively steep-to with the 50 m depth contour lying approximately 2 miles offshore. However a bank extends S of Isola di Sant' Antioco on which there are a number of shoals and the islet Isola la Vacca.

Concentration of traffic

9.116

1 Ocean routes between Barcelona and the E Mediterranean, Marseille and the E Mediterranean and between the W Mediterranean and Napoli converge S of Isola del Toro (38°51′·7N, 8°24′·6E) (9.120) to round the S end of Sardegna. Traffic following these routes will join the coastal route leading SW of Isola di San Pietro to Capo Teulada (9.120).

Tunny fishing

9.117

1 Tunny fisheries are established in the following positions:

Capo Altano (39°13′·6N, 8°22′·3E).
Cala Lunga, (39°10′·8N, 8°18′·0E).
Punta delle Oche, (39°10′·7N, 8°16′·1E).
Spiaggia Grande (39°03′·4N, 8°21′·5E).

Navigation or stopping close to the nets is prohibited, see 1.6.

Local weather

9.118

1 The *Scirocco* (SE) and *Libeccio* (SW) increase and sea mist develops when pressure falls. During the winter these winds are usually accompanied by rain. White cloud developing to the N indicates fair weather. Haze developing between S and W indicates the approach of unsettled weather.

Principal marks

9.119

1 **Landmarks:**

Monte Guardia dei Mori (39°09′·8N, 8°16′·9E), a square building stands on the summit.
Bricco Resciotto (Picco Resciotto) (39°07′·0N, 8°17′·8E).
Monte Perdas de Fogu (39°01′·3N, 8°25′·8N).
Monte Arbus (38°58′·4N, 8°25′·6E).

2 **Offshore marks:**

Isola del Toro Light (round tower on white hut) (38°51′·6N, 8°24′·6E).

Major light:

Capo Sandalo (white round tower on two storey dwelling, 30 m in height) (39°08′·8N, 8°13′·3E).

Chart 1990

Directions for passage south of Isola di San Pietro and Isola di Sant' Antioco

(continued from 9.108)

9.120

1 From a position W of Capo Altano (39°13′·6N, 8°22′·3E), the track leads S passing, with positions relative to Capo Sandalo Light (39°08′·8N, 8°13′·3E) (9.119):

W of Isolotto dei Meli (7¾ miles NE), thence:
W of Isola Piana (5¼ miles NE), a light (white round tower, 8 m in height) is exhibited from the N end of the island. Thence:
W of La Punta (4½ miles NE), the N extremity of a level promontory which forms the N extremity of Isola di San Pietro. A tunny fishery with a tall chimney stands close S of the point. Thence:

2 W of Punta delle Oche (3 miles NE), a steep-to shoal, with a depth of 3 m over it, lies ½ cable N of the headland. Thence:
W of Cala Vinagra (1½ miles NNE), Isoletto di Calapinagra lies in the mouth of the bay, thence:
W of Punta Figu (7½ cables N), a shoal with a depth of 4·6 m over it, lies within 1 cable W of the headland, thence:

3 W of Capo Sandalo, the W extremity of the island from which a light (9.119) is exhibited. An islet lies close off the headland. Thence:
W of Isolotto del Corno (del Gallo) (5 cables W), the island is steep-to. The passage separating it from Isola di San Pietro is deep and clear of dangers. Thence:

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W of Punta Spalmatore di Fuori (2½ miles SE). Spalmatore Grande is entered N of the headland; a rock, with a depth of 4·9 m over it, lies in the middle of the entrance to the bay. Thence:

4 W of Punta Grossa (4 miles SE). There is a danger of rock falls in the vicinity of the headland, entry of an area extending 100 m from the headland is prohibited. Thence:

W of Isolotto Genia (4¼ miles SE). The islet stands in a bay encumbered with rocks and shoals. Dangerous shoals extend up to 3½ cables S of the islet. Thence:

5 W of Punta delle Colonne (4½ miles SE). A rocky shoal extends up to 1¾ cables from the headland; a number of remarkable columnar rocks stand on the shoal. Entry of this area is prohibited because of the danger of rock falls. Thence:

To a position 10 miles SSE of Punta Grossa. The track then leads SE passing, with positions relative to Isola del Toro Light (38°51′·6N, 8°24′·6E) (9.119):

SW of the S entrance to Canale di San Pietro (14 miles NNW).

(Directions for Canale di San Pietro continue at 9.132)

6 Thence:

SW of Scoglio Mangiabarche (13½ miles NNW), marked by a light (white truncated conical tower, 10 m in height). The white houses and chimney of Spiaggia Grande tunny fishery stand on the headland NE of the light. Thence:

SW of Hotel Mercuri (9¼ miles NNE). The hotel stands above Port Signora, a small sheltered cove. Thence:

7 SW of Banco (Secco) Pomato (5¾ miles NNW). The shoal has a depth of 13 m over it; heavy breaks can develop over the bank in W gales and the area should be avoided. Thence:

SW of Capo Sperone Signal Station (6½ miles N), thence:

8 SW of Capo Sperone (5¾ miles N). The low rocky headland is backed by hills. Thence:

SW of Secca della Vacca (5¾ miles NNE), a dangerous shoal with a least depth of 4·2 m over it. The remains of a ruined beacon stand close SW of the shoal. A wreck, with a depth of 5 m over it, lies close SSW of the beacon. The channel between Secca della Vacca and Isola di Sant' Antioco is obstructed by shoals. Thence:

9 SW of Isolotto la Vacca (5 miles NNE), a disused lighthouse stands on the summit of the islet. Scoglio Vitello lies 1 cable N of Isolotto la Vacca and is the highest of a number of dangers surrounding it. The islet and surrounding dangers are covered by the red sector (199°–205°) of Isola del Toro Light. Thence:

SW of Isola del Toro. The island is steep-to, conical and exhibits a light. Thence:

10 SW of the entrance to Golfo di Palmas (7½ miles NE), thence:

(Directions for Golfo di Palmas continue at 9.142)

SW of Secca di Cala Piombo (8¾ miles ENE), a rocky shoal with a least depth of 0·7 m over it. The channel separating it from the coast is deep. Thence:

SW of Punta di Cala Piombo (9½ miles ENE), Torre di Cala Piombo stands 6 cables ENE of the headland. Thence:

To a position SW of Capo Teulada (11 miles E), the headland, at the SW extremity of a hilly peninsula, is steep-to. Cala Aligosta, lies on the N side of the headland.

Useful mark:

9.121

Tower (39°06′·3N, 8°15′·1E).

(Directions continue at 9.186)

Canale di San Pietro

Chart 1207

General information

9.122

1 Canale di San Pietro separates Isola di Sant' Antioco from Sardegna and Isola di San Pietro from Isola di Sant' Antioco. The channel is obstructed by a bar extending WSW from the coast of Sardegna to Carloforte (39°08′·6N, 8°18′·7E), on the E coast of Isola di San Pietro, dividing the channel into N and S parts. The bar can only be crossed by vessels of less than 5 m draught using local knowledge. Porto Vesme (39°11′·7N, 8°23′·7E) lies on the NE side of the N part of the channel; Carloforte is a shallower harbour.

2 The W shore of Canale di San Pietro is low and sandy fronted by extensive shoals.

9.123

1 **Routes**. Inshore routes lead from the N entrance, which lies between Capo Altano (39°13′·6N, 8°22′·3E) and La Punta, 3½ miles SW, to the outer end of the approach channels to Porto Vesme and Carloforte.

For vessels of less than 5 m draught inshore routes lead S and N across the bar E of Carloforte.

An inshore route leads from the S entrance, which lies between Punta delle Colonne (39°05′·6N, 8°17′·7E) and Scoglio Mangiabarche, 2½ miles ESE to Carloforte.

9.124

1 **Pilotage** is compulsory for passage through Canale di San Pietro. The pilot boards at the following positions:

Approaching from N; 2 miles N of Isola Piana (39°11′·5N, 8°19′·2E). In NW gales vessels will be directed to embark the pilot either in the S entrance to Canale di San Pietro (39°05′·0N, 8°19′·3E) or within Golfo di Palmas (39°00′·0N, 8°30′·0E).

Approaching from the S; 1 mile N of Calasetta (39°06′·6N, 8°22′·2E). Vessels of less than 5·2 m draught also embark pilots here.

9.125

1 **Submarine cables and pipelines**. A submarine power cable is laid between a position close S of Punta du Din (39°09′·2N, 8°18′·6E) and a position close S of Punta Tabarchina (39°11′·3N, 8°24′·0E).

An area containing submarine cables and a water pipeline lies in the S entrance to Canale di San Pietro, between a position N of Punta di Girin (39°07′·0N, 8°18′·6E), Punta Nera (39°06′·0N, 8°18′·4E), Scoglio Mangiabarche (39°04′·6N, 8°20′·7E) and a headland N of Calasetta (39°06′·8N, 8°22′·1E). Navigation within 100 m of the landing positions of cables within the area is prohibited. Vessels on passage must keep sufficient distance from the cables to avoid the possibility of damage in shallow water.

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9.126

1 **Current**. Within the N entrance to Canale di San Pietro a NNE current sometimes sets across Secca Grande; smaller vessels using the channel SW of Secca Grande should make sufficient allowance for this.

9.127

1 **Landmarks**:

Portoscuso tower (surmounted by a hut) (39°12′·2N, 8°22′·6E).

Chimney, Porto Vesme (39°11′·7N, 8°24′·0E).

Carloforte Cathedral belfry (white, with an illuminated, four-faced clock) (39°08′·7N, 8°18′·3E).

Torre San Vittorio (height 13 m) (39°08′·2N, 8°18′·7E). Stands on Punta San Vittorio.

2 Bricco Resciotto (39°07′·0N, 8°17′·8E) (9.119).

Calasetta Church (white dome) (39°06′·6N, 8°22′·1E); only visible from N.

Calasetta tower (round, 29 m in height) (39°06′·5N, 8°22′·1).

Calasetta silos (white, domed tops) (39°06′·4N, 8°22′·3E). Red obstruction lights are exhibited from the silos.

Directions for Canale di San Pietro, north-east of Secca Martin to Porto Vesme approach channel.

(continued from 9.108)

9.128

1 Large vessels should approach Porto Vesme using this route. Directions for an alternative route for smaller vessels are provided at 9.129.

From a position W of Capo Altano (39°13′·6N, 8°22′·3E) the track leads SE passing, with positions relative to Scoglio La Ghinghetta Light (black tower red bands, 10 m in height) (39°12′·0N, 8°22′·2E):

2 SW of Isolotto dei Meli (1¾ miles NNW). The island and the dangers surrounding it are covered by a red sector (153°–163°) of Scoglio La Ghinghetta Light and a red sector (209°–231°) of Isola Piana Light (white round tower, 8 m in height) (2¼ miles ESE). The navigable channel between Isola dei Meli and Sardegna is 1¼ cables wide and has depths of 15 m however tunny nets are laid in this area. Thence:

NE of Secca Grande Light-beacon (1½ miles NW) (buoyant, black with red band, double sphere topmark), thence:

3 NE of Secca Grande (1¾ miles WNW), a rocky shoal with a least depth of 3 m over it. A stranded wreck lies on the W side of the danger. Secca Grande is covered by a red sector (100°–116°) of Scoglio La Ghinghetta Light and a red sector (209°–231°) of Isola Piana Light (2¼ miles ESE) (9.120). Thence:

4 NE of Secca Martin (1½ miles WNW). The shoal has a depth of 7 m over it and is also covered by the red sector of Isola Piana N end Light (2¼ miles ESE) (9.120). Thence:

NE of Secca del Sardo (1¼ miles E), a shoal with a least depth of 7·1 m over it, thence:

SW of Portoscuso (5 cables NE). A prominent tower (9.127) stands close W of the mining and fishing village. Thence:

5 SW of Scoglio La Ghinghetta. The rocky shoal is marked by a light on its S side. Thence:

Into the dredged channel, marked by light-beacons, leading to Porto Vesme.

(Directions for Porto Vesme continue at 9.150)

Directions for Canale di San Pietro, south-west of Secca Martin to Porto Vesme approach channel

(continued from 9.108)

9.129

1 From a position N of La Punta (39°11′·2N, 8°18′·5E) (9.120), the track leads ESE passing, with positions relative to Scoglio La Ghinghetta Light (39°12′·0N, 8°22′·2E) (9.128):

NNE of an unnamed shoal (2¾ miles WSW), which lies close E of La Punta, thence:

NNE of Isola Piana (2¼ miles WSW), the rocky island is covered with vegetation; a light (9.128) is exhibited from the N end. Scoglio della Catena, a steep sided rock, lies close of the N extremity of the island. A tunny fishery with a chimney stands on the E point of the island. Thence:

2 SSW of Secca Grande (1¾ miles WNW) (9.128). thence:

SSW of Secca Grande Light-beacon (1½ miles NW) (9.128), thence:

SSW of Secca Martin (1½ miles WNW) (9.128), thence:

SSW of Secca del Sardo (1¼ miles E) (9.128), thence:

N of anchorage area Papa (1 mile SSW), thence:

3 Into the dredged channel, marked by light-beacons, leading to Porto Vesme.

(Directions for Porto Vesme continue at 9.150)

Directions for Canale di Sant Pietro, Porto Vesme inner roads to Carloforte approaches

9.130

1 From a position SSW of Portoscuso tower (39°12′·2N, 8°22′·6E) (9.127) with the tower bearing 027°, astern, the track leads SSW passing, with positions relative to Isola Piana Light (39°11′·6N, 8°19′·2E) (9.128):

ESE of Isola Piana N end Light. Rocks and dangers extend 1½ cables E of the island. Thence:

ESE of Villamarina Mole Head Light (3½ cables SE). (green post, 5 m in height). The light, reported as unreliable (2003) marks the head of the breakwater protecting a small craft harbour. Thence:

2 ESE of Secca Arena (1½ miles ESE), an isolated rocky shoal with a least depth of 4 m over it, thence:

ESE of Isola dei Ratti (5 cables S), the island is 6 m in height and overgrown; rocks and dangers surround it extending up to 2 cables E. Thence:

ESE of a buoy (1½ miles SSE) (spar, diagonal cross topmark), thence:

3 WNW of a light-buoy (3½ miles SE) (can, diagonal cross topmark), thence:

ESE of a light-buoy (2¼ miles SSE) (can, diagonal cross topmark) marking the seaward end of a submarine outfall pipeline. Thence:

On to the alignment (242°) of Carloforte N leading light-beacons (9.131).

(Directions for Carloforte continue at 9.157 and for crossing Canale di San Pietro bar at 9.131)

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Chart 1202 plan of Carloforte

Directions for crossing Canale di San Pietro bar, passage south

(continued from 9.130)

9.131

1 The channel is restricted to vessels of less than 5 m draught. From a position ENE of Carloforte (39°08′·6N, 8°18′·7E) the track leads towards the harbour.

Leading light-beacons:

Front beacon, Secca di Marmi NW Light-beacon (buoyant, yellow with diagonal cross topmark) (39°09′·0N, 8°20′·0E).

Middle beacon (white building, black bands, 8 m in height) (1¼ miles from front beacon).

Rear beacon (white beacon, 4 m in height) (9 cables from middle beacon).

The alignment (242°) of these light-beacons leads WSW passing, with positions relative to the front beacon:

N of a buoy (N cardinal) (3 cables ENE), thence:

N of a shoal (2 cables ENE), with a least depth of 4·8 m over it close S of the leading line, thence:

N of Secca dei Marmi (1¼ cables ESE). The shoal has a least depth of 1·5 m over it. A buoy (S cardinal) is moored on the S side of the shoal. Thence:

2 To the vicinity of Secca di Marmi NW Light-beacon. The recommended track 179° then leads S on the alignment (359°), astern, of the following marks:

Secca di Marmi NW Light-beacon – as above.

Spar buoy (black, diagonal cross topmark) (39°10′·1N, 8°20′·0E), shown on Chart 1207.

The track passes, with positions relative to Carloforte Cathedral belfry (39°08′·7N, 8°18′·3E) (9.127):

W of Secca dei Marmi buoy (S cardinal) (1½ miles E), thence:

3 E of Carloforte S front leading light-beacon, Secca dei Marmi W Light-beacon (buoyant, red with white stripes, red spherical topmark) (1¼ miles E), thence:

E of Secca Sant Vittorio Buoy (E cardinal) (1 mile ESE), thence:

E or W of a buoy (spar, yellow, diagonal cross topmark) (1½ miles ESE), thence:

Chart 1207

E of a dangerous wreck with a depth of 3 m over it (1¼ miles SE), thence:

4 W of Calasetta N cardinal light-beacon (3½ miles ESE), thence:

W of Punta di Manca (3¼ miles SE). The coast between this headland and Scoglio Mangiabarche, 2 miles SSW, is fringed with rocks and should be given a berth of at least 5 cables.

The track then leads SW passing:

W of Punta della Salina (3½ miles SE). The headland is fronted on its SW side by Secca delle Saline, a dangerous shoal, extending up to 2 cables from it and on which stand several rocks awash. Thence:

5 SE of Punta Nera (2½ miles S), thence:

NW of Spiaggia Grande (4¼ miles SSE). The tunny fishery and chimney on the SW headland is prominent. Thence:

NW of Scoglio Mangiabarche (4½ miles SSE). The islet is connected to the shore by a shoal spit on which stand several above water rocks. The islet is marked by a light (9.120). Thence:

SE of Punta delle Colonne (3¼ miles SSW) (9.120), thence:

6 SE of a dangerous shoal (3½ miles SSW) with a depth of 2 m over it, thence:

To a position 10 miles SW of Punta delle Colonne.

Clearing bearing. The edge of land E of Scoglio Mangiabarche (39°04′·6N, 8°20′·7E) bearing less than 167° and open E of Isola del Toro (38°51′·7N, 8°24′·6E) (9.120) clears Secca delle Saline.

(Directions for passage S of Isola di Sant' Antioco continue at 9.120)

Directions for crossing Canale di Sant Pietro bar, passage north.

(continued from 9.120)

9.132

1 For passage N the directions provided at 9.131 should be reversed.

From the Carloforte N leading line Portoscuso tower (39°12′·2N, 8°22′·6E) (9.128) bearing 027° leads NNE to the entrance of Porto Vesme dredged channel, passing ESE of Secca Arena (39°10′·9N, 8°21′·0) (9.130).

(Directions for Porto Vesme continue at 9.150)

Golfo di Palmas

Chart 1207

General information

9.133

1 **Description**. Golfo di Palmas is entered between Capo Sperone (38°57′·4N, 8°24′·7E) and Capo Teulada, 12 miles ESE. The gulf is formed by the E coast of Isola di Sant' Antioco and part of the SW coast of Sardegna.

9.134

1 **Topography**. The W shore between Capo Sperone and Maladroxia, 3 miles NNE, is low. To the N of Maladroxia the coast is rugged and rocky for about 1 mile then becomes low and sandy.

2 The E shore of the gulf is more varied with high rocky headlands and numerous bays in the vicinity of Capo Teulada giving way, close N, to a sandy, low-lying shore, backed by saltwater lagoons. This area is separated by a more elevated and rocky section of coast between Punta Menga and Punta di Porto Botte, 3½ miles NNW, from a further low-lying and sandy area which extends to the head of the gulf. At its head there are extensive saltwater lagoons and the low sandy isthmus connecting Isola di Sant' Antioco to Sardegna. Riu Palmas enters the NE part of the gulf.

9.135

1 **Depths**. The W and E shores of the gulf are relatively steep-to with the 10 m depth contour lying close off much of the S part of them. However the isolated dangers of Secca della Vacca, and Isola la Vacca lie respectively 1 mile E and 2¼ miles SE of Capo Sperone. Secca di Cala Piombo, a dangerous shoal, lies 2¾ miles NW of Capo Teulada (38°52′·0N, 8°38′·5E).

The bay shelves gradually towards the head where depths of less than 5 m lie as far as 7 cables from the coast.

9.136

1 **Exercise areas**. Military live firing practice areas lie between Punta Menga (38°57′·5N, 8°35′·3E) and Punta Niedda (38°55′·5N, 8°43′·0E). Details of the areas and their activation are contained in local notices to mariners. See also 9.137.

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9.137

1 **Prohibited area**. Anchoring and fishing are prohibited within an area, shown on the chart, enclosing the coast and extending 6 miles NW of Capo Teulada. Landing on the coast between Punta di Cala Piombo (38°53′·5N, 8°36′·5E) and a position 1½ miles N is also prohibited. The area contains explosive devices.

9.138

Local weather and sea state. Although Golfo di Palmas is open S the seas raised by S winds are dissipated sufficiently for the anchorage to remain comfortable. Similarly wind strength is reduced within the bay.

9.139

1 **Landmarks**:

Torre Cannai (grey, round) (38°58′·1N, 8°26′·6E).

Monte Arbus (38°58′·4N, 8°25′·6E).

Sa Scroca Manna radio mast (red, framework) (39°05′·1N, 8°24′·8E).

Porto di Sant' Antioco Main Lighthouse (white tower on two-storey dwelling, 22m in height), (39°03′·5N, 8°28′·5E).

Salt pans (39°03′·9N, 8°31′·8E). The white areas are conspicuous from offshore.

9.140

1 **Offshore marks**:

Isola del Toro Light (38°51′·6N, 8°24′·6E) (9.119).

Isolotto la Vacca Lighthouse (disused, small hut, stands on summit of island) (38°56′·1N, 8°27′·0E).

Porto di Sant' Antioco channel entrance light-beacon (bouyant, red, port-hand topmark, 6 m in height) (39°02′·6N, 8°28′·9E).

Porto di Sant' Antioco channel entrance light-beacon (buoyant, green, starboard-hand topmark, 6 m in height) (39°02′·7N, 8°29′·0E).

9.141

Major light:

Porto di Sant' Antioco Main Light – as above.

Directions for Isolotto la Vacca to Porto di Sant' Antioco entrance channel

(continued from 9.120)

9.142

1 From a position NE of Isola del Toro Light (38°51′·6N, 8°24′·6E) (9.119) the track leads N passing, with positions relative to Isolotto la Vacca (38°56′·1N, 8°27′·0E) (9.120):

E of Isolotto la Vacca, thence:

E of Capo Sperone (2 miles NW) (9.120), thence:

E of Secca della Vacca (1¼ miles NNW) (9.120), thence:

E of Punta Cannai (2 miles NNW), a low rocky point surmounted by Torre Cannai (9.139), thence:

2 E of Monte Arbus (2½ miles NNW) (9.119), thence:

E of Monte Perdas de Fogu (5¼ miles NNW) (9.119), thence:

To a position SW of Porto di Sant' Antioco entrance channel (6½ miles NNE).

(Directions continue, for Porto di Sant' Antioco at 9.166 and for Porto di Sant' Antioco entrance channel to Capo Teulada at 9.143)

Directions for Porto di Sant'Antioco entrance channel to Capo Teulada

(continued from 9.142)

9.143

1 From a position SE of Porto di Sant' Antioco entrance channel (39°02′·7N, 8°29′·0E) the track leads SSE passing, with positions relative to Punta Menga (38°57′·4N, 8°35′·2E):

WSW of Porto Botte (5 miles NNW). The shallow bay is entered between a low point (5½ miles NNW) and Punta di Porto Botte (3½ miles NNW), the shore is fringed by sandy beach backed by marshes. A warehouse with a red roof and a group of white houses stand 7½ cables E of the low point. A wooden pier, served by a railway line, lies close to the warehouse. Thence:

2 WSW of Punta Menga. The relatively high headland has a rocky shore and is covered with low vegetation. The headland shows up well against the light coloured sand dunes behind it. A building stands close to the summit. Thence:

WSW of Porto Pino (8 cables ENE). The small resort is surrounded by pine woods within which stand numerous multi-coloured villas. Behind this part of the coast is an extensive area of saltwater marsh and large lagoons. Thence:

3 WSW of Secca di Cala Piombo (3½ miles S) (9.120), thence:

WSW of Punta di Cala Piombo (3½ miles SSE) (9.120), thence

To a position SW of Capo Teulada (5½ miles SSE) (9.120).

(Directions continue at 9.186)

Anchorages

9.144

1 **Prohibited anchorage**. Anchoring and fishing are prohibited within an area enclosing Capo Teulada, see 9.133.

Anchor berths. The following anchor berths for merchant vessels have been established within Golfo di Palmas:

Berth	*Position (centred on)*	*Remarks*
S1	39°02′·4N, 8°30′·5E	
S2	39°01′·5N, 8°28′·8E	
S3	39°59′·6N, 8°28′·5E	Coal lightering permitted 1 Oct-31 May
S4	39°59′·6N, 8°30′·0E	Coal lightering permitted 1 Jun-30 Sep
S5	39°59′·3N, 8°32′·2E	
S6	39°58′·4N, 8°28′·0E	

2 Anchorage at these berths is limited to a period of 48 hours. Vessels using lighters must depart on completion of lightering operations. Stopping at, fishing and navigation within the anchor berths is prohibited.

Porto Botte (39°01′·4N, 8°32′·6E). Good anchorage can be obtained in depths of 9·3 to 10·7 m, sand and weed, 1¼ miles NW of Punta di Porto Botte.

Small craft channel

North-east of Isola di Sant' Antioco

9.145

1 **General information**. A channel marked by concrete dolphins leads, from a position 3 miles ENE of Calasetta (39°06′·6N, 8°22′·2E), generally 3 miles SSE to the small craft harbour fronting the town of Sant' Antioco, thence 8 cables SSE to the small commercial port of Porto di Sant' Antioco, also known as Porto Ponte Romano (9.162), at the head of Golfo di Palamas (9.133). The channel, indicated on Chart 1207, has depths of of about 2 m and is not maintained.

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2 **Vertical clearance**. High voltage power cables and a road bridge span the channel close N of Porto Sant' Antioco (9.162). Use of the S entrance to the channel is restricted to vessels with a maximum masthead height of 8·5 m. Lowering masts to conform to the height restriction must be completed at least 50 m from the cables.

Porto Vesme

Chart 1202 plan of Porto Vesme

General information

9.146

1 **Position and function**. Porto Vesme (39°11′·7N, 8°23′·7E) is an important commercial port handling bulk minerals, some general cargo and chemicals.

Approach and entry. Porto Vesme is approached through Canale di San Pietro and entered through a dredged channel leading to the harbour entrance which lies between the heads of Molo di Ponente and Molo di Levante.

Traffic. In 2002 the port was used by 254 vessels with a total of 7 405 375 dwt.

2 **Port Authority**. Autorita Porto Vesme, Molo Centrale, Portoscuso CA.

Limiting conditions

9.147

1 **Controlling depth**. The dredged channel has a least depth of 13·2 m and the harbour basin between the entrance and Banchina Euroallumina has been dredged to a depth of 13 m. The approach channel and harbour are subject to silting and mariners should confirm available depth with the Harbour Master.

Deepest and longest berth. Banchina Euroallumina (9.151).

Tidal levels. The mean range is 0·3 m but can increase to 0·6 m between December and April.

Local weather and sea state. The predominant winds are from NW, SSE and SSW. Generally strong NW winds make the entrance channel dangerous. During the winter the *Maestrale* (NW wind) generates a heavy swell which may cause loading or unloading to be suspended. Although currents are generally insignificant the effect of wind induced current combined with tidal stream can be appreciable.

Arrival information

9.148

1 **Port operations**. 0700–1900 local time.

Port radio. There is a port radio station, see the relevant volume of *Admiralty List of Radio Signals*.

Outer anchorages. In moderate or strong winds vessels waiting for an alongside berth should remain at sea or proceed to Golfo di Palmas (9.133) where better anchorage can be obtained.

Berth	*Position (centred on)*	*Remarks*
P1	39°13′·8N, 8°19′·0E	8 m maximum draught. Prohibited 1 April-31 July due to tunny fishing.
P2	39°12′·9N, 8°18′·0E	8 m maximum draught. Prohibited 1 April-31 July due to tunny fishing.
P3	39°07′·5N, 8°21′·0E	5·2 m maximum draught. Tankers carrying or that have carried hydrocarbons or dangerous liquids are prohibited.
P4	39°07′·8N, 8°22′·3E	5·2 m maximum draught. Tankers carrying or that have carried hydrocarbons or dangerous liquids are prohibited.
P5	39°04′·8N, 8°19′·2E	8 m maximum draught.
PAPA	39°11′·0N, 8°21′·8E	Permission to anchor in the area is required. Maximum period at anchor 24 hours. Tankers carrying or that have carried hydrocarbons or dangerous liquids are prohibited.

2 The anchorages are shown on Chart 1207. Permission to remain at anchor in berths P1, P2 and P5 must be obtained from Portoscuso Maritime Authority. Anchorages P3 and P4 are within the compulsory pilotage area.

Temporary anchorage can also be obtained in depths of about 15 m, sand and weed, 2 cables SW of Scoglio La Ghinetta. This anchorage is particularly exposed to NW winds but can be used to await the pilot in good conditions.

3 **Pilotage** is compulsory for all vessels over 500 grt and for passage through Canale di San Pietro, see 9.124.

Tug. A tug is available, an additional tug can be provided from Cagliari.

4 **Regulations**. Tug assistance is compulsory for all tankers of 3000 grt or greater without a double hull or more than 15 years old; also for chemical carriers of 3000 grt or greater more than 15 years old. Other vessels, more than 20 years old, carrying cargoes potentially dangerous to the marine environment, must have a tug in attendance when entering or leaving harbour.

Harbour

9.149

1 **General layout**. The harbour basin is protected from the W by Molo di Ponente and from the S by Molo di Levante. Lights are exhibited from the heads of the moles: Molo di Ponente (red structure), Molo di Levante (green column on hut, 7 m in height). The harbour entrance lies between the elbow of Molo di Ponente and the head of Molo di Levante. A light is also exhibited from the elbow (red post, 7 m in height). Berths on the inner face of Molo di Ponente and in the NW corner of the harbour are used for ferries, Ro-Ro traffic, some raw materials and bulk liquids.

2 Banchina Euroallumina, at the head of the basin, handles bulk bauxite, caustic soda and aluminium. Pontile Enirisorse, towards the head of Molo di Levante, handles sulphuric acid tankers.

Development. Works are in progress (2003) in the NW part of the basin.

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Landmarks:

Portocuso tower (39°12′·2N, 8°22′·6E) (9.127).

Chimney, Porto Vesme (39°11′·7N, 8°24′·0E) (9.127).

Directions for entering harbour

9.150

1 From a position S of Scoglio La Ghinghetta Light (39°12′·0N, 8°22′·2E) (9.129) the track leads ESE into the dredged channel, which is marked by light-beacons. The channel leads 5½ cables ESE to pass between No. 6 and No. 5 Light-beacons then 3¼ cables NE to the harbour entrance; the chart is sufficient guide.

Berths

9.151

1 **Banchina Commerciale**: length 300 m; alongside depth 8·4 m. The berth is used by passenger ferries and smaller bulk carriers.

Pontile ENEL. The basin formed by the pier and the quay E of its root has a dredged depth of 9·3 m. The W side of Pontile ENEL handles bulk carriers up to 200 m in length or 32 500 tons.

Banchina Euroallumina: length 440 m; alongside depth 13·2 to 14·2 m.

2 **Pontile Enirisorse**. The head of the jetty is 40 m wide. Sulphuric acid tankers of maximum length 100 m, maximum draught 9 m are accepted. The use of anchors is prohibited at this berth.

Port services

9.152

1 **Repairs**. Minor repairs only.

Other facilities. A doctor and limited medical facilities are available.

Supplies: fuel in limited quantities; water; provisions.

Communications. Nearest airport Cagliari, 65 km ENE.

Harbour regulations. The use of Gruppo Ormeggiatori Porto Vesme line handlers is obligatory for vessels of 400 grt and greater.

Carloforte

Charts 1207, 1202 plan of Carloforte

General information

9.153

1 **Position and function**. Carloforte (39°08′·6N, 8°18′·7E) is the only town on Isola di San Pietro. The shallow harbour fronting the town developed with the export of zinc, lead and tunny fish. Carloforte now handles local ferry services, is a fishing port and yacht harbour.

2 **Topography**. Carloforte stands on the low-lying, sandy central E coast of Isola di San Pietro. The town occupies an area of gently rising ground backed by low hills and the more rugged and elevated interior of the island. Extensive saltpans lie S of the town and harbour. This part of the coast is particularly encumbered by shoals which, off the harbour, form a bar across Canale di San Pietro.

3 **Approach and entry**. Carloforte is approached from Canale di San Pietro using the N or S leading lines and entered between the heads of Molo della Sanità (39°08′·7N, 8°19′·0E) and Molo San Vittorio, 2 cables S.

Port Authority. Capitaneria di Porto Ufficio, Circondariale Marittimo, 1–09014 Carloforte, Sardegna, Italy.

Limiting conditions

9.154

1 **Controlling depth**. The N leading line approach has a least depth of 4· 8 m; the S leading line approach has a least depth of 5·0 m. The harbour entrance has a least depth of 4·7 m.

Deepest and longest berth. Banchina Tagliafico No. 1; length 80 m, depth alongside 6·8 m.

Tidal levels. The mean tidal range is 0·2 m, for further information see the relevant *Admiralty Tide Tables*.

2 **Local weather and sea state**. Strong winds from any direction, but particularly the *Libeccio* (SW wind), send a swell into the harbour; strong winds with an E component raise a heavy sea.

During the winter winds with a N component prevail; clear weather and high barometric pressure indicate strong NW winds should be expected soon and usually last for four or five days.

3 In the summer, generally in the afternoon, violent squalls known locally as *Bevagne* can develop; a localised short sea is raised, berths in the N part of the harbour can be badly affected. In May and June the *Scirocco* (SE wind) frequently occurs with low barometric pressure and mist or fog.

Arrival information

9.155

1 **Port operations** 24 hours.

Port radio. There is a port radio station, see the relevant volume of *Admiralty List of Radio Signals*.

Outer anchorages. All commercial vessels, except those carrying dangerous goods, can obtain anchorage in depths of about 10 m, sand, in a circular area centred on (39°10′·7N, 8°20′·0E), shown on Chart 1207. Permission to use the anchorage must be obtained from the Harbour Master.

2 The anchorage can be approached from the NW with Portoscuso tower (39°12′·2N, 8°22′·6E) (9.127) bearing 083° passing between Isola di Piana and Secca Grande. The track then leads SSE on the alignment (162°) of Calasetta tower (39°06′·5N, 8°22′·0E) (9.127) slightly open W of Monte Arbus (38°58′·4N, 8°25′·6E). When clear of Isola Piana alter course to gain the anchorage. Fishing is prohibited within the anchorage area.

3 Anchorage for smaller vessels, with a maximum draught of 4 m, can be obtained in depths of 6·2 to 9·1 m, sand, on the S leading line (9.158), 3 cables E of the harbour entrance.

Pilotage and tugs. Pilotage is compulsory for Canale di San Pietro, see 9.124. Pilots for Carloforte are provided by Porto di Sant' Antioco (Porto Ponte Romano). No tugs are available.

4 **Regulations concerning entry**. Vessels entering harbour must give way to vessels leaving. There is a speed limit of 3 kn throughout the harbour. Tankers carrying petroleum can only berth in the absence of passenger vessels. Vessels employed on scheduled services must obtain authority to alter programmed movements.

Harbour

9.156

1 **General layout**. The harbour is protected from the N by Molo della Sanità, which extends 3¾ cables ESE from the coast, and from the SE by Molo San Vittorio, which extends 2 cables NE from Punta San Vittorio. Lights are exhibited from the heads of the moles; Molo della Sanità (green column, 6 m in height), Molo San Vittorio (red column on pedestal 5 m in height). Three short piers extend from the W shore of the harbour providing the main commercial berths. Small craft berths lie at the inner ends of the harbour moles and within Canale delle Saline, entered 2½ cables S of the commercial berths. A fishing

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vessel haven, protected by a mole and a smaller breakwater lies on the N side of the root of Molo della Sanità. The haven also contains a slipway.

2 **Development**. Works are in progress (2003) N and S of the commercial berths; the extent of the works is shown on the chart.

Landmarks:

School (red, single storey) (39°08′·8N, 8°18′·4E).

Carloforte Cathedral belfry (39°08′·7N, 8°18′·3E) (9.127).

Torre San Vittorio (39°08′·2N, 8°18′·7E) (9.127).

North Rear Leading Light-beacon (black and white chequers, 5 m in height) (39°08′·7N, 8°18′·1E).

3 South Middle Leading Light-beacon (white building, black bands) (39°08′·4N, 8°18′·6E).

Directions for entering harbour

9.157

1 **North Leading Light-beacons**.

Front beacon, Secca di Marmi NW Light-beacon (39°09′·0N, 8°20′·0E) (9.130).

Middle beacon (1¼ miles from front beacon) (9.130).

Rear beacon (9 cables from middle beacon) (9.130).

The alignment (242°) of these light-beacons leads towards the harbour entrance passing, with positions relative to Carloforte Cathedral belfry (39°08′·7N, 8°18′·3E):

N of a buoy (N cardinal) (1½ miles ENE), thence:

2 N of a shoal, with a least depth of 4·8 m over it, (1½ miles ENE), thence:

N of Secca dei Marmi (1½ miles E). The shoal has a least depth of 1·5 m over it. A light-buoy (S cardinal) is moored on the S side of the shoal. Thence:

S of Secca di Marmi NW Light-beacon (bouyant, yellow with diagonal cross topmark) (1¼ miles ENE), thence:

3 The track then leads between several shoals (1 mile ENE) shown on the chart, with depths of less than 5 m over them, to a position ESE of Molo della Sanità Head (5 cables E).

Leading beacons. The alignment (273°) of Carloforte S Leading Light-beacons, see 9.158, leads W into the harbour entrance, passing close S of of Molo della Sanità Head (5 cables W).

9.158

1 **South Leading Light-beacons**.

Front beacon, Secca di Marmi W Light-beacon (39°08′·6N, 8°20′·0E) (9.131).

Middle beacon, Carloforte Cathedral belfry (39°08′·7N, 8°18′·3E) (9.127).

Rear beacon (black and white chequers, 5 m in height) (2 cables W of middle beacon).

The alignment (273°) of these light-beacons leads W towards the harbour entrance passing, with positions relative to Carloforte Cathedral belfry:

2 S of Secca dei Marmi buoy (S cardinal) (1½ miles E). The buoy marks the S side of Secca dei Marmi, a shoal with a least depth of 1·5 m over it. Thence:

S of Secca di Marmi W Light-beacon (1¼ miles E) (9.131), thence:

The track passes between two shoals (1 mile E), with depths of less than 4 m over them, thence:

S of a shoal (6 cables E) with a depth of 4·9 m over it, thence:

3 S of Molo della Sanità Head (5 cables W) to enter the harbour.

Berths

9.159

1 **Molo Centrale** is the main ferry berth; the N and S sides of the pier are, respectively, known as Banchina Tagliafico No. 1 and Tagliafico No. 2, see 9.154. The berths at the piers and quays between Molo Centrale and Molo San Carlo, the most S pier, are used by smaller ferries. The pier heads are marked by lights.

Port services

9.160

1 **Repairs**. Minor repairs only.

Supplies: fuel, small amounts only: water, very limited quantities; provisions, limited quantities.

Communications. Nearest airport Cagliari.

Small craft

9.161

1 **General information** Carloforte provides 325 small craft berths in depths of 2 to 5 m. Vessels up to 30 m in length are accepted.

Canale di Saline. Permission to navigate the channel must be obtained from the Harbour Master and cannot be conducted using engines. Access is restricted to vessels up to 7 m in length. The dumping of any substance or refuse is prohibited. Vessels are not to be secured to the sides of the channel between the bridge spanning the channel mouth and a position 1 mile upstream of it. Landing on the S bank of the channel, outside the prohibited berthing area, is permitted but access to the saltpan side is prohibited.

2 **Facilities**. Good small craft facilities including repairs.

Supplies: fuel; water; provisions.

Porto di Sant' Antioco

Chart 1207, plan of Porto di Sant' Antioco

General information

9.162

1 **Position and function**. Porto di Sant' Antioco, also known as Porto Ponte Romano, (39°03′·1N, 8°28′·2E), lies at the head of Golfo di Palmas. The port handles foodstuffs, timber, metal, grain, wine and dairy products.

Topography. The port occupies the W end of a narrow isthmus joining Isola di Sant' Antioco to Sardegna. The isthmus is cut by a small craft channel (9.145) which leads N from the W side of the harbour. The channel is spanned by a fixed bridge carrying a road and a railway line. The NE part of Isola di Sant' Antioco is generally low-lying; Sant' Antioco stands close NW of the port.

2 **Approach and entry**. Porto di Sant' Antioco is approached through Golfo di Palmas and entered through a dredged channel marked by light-beacons.

Traffic. In 2002 the port was used by 19 vessels with a total of 194 635 dwt.

Port Authority. Ufficio Circondariale Marittimo, Sant' Antioco, Sardegna.

Limiting conditions

9.163

1 **Controlling depth**. The entrance channel has charted depths of about 8 m however it is subject to silting. Mariners should note depths of 3·1 to 6·9 m close along the NE side, and depths of 2·9 to 7·3 m close along the SW side of the channel.

Vertical clearance. The small craft channel approaching the port from the N is spanned by power cables and a

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fixed bridge. The maximum permitted masthead height is 8·5 m, see 9.145.

2 **Deepest and longest berth**. Banchina di Ponente; length 389 m, depth alongside 5·7 m. Banchina di Levante; length 300 m, depth alongside 6·0 m.

Tidal levels. The mean spring range is 0·4 m.

Maximum size of vessel handled. The maximum draught accepted is 5·1 m.

3 **Local weather and sea state**. During the winter the prevailing wind is NW; during the summer this alternates with a SE wind which brings mist or fog. Strong winds with S component send a sea into the harbour which makes Banchina Sanità and Banchina di Testata difficult.

Arrival information

9.164

1 **Port operations** 0700–1900 local time.

Port radio. There is a port radio station, see the relevant volume of *Admiralty List of Radio Signals*.

Outer anchorages. Anchorage can be obtained 1¼ miles SE of the port in depths of about 9 m, sand and weed, with Porto di Sant' Antioco Main Light bearing 326° and the peak of Monte Perdas de Fogu (39°01′·3N, 8°25′·8N) bearing 245°. See also 9.144.

Pilotage is compulsory for vessels of 500 grt or greater. Fishing vessels, except deep sea vessels, warships and vessels of less than 500 grt are exempt pilotage. A VHF pilotage advisory service is available to vessels of less than 2000 grt not using tugs.

2 **Tugs**. A tug is available from Porto Vesme, an additional tug can be provided from Cagliari.

Regulations. Tug assistance is compulsory for all tankers of 3000 grt or greater without a double hull or more than 15 years old; also for chemical carriers of 3000 grt or greater more than 15 years old. Other vessels, more than 20 years old, carrying cargoes potentially dangerous to the marine environment, must have a tug in attendance when entering or leaving harbour.

Harbour

9.165

1 **General layout**. The port consists of a broad quay extending SSE from the isthmus joining Isola di Sant' Antioco with Sardegna. Basins are formed to the SW and NE of the broad quay; a turning basin lies between the head of the broad quay and a breakwater 1¾ cables S.

Landmarks:

Two chimneys (39°03′·3N, 8°27′·7E).

Harbour Master's Office and Customs House (flagstaff on building) (39°03′·5N, 8°28′·3E).

Porto di Sant' Antioco Main Lighthouse (39°03′·5N, 8°28′·5E) (9.139).

2 **Offshore marks**:

Porto di Sant' Antioco Channel entrance light-beacon (39°02′·6N, 8°28′·9E) (9.140).

Porto di Sant' Antioco Channel entrance light-beacon (39°02′·7N, 8°29′·0E) (9.140).

Major light:

Porto di Sant' Antioco Main Light (39°03′·5N, 8°28′·3E) (9.139).

Directions for entering harbour

9.166

1 From a position SE of Porto di Sant' Antioco entrance channel the track leads NE, passing between the outer buoyant light-beacons (lateral) (39°02′·7N, 8°29′·0E), then E of the detached breakwater, then between the inner buoyant light beacons (lateral) (5½ cables NW of the outer light-beacons) marking the entrance to the turning basin. The channel is approximately 80 m wide and shoal depths lie on both sides of it; the chart provides sufficient guide.

2 **Useful mark**:

Coal wharf SE Corner light (grey post, 7 m in height).

Basins and berths

9.167

1 **West basin**. Banchina di Ponente; the outer 100 m of the quay is used for handling dangerous cargoes, the inner part is used by fishing vessels. Private piers and quays handling minerals lie on the W side of the basin. The entrance to the small craft channel (9.145) leading to Sant' Antioco and NE of Isola di Sant' Antioco lies at the N end of the basin.

2 **East basin**. Banchina Sanità is reserved for naval vessels and yachts. Banchina di Levante and Banchina di Testata provide the main commercial berths. The E limit of the dredged area is marked by three blocks, the S block is awash; a fourth block stands 1 cable further E on the shoal.

Port services

9.168

1 **Repairs**. Small repairs only. Divers are available.

Other facilities. Medical assistance available, there is a hospital at Carbonia.

Supplies: fuel; water; provisions.

Small craft

9.169

1 **General information**. The port accepts larger yachts up to 60 m in length. Sant' Antioco and Porto di Sant' Antioco provide good small craft facilities including repairs.

Chart 1207

Anchorage and harbour

Calasetta, Porto Commerciale

9.170

1 **General information**. Porto Commerciale (39°06′·8N, 8°22′·4E) is a small harbour handling local ferries and visiting small craft on the E side of Isolotto Francese, a peninsula on the NE side of the town. The peninsula is fronted by a spit, with a depth of 2·9 m over it, which extends 2¾ cables N and is marked by a light-beacon (N cardinal). An outfall pipeline extends 4¼ cables NNW from the N extremity of Isolotto Francese.

2 The harbour is protected from the N by Molo Foraneo an angled, rubble faced mole extending approximately 1 cable E from Isolotto Francese. Lights (green post, 5 m in height) are exhibited from the head of the mole. The entrance faces E and has a least depth of 4·4 m.

Anchorage can be obtained by small vessels in depths of about 4 m, sand and weed, 3½ cables ESE of the harbour entrance

3 **Berths**. A pier extends 1 cable ENE from the S end of Isolotto Francese. The outer part of the pier has alongside depths of about 4 m and provides a berth for local ferries. Lights (red post, 5 m in height) are exhibited from the head of the pier.

The outer arm of Molo Foraneo cannot be used for berthing because of submerged blocks. The inner arm provides berths for visiting small craft, see 9.174.

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Small craft

Isola Piana, Villamarina

9.171

1 **General information**. Villamarina yacht harbour (39°11′·4N, 8°19′·5E) lies at the SE end of Isola Piana protected from the E by a rubble breakwater extending S then SW from the shore. A light (39°11′·3N, 8°19′·5E) (9.130) is exhibited from the head of the mole. The harbour accepts vessels up to 25 m in length.

2 **Berths**. The harbour provides 80 berths, mainly at pontoons, in depths of 2·0 to 2·7 m.

Facilities. Limited marina facilities.

Portoscuso

9.172

1 **General information**. Portoscuso (39°12′·0N, 8°22′·9E) is a yacht harbour fronting the town. The harbour is protected from the W by a rubble breakwater extending generally 2 cables S from the coast and from the S by a short mole extending W from the coast. The E facing entrance is 50 m wide, has a depth of about 6 m and is marked by lights exhibited from the heads of the moles. A light is also exhibited from the elbow of the W breakwater.

Mariners should beware of tunny nets in the vicinity of Portescuso.

2 **Anchorage**. Small craft may obtain temporary anchorage in depths of 4·2 to 7·5 m about 2 cables S of the harbour.

Facilities. Usual marina facilities including small repairs.

Supplies: fuel in small amounts only; water; provisions.

Calasetta

9.173

1 **General information**. Calasetta (39°06′·7N, 8°22′·2E) small craft harbour occupies a cove N of the town. The cove is protected from the NW by a breakwater extending ENE then NE from the W headland. Two jetties extend from the SW shore and a number of mooring buoys lie at the head of the cove. The harbour has depths of less than 2 m.

Calasetta, new marina

9.174

1 **General information**. A new marina is under construction (2003) close SE of Porto Commerciale (39°06′·8N, 8°22′·4E) (9.170).

Sant' Antioco

9.175

1 **General information**. Sant' Antioco (39°04′·2N, 8°27′·5E) is a small craft and fishing haven fronting the town. Vessels up to 20 m in length are accepted.

Berths. The haven provides 133 berths, at quays and within a small basin, in depths of 1·3 to 4·5 m.

Facilities. Sant' Antioco and Porto Ponte Romano (9.162) provide comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Other names

9.176

1 Lunga, Cala: Isola di Sant' Antioco (39°01′·1N, 8°22′·3E).
Narcao, Monte (39°08′·4N, 8°39′·2E).
Orri, Monte (39°13′·7N, 8°45′·3E).

CAPO TEULADA TO CAPO CARBONARA

GENERAL INFORMATION

Chart 1990

Area covered

9.177

1 This section describes the S coast of Sardegna between Capo Teulada (38°52′·0N, 8°38′·5E) and Capo Carbonara, 53 miles ENE. The section is arranged as follows:

Capo Teulada to Capo di Pula (9.179).
Capo di Pula to Capo Carbonara (9.192).
Cagliari (9.219).

Topography

9.178

1 The S coast of Sardegna is generally rocky and mountainous except for the head of Golfo di Cagliari which is a low, sandy and backed by extensive marshes and saltwater lagoons.

CAPO TEULADA TO CAPO DI PULA

General information

Chart 1990

Routes

9.179

1 An ocean route between the W Mediterranean and Napoli (40°48′·2N, 14°17′·8E) (12.212) passes through the coastal waters of S Sardegna and is not described. Ocean routes between Barcelona and the E Mediterranean and Marseille (43°20′·0N, 5°20′·0E) (2.284) and the E Mediterranean converge W of Capo Teulada (38°52′·0N, 8°38′·5E); the route then passes S of Capo Spartivento (38°52′·7N, 8°50′·8E) and opens WSW from Sardegna towards the Sicilian Channel (37°30′·0N, 11°30′·0E).

A coastal route leads, from a position SW of Capo Teulada, 30 miles ENE to a position SE of Capo di Pula (38°59′·0N, 9°01′·0E).

Topography

9.180

1 This part of the S coast of Sardegna is backed by high mountains. The coast between Capo Teulada and Capo Spartivento, 9½ miles E, is generally rocky, rock fringed and backed by hills.

To the E of Capo Spartivento, and as far as Capo Pula, the coast consists mainly of sandy beach, fringed with rocks close offshore. Immediately inland the coast remains relatively low. There are numerous villas and hotels along the coast ENE of Capo Spartivento. A number of truncated conical structures, present throughout Sardegna and known as nuragi, can be seen in this area.

Depths

9.181

1 Much of this section of the coast is relatively steep-to with the 50 m depth contour lying within 1¾ miles of the shore between Capo Teulada and Capo Spartivento. Between Capo Spartivento and Capo Pula the 50 m depth

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contour gradually opens from the coast to lie up to 3¾ miles offshore. There are no dangers more than 1½ miles offshore; the coastal route lies in deep water further to seaward.

Hazards

9.182

1 **Concentration of traffic**. Traffic following the ocean route between the W Mediterranean and Napoli joins the coastal route along the S coast of Sardegna.

Exercise areas. Military live firing practice areas lie between Punta Menga (38°57′·5N, 8°35′·3E) and Punta Niedda (38°55′·5N, 8°43′·0E). Details of the areas and their activation are contained in local notices to mariners. See also 9.183.

Prohibited area

9.183

1 Anchoring and fishing are prohibited within an area, shown on the chart, enclosing Capo Teulada and the coast 4¾ miles NE including Isola Rossa (38°54′·9N, 8°43′·0E). The area contains explosive devices.

Spoil ground

9.184

1 A spoil ground for dangerous industrial waste lies in deep water in an area 2 miles square, centred 22 miles SSW of Capo Teulada (38°52′·0N, 8°38′·5E).

Principal marks

9.185

1 **Landmarks:**

Torre di Porto Scudo (tall round, 144 m in height) (38°53′·9N, 8°40′·0E).

Isola Rossa (red rock, 54 m in height) (38°54′·9N, 8°43′·0E).

Torre Budello (round, light coloured, 23 m in height) (38°55′·9N, 8°43′·4E).

Punta Planedda (Monte Planedda) (38°56′·0N, 8°45′·3E). A conspicuous white building stands on the summit.

Torre di Piscinni (Pixini) (truncated conical, 12 m in height) (38°54′·2N, 8°46′·7E).

Torre Malfatano (round, light coloured, 64 m in height) (38°53′·2N, 8°48′·1E).

Capo Spartivento Signal Station (38°52′·9N, 8°50′·7E).

Capo Spartivento Lighthouse (red square tower on two-storey dwelling, 19 m in height) (38°52′·7N, 8°50′·8E).

Torre di Chia (light coloured, 44 m in height) (38°53′·7N, 8°53′·1E).

Hotel (38°56′·0N, 8°56′·0E).

Torre di Cala d' Ostia (round) (38°57′·2N, 8°57′·8E).

Torre di Sant' Efisio (round, two-storey, surmounted by Capo di Pula Light) (38°59′·0N, 9°01′·0E).

2 **Major light:**

Capo Spartivento – as above.

Directions

(continued from 9.120)

9.186

1 From a position SW of Capo Teulada (38°52′·0N, 8°38′·5E) (9.120), the track leads ENE passing, with positions relative to Capo Spartivento Light (38°52′·7N, 8°50′·8E):

S of Capo Teulada (9½ miles W), the W headland of Golfo di Teulada. Thence:

SSE of Cala Brigantina (8¾ miles W). A dangerous wreck lies in the entrance to the bay. Thence:

2 SSE of Torre di Porto Scudo (8½ miles WNW) (9.185). The tower stands on the SE shoulder of a steep promontory forming the SW side of Porto Scudo; the inlet shoals rapidly within its entrance. Thence:

SSE of Secca di Porto Scudo (7½ miles WNW). The shoal has a depth of 2·6 m over it. Thence:

SSE of Isola Rossa (6½ miles WNW) (9.185). When seen from the SE it appears as two humps; a small signal mast stands on a white painted stone on the S hillock. Thence:

3 SSE of Porto Teulada (6½ miles WNW). A small craft harbour (9.189) lies on the W side of the bay; lights are exhibited (red and green posts) from the harbour. Anchorage (9.187) can be obtained within the bay. Thence:

SSE of Torre Budello (6½ miles NW) (9.185), thence:

SSE of Punta Planedda (5½ miles NW) (9.185), thence:

SSE of Torre Piscini (3½ miles WNW) (9.185), thence:

4 SSE of Capo Malfatano (2 miles WNW), the E headland of Golfo di Teulada. Capo Malfatano is the S extremity of a high, narrow peninsula on which stands a conspicuous tower (9.185). Thence:

SSE of Porto Malfatano (2 miles WNW) a narrow, shallow inlet on the E side of Capo Malfatano. The shore of the bay extending 1¼ miles E of Capo Malfatano is barren and has the appearance of an area of desert. Anchorage (9.188) can be obtained off the entrance to Porto Malfatano. Thence:

5 SSE of Isola Teredda (31 m in height) (1¾ miles NW). The island is connected to the shore by a shoal bank and has an above water rock close SSW. Thence:

SSE of Isolotti Ferraglioni (1 mile WNW), connected to the shore by a shoal bank, thence:

SSE of Isolotti Padiglioni (5 cables W). There are numerous islets between them and Capo Spartivento. Thence:

6 SSE of Capo Spartivento Signal Station (3½ cables NNW) (9.185), thence:

SSE of Capo Spartivento Light (9.185). A dangerous wreck lies 7 cables ESE of the light. Capo Spartivento is sheer sided, fringed with rocks and dangerous shoals and should not be approached closer than 7½ cables. Thence:

SSE of Isolotto su Giudeu (Giudeo) (1 mile ENE) is dark coloured and divided into two sections. The coast behind the island is formed by white sand dunes which appear as a conspicuous white patch from offshore. Thence:

7 SSE of Secca Giudeu (1¼ miles E), a shoal with a depth of 11·6 m over it, thence:

SSE of Torre di Chia (2 miles NE) (9.185). The tower stands on a small promontory which appears bare and rocky from SW but overgrown from NE. Cala Chia, which is shallow, lies between the promontory and Isolotto Chia (15 m in height). Thence:

SSE of Cala Verde Marina (5½ miles NE) (9.190). A prominent hotel stands close to the harbour. Thence:

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8 SSE of Torre di Cala d' Ostia (7 miles NE) (9.185). Two groups of houses stand 1 mile NW and 1 mile SW of the tower; amongst each group of houses stands a small isolated tower with a pitched roof. Thence:

SSE of Porto Pula, also known as Porto d' Aguma, (9½ miles NE). The shallow inlet is only suitable for boats, is surrounded by marshes and the remains of the ancient city of Nora stand on its shores. Thence:

9 S of Capo di Pula (10¼ miles NE). The dark, conical headland is the SE extremity of a rocky peninsula joined to the coast by a low, sandy isthmus. The church of Sant' Efisio and, close S of it, the remains of a Roman amphitheatre stand on the isthmus. A conspicuous tower, Torre di Sant' Efisio (9.185) stands on Capo di Pula; a light (9.185) is exhibited from a structure surmounting Torre di Sant' Efisio. Isolotto Coltellazzo, close off the headland, is dark and rocky. Thence:

To a position SE of Capo di Pula.

(Directions continue, for the offshore route at 9.201 and for Golfo di Cagliari at 9.202)

Anchorages

Porto Teulada

9.187

1 Porto Teulada (38°55′·8N, 8°43′·4E). Anchorage can be obtained in depths of about 18 m with Torre Budello (38°55′·9N, 8°43′·4E) (9.185) bearing 319°, distant 3 cables and Punta Niedda (38°55′·5N, 8°43′·0E) aligned (239°) with Torre di Porto Scudo (38°53′·9N, 8°40′·0E) (9.185). Mariners should beware of a shoal, with a depth of 5·8 m over it, 3½ cable NE of Punta Niedda. Smaller vessels can anchor closer to Torre Budello in depths of about 7 m.

Porto Malfatano

9.188

1 Porto Malfatano (38°53′·4N, 8°48′·4E). Temporary anchorage can be obtained in depths of about 15 m, sand and weed, 2½ cables ENE of Torre Malfatano (38°53′·2N, 8°48′·1E) (9.185). With local knowledge small vessels can obtain anchorage within the mouth of the inlet. A rock with a depth of less than 2 m over it lies off the W side of the entrance.

Small craft

Porto Teulada

9.189

1 **General information**. Porto Teulada (38°55′·8N, 8°43′·4E), also known as Porto Budello, small craft harbour lies on the W side of Porto Teulada, a bay at the head of Golfo Teulada. The harbour is protected from the S by an angled mole extending 1 cable ENE then 1 cable NE from the E side of Punta Niedda. A light (red post, 2 m in height) is exhibited from the head of the mole. The entrance faces NE and has depths of about 8 m. The harbour accepts vessels up to 45 m in length.

2 **Berths**. The harbour provides 60 berths in depths of 3·5 m to 5·0 m.

Facilities and supplies. The harbour provides berths only. Small amounts of fuel, water and provisions can be obtained from Teulada, 7 km NE.

Cala Verde Marina

9.190

1 **General information**. Cala Verde Marina (38°56′·1N, 8°56′·2E). The small marina consists of a single basin entered between two short breakwaters extending SE from the coast. Lights (red and green posts, 5 m in height) are exhibited from the heads of the breakwaters. Vessels up to 12 m in length are accepted.

2 A private pier belonging to a coastal hotel lies 1 mile SW of Cala Verde Marina.

Berths. The harbour provides 100 berths, 8 are for visiting yachts, at quays and jetties in depths of 2·2 m.

Facilities. Good small craft facilities including repairs.

Supplies: fuel; water; provisions.

Other names

9.191

1 Camponia, Isolotto (38°54′·9N, 8°45′·9E).
Santa Margherita (38°58′·0N, 8°58′·6E).

CAPO DI PULA TO CAPO CARBONARA

General information

Chart 1990

Routes

9.192

1 An offshore route leads, from a position SE of Capo di Pula (38°59′N, 9°01′E), 22 miles ENE to a position SE of Capo Carbonara (39°06′N, 9°31′E).

A coastal route leads, from a position SE of Capo di Pula, 18 miles NNW to a position S of the Cagliari Traffic Separation Scheme (TSS) (39°09′N, 9°06′E).

A coastal route leads, from a position S of the Cagliari TSS, 24 miles ESE to a position SE of Capo Carbonara.

Topography

9.193

1 Golfo di Cagliari, entered between Capo di Pula and Capo Carbonara, forms the E part of the S coast of Sardegna. From close N of Capo di Pula to Punta Zavorra, 3½ miles N, the coast consists of sandy beaches separated by rocky points; in places rocks lie close inshore. This area is backed by mountains standing close to the coast.

2 Within Golfo di Cagliari the W shore remains low-lying and further N the mountains recede from the coast. The installations and refinery associated with the Sarroch Oil Terminal are a conspicuous feature by day and night.

Much of the head of the gulf is a low marshy plain but Capo Sant' Elia (39°10′·8N, 9°09′·6E) rises quickly from the low-lying land surrounding it. The city and port of Cagliari lie NW of Capo Sant' Elia; the city is obscured from the SE by the headland.

3 The NE shore of the gulf is low and sandy, backed by saltwater lagoons, further inland the the countryside is undulating and fertile. Between Foxi (39°13′·1N, 9°14′·7E) and Capo Boi, 10½ miles SE the character of the coast changes from low, sandy beach to a succession of small sandy bays separated by rocky points. The foothills of the mountains which back this shore stand close behind the coast.

4 Capo di Carbonara, the E headland of Golfo di Cagliari, is covered with green vegetation and connected to the shore by a low, sandy spit. A number of islands and dangers lie S and E of the headland.

Depths

9.194

1 The W side of Golfo di Cagliari is encumbered by a number of inshore shoals but generally the 10 m depth

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contour lies within 1½ miles of the coast as far N as Cagliari. To the E of the port the 10 m depth contour steadily closes the coast and lies within 5 cables of much of the E shore.

Concentrations of traffic

9.195

1 Coastal traffic passing S of Golfo di Cagliari is joined by traffic following the ocean route, S of Sardegna, between Napoli and the W Mediterranean. Within Golfo di Cagliari traffic entering or leaving TSS associated with different parts of the port of Cagliari may present a complex traffic picture.

Traffic Regulations

9.196

1 **Traffic separation schemes**. TSS, shown on Chart 1208, have been established within Golfo di Cagliari; none of the schemes are IMO adopted.

Vessel Traffic Service Scheme. A mandatory VTSS with full radar surveillance is maintained for the control of shipping, for details and a list of reporting points, referred to as convergence points within this scheme, see the relevant volume of *Admiralty List of Radio Signals*. The reporting/convergence points are shown on Chart 1208.

2 **Restricted area**. Sarroch Oil Terminal (39°05′·5N, 9°03′·0E) is enclosed by a restricted area. Navigation within the area is prohibited except for vessels loading, discharging or servicing the installations.

Submarine cables

9.197

1 Submarine cables, shown on the charts, extend S through Golfo di Cagliari from a position E of Capo Sant' Elia (39°10′·8N, 9°09′·6E). Some cables are enclosed by an area within which anchoring and fishing are prohibited; anchoring and fishing within 200 m of all other cables is prohibited.

Marine nature reserves

9.198

1 A marine nature reserve has been established NW of a line, shown on Chart 1208, joining Punta Zavorra (39°03′·4N, 9°02′·7) and Capo Sant' Elia (39°10′·8N, 9°09′·6E); fishing within the area is regulated.

2 A marine reserve has been established in an area between Capo Boi (39°7′·4N, 9°26′·3E) and a position S of Torre Piras (39°10′·4N, 9°34′·5E), including Secca di Sant Caterina, Isola dei Cavoli and Isola Serpentara. The extent of the reserve is shown on Chart 1990. The area is divided into three types of restricted zone:

Zone A. Navigation, anchorage, stopping, swimming, fishing, unauthorised diving, the use of jet skis and the removal or damage of the natural environment are prohibited.

3 Zone B. Navigation at speeds greater than 10 kn, unauthorised anchorage, fishing and the use of jet skis are prohibited.

Zone C. Navigation at speeds greater than 20 kn, unauthorised anchorage, unauthorised diving and unauthorised fishing are prohibited.

4 The zones apply to the following areas:

Zone	*Approximate area*
A	The W side of Isola Serpentara.
B	The E side of Isola Serpentara. Secca dei Berni. The channel between Capo Carbonara and Isola dei Cavoli including the S side of the island.
C	The remaining area of the reserve.

Mariners must obtain full details of the area and its regulations from local authorities.

Natural conditions

9.199

1 **Local weather**. The prevailing winds are W and ENE. A falling barometer indicates a W wind is imminent, conversely a rising barometer indicates an ENE wind. These winds can quickly become violent and may last for three days.

Current within Golfo di Cagliari is negligible although wind induced currents develop; an E current is particularly noticeable with NE winds.

Principal marks

9.200

1 **Landmarks**:

Torre Isolotto San Macario (39°00′·3N, 9°02′·0E).
Pula castle (39°00′·8N, 8°59′·9E).
Punta Sa Cresta (39°01′·8N, 8°54′·6E).
Torre del Diavolo (truncated, conical) (39°02′·7N, 9°02′·5E).
Monte Arrubin (39°03′·3N, 9°00′·8E).

2 Torre Su Loi (9 m in height) (39°07′·8N, 9°00′·8E).
Cagliari Silo (rectangular tower on SE side, 52 m in height) (39°12′·6N, 9°06′·2E).
Castello di San Michele (square, four towers surmounted by a radio mast) (39°14′·8N, 9°06′·6E).
Sanatorium (yellow) (39°12′·6N, 9°08′·2E)

3 Stadio Sant' Elia (39°12′·2N, 9°08′·5E).
Capo Sant' Elia (prominent, whitish chalk) (39°10′·8N, 9°09′·6E).
Torre Sant' Elia (39°11′·2N, 9°10′·0E).
Quartu Sant' Elena Cathedral (white with red roof, belfry with dome) (39°14′·6N, 9°11′·0E).
Torre Foxi (3 m in height) (39°13′·1N, 9°14′·8E).
Torre di Cala Regina (39°10′·8N, 9°21′·2E).

4 Torre Finocchio (39°08′·8N, 9°23′·7E).
Torre Boi (39°07′·6N, 9°26′·3E).
Monte Maria (39°09′·7N, 9°28′·5E).
Punta sa Ceraxa (Monte dei Sette Fratelli) (39°17′·7N, 9°26′·2E).

5 **Offshore marks**:

Q Light-buoy (safe water) (39°03′·8N, 9°06′·1E).
Secca di Santa Caterina Light-beacon (buoyant, W cardinal) (39°05′·1N, 9°29′·8E).

Major lights:

Capo Sant' Elia Light (white round tower and two-storey dwelling, black bands, 21 m in height) (39°11′·0N, 9°08′·9E).
Capo Carbonara Light (white round tower, 5 m in height) (39°06′·2N, 9°30′·9E).

Directions for the offshore route

(continued from 9.186)

9.201

1 From a position SE of Capo di Pula (38°59′N, 9°01′E) (9.186) the track leads ENE passing, with positions relative to Capo di Pula Light (38°59′·0N, 9°01′·0E) (9.185):

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SSE of Punta Zavorra (4½ miles NNE). The headland is dominated by a hill covered with vegetation. Torre Antigori, ruined, lies 2¾ miles NW. Thence:
SSE of Q Light-buoy (6¼ miles NE) (9.200), thence:
SSE of Capo Sant' Elia Light (13½ miles NNE) (9.200), thence:
2 SSE of Quartu Sant' Elena Cathedral (17½ miles NNE) (9.200), thence:
SSE of Secca di Santa Caterina Light-beacon (23¼ miles ENE) (9.200), thence:
SSE of a shoal (24½ miles ENE) with a depth of 15 m over it, thence:
To a position SE of Capo Carbonara Light (24½ miles ENE) (9.200).

Directions for Golfo di Cagliari, Capo di Pula to Cagliari Traffic Separation Scheme

(continued from 9.186)

9.202

1 From a position SE of Capo di Pula (38°59′N, 9°01′E) (9.186) the track leads NNW passing, with positions relative to Capo di Pula Light (38°59′N, 9°01′E) (9.185):
E of Capo di Pula, thence:
E of Isolotto San Macario (1½ miles NNE). The island lies on a bank with depths of less than 5·5 m over it but is reasonably steep-to on its E side. A prominent tower (9.200) stands on the islet. Thence:
2 E of Pula (2 miles NNW). A castle (9.200) stands close to the village. Thence:
E of Perd e Sali Marina (2¾ miles NNE) (9.214), thence:
E of Torre del Diavolo (3¾ miles NNE) (9.200), the tower stands on a hillside, it is more visible from the S. Thence:
Chart 1208 approaches to Cagliari
E of Punta Zavorra (4½ miles NNE) (9.201), thence:
3 E of the Sarroch Oil Terminal restricted area (6½ miles NE) (9.196).
(Directions for Sarroch Oil Terminal continue at 9.208)
Thence:
E of Q Light-buoy (6¼ miles NNE) (9.200), thence:
E of Sarroch (4¾ miles N). The village stands on a hill; a yellow coloured house stands at the NE point of the village. Thence:
E of Sarroch Oil terminal (6½ miles N). The terminal is conspicuous by day and night. Thence:
4 E of Torre Su Loi (light coloured, 9 m in height) (8¾ miles N). The tower is surrounded by dense vegetation. Thence:
E of Pontile ENICHEM (10½ miles N), thence:
To a position S of the Cagliari Traffic Separation Scheme (39°09′·0N, 9°06′·0E).

(Directions for Cagliari continue at 9.240 and for S of Cagliari Traffic Separation Scheme to Capo Carbonara at 9.203)

Directions for Golfo di Cagliari, south of Cagliari Traffic Separation Scheme to Capo Carbonara

9.203

1 From a position S of Cagliari Traffic Separation Scheme (39°09′·0N, 9°06′·0E) the track leads ESE passing, with positions relative to Capo Carbonara Light (39°06′·2N, 9°30′·9E) (9.200):
S of Capo Sant' Elia (17½ miles WNW) (9.200). The headland appears as an island because of the low marshy ground behind it. From the SE Cagliari is obscured by Capo Sant' Elia although at night the lights from the town show up well. Thence:
2 S of Torre Sant' Elia (17 miles WNW) (9.200), thence:
Chart 1990
SSE of Poetto (17½ miles WNW), a large resort with a yacht harbour (9.215) close SE and a racecourse close NE. Thence:
SSW of Seno di Quarto (16 miles WNW). The bay is backed by a sandy beach, Stagnu di Quartu and other saltwater lagoons. The bay is not recommended as an anchorage due to poor holding ground. Thence:
3 SSW of Torre Foxi (14¼ miles WNW) (9.200). The tower stands on a low, overgrown point. A private pier lies 7½ cables E of the tower. Thence:
SSW of Marina di Capitana (11½ miles ENE) (9.216), thence:
SSW of Torre di Cala Regina (8¾ miles WNW) (9.200). The tower stands on a steep, rocky projection. Thence:
SSW of Punta sa Ceraxa (12 miles NNW) (9.200), thence:
4 SSW of Torre Finocchio (6 miles WNW) (9.200), the tower stands on a hill. A dangerous wreck, shown on the chart, lies close off the tower. Thence:
SSW of Capo Boi (3¾ miles WNW), the S extremity of a small rocky promontory. Torre Boi (9.200) stands on the point. Thence:
S of Monte Maria (3¾ miles NNW) (9.200). The hill lies N of the head of Golfo di Carbonara and is easily recognised by its gently rising peak. Thence:
5 SSW of Secca de Piscadeddus (2½ miles WNW), the shoal has a depth of 3·7 m over it. Isolotti Piscadeddus lies 4 cables NNE of the shoal. Thence:
SSW Golfo di Carbonara Light (white pylon on hut, 4 m in height) (2 miles NNW). The light is obscured over Secca de Piscadeddus when bearing more than 058°. Thence:
SSW of Fortezza Vecchia (9 cables NNW). Although ruined the fort is conspicuous. A marina (9.217) lies close N of the fort. Thence:
6 SSW of Isolotto San Stefano (6½ cables W), the islet is 18 m in height and covered by the red sector (073°–093°) of Isola dei Cavoli Light (tower on two storey dwelling, black bands, 37 m in height) (1¼ miles SE). Thence:
SSW of Secca di Santa Caterina Light-beacon (1¼ miles SSW) (9.200). The light beacon marks a rocky shoal with a depth of 5 m over it. The shoal is also covered by the red sector (073°–093°) of Isola dei Cavoli Light (as above). Numerous rocks and dangers lie inshore of Secca di Santa Caterina along the SW coast of Capo Carbonara. Thence:
7 SSW of Capo Carbonara Light, thence:
SSW of Isola dei Cavoli (1¼ miles SE). The islet is low, rocky and partly covered with vegetation. It is surrounded with dangers and should not be approached closer than 3 cables. Thence:
SSW of a shoal (2½ miles SSE) with a depth of 15 m over it, thence;
To a position SE of Capo Carbonara.

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Sarroch Oil Terminal

Charts 1990, 1208 approaches to Cagliari

General information

9.204

1 **Position and function.** Sarroch Oil Terminal (39°05′N, 9°03′E), also known as Porto Foxi, on the W shore of Golfo di Cagliari is the tanker terminal for the Port of Cagliari.

Port limits. The port is enclosed by a restricted area, see 9.196, shown on the charts.

Approach and entry. Sarroch Oil Terminal is approached through Golfo di Cagliari and entered via the TSS.

Traffic. In 2002 the port was used by 328 ships with a total of 32 523 756 dwt.

2 **Port Authority.** Sarroch Port Authority, Porto Foxi, 1–09018, Sarroch, CA, Italy.

Limiting conditions

9.205

1 **Controlling depth.** The entrance channel is dredged to a depth of 22·8 m.

Deepest and longest berth. Pontile SARAS No. 1 Head, NE side; length 550 m, alongside depth 22·8 m

Maximum size of vessel handled. 380 000 dwt. Maximum draught accepted 20·8 m.

Arrival information

9.206

1 **Port operations**. 24 hours.

Port radio. There is a port radio station, see the relevant volume of *Admiralty List of Radio Signals.*

Outer anchorages. Anchorage areas and berths are shown on the chart and allocated as follows:

Area	*Position, relative to Punta Zavorra* (39°03′N, 9°03′E)	*Remarks*
Alfa	1½ miles E	Berth G4 within Waiting Area A1 for vessels greater than 250 000 grt.
		Berth G2 for vessels not exceeding 12·8 m draught.
Echo	2¼ miles NE	Berth G1 for vessels exceeding 12·8 m draught.
Charlie	3½ miles N	Berth G3 for vessels less than 5 000 grt

2 **Pilotage** is compulsory for all vessels of 500 grt or greater and is available 24 hours a day. Pilot boards vessel in vicinity of anchor berth depending on size of vessel.

Tugs available 24 hours a day. Tug assistance is compulsory for all tankers of 3 000 grt or greater and for vessels without a double hull or more than 15 years old; also for chemical carriers of 3 000 grt or greater more than 15 years old.

3 **Traffic separation scheme.** A TSS, not IMO adopted, has been established in the approach to the terminal. It consists of a NW-bound entry lane and SE-bound exit lane with a narrow separation zone between them. In addition an exit lane for large tankers passes N of anchorage area Echo

Vessel Traffic Service. Sarroch Oil terminal lies within the Cagliari VTSS, see 9.196. The reporting/convergence point for the terminal is Q (39°03′·8N, 9°06′·0E), in the vicinity of Q Light-buoy (9.200).

Harbour

9.207

1 **General layout.** Sarroch Oil Terminal consists of two piers extending from the W shore of Golfo di Cagliari. The piers provide 12 berths for tankers handling crude oil, oil products and LPG.

Directions for entering harbour

9.208

1 **Pontile SARAS No. 1**. From the vicinity of Q Light-buoy (safe water) (39°03′·8N, 9°06′·1E) the entry channel, dredged to a depth of 22·8 m, leads NW towards the head of Pontile SARAS No. 1. The entry channel is marked by numbered light-beacons (buoyant, lateral). The head of the pier lies within dredged turning areas. The NE area, dredged to a depth of 22·8 m (1980), is marked at its NE limit by No. 8 Light-buoy (starboard-hand); the SW area, dredged to a depth of 18·8 m (1980), is marked at its SW limit by No. 7 Light-buoy.

2 **Pontile SARAS No. 2**.

Leading light-beacons. From a position in the precautionary area, NE of Pontile SARAS No. 1, the alignment (291°) of Pontile SARAS Leading Light-beacons leads towards the head of the pier:

Front light (white triangle, point up with red stripe, on mast, 5 m in height) (39°05′·9N, 9°01′·7E).

Rear light (white triangle, point down with red stripe, on mast) (7 cables from front light).

3 **Useful mark:**

No. 9 Light-buoy (port hand) (39°05′·4N, 9°02′·5E)

Directions for leaving harbour

9.209

1 Large tankers departing from the main berths at the head of Pontile SARAS No. 1 use the departure channel NE of the pier. The channel, shown on the chart, is entered in the vicinity of a light-buoy (special) in position (39°05′·7N, 9°03′·4E) and leads NE to the vicinity of a light-buoy (special) in position (39°05′·8N, 9°04′·3E). The channel then leads SE to the boundary of the restricted area enclosing the terminal.

Berths

9.210

1 Pontile SARAS No. 1 provides the main berths; Pontile SARAS No. 2 handles mainly chemicals.

Port services

9.211

1 **Repairs.** Minor repairs only.

Other facilities. Oily waste reception facilities.

Supplies: fuel; water; provisions.

Communications. Nearest airport Cagliari, 43 km NNE.

Small craft

9.212

1 Both piers have small craft jetties for harbour launch services.

Anchorage

Chart 1990

Golfo di Carbonara

9.213

1 Golfo di Carbonara (39°07′·5N, 9°29′·5E). Anchorage can be obtained in depths of 20 m, sand, 8½ cables WNW of Fortezza Vecchia (39°06′·9N, 9°30′·3E) or in depths of 15 m, 4½ cables NW of the ruined fort.

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Small craft

Perd e Sali Marina
9.214

1 **General information**. Perd e Sali Marina (39°01′·7N, 9°01′·9E) lies close S of a small headland. The harbour is protected from the E by a mole extending SSW from the shore. A second mole extends SE from the coast protecting the SW side of the harbour. The entrance faces SW, is 50 m wide and has depths of about 4 m. The harbour accepts vessels up to 18 m in length.

2 **Berths**. The harbour provides 200 berths at pontoons in depths of 2·5 m to 3·0 m.

Facilities. Limited small craft facilities.

Supplies: fuel; water; provisions.

Marina Piccola dei Poetto
9.215

1 **General information**. Marina Piccola dei Poetto (39°11′·5N, 9°09′·8E), a fishing and yacht harbour, lies on the NE side of Capo Sant' Elia. The harbour is protected from the E by an angled mole extending N then NW from the coast; a light (red post 4 m in height) is exhibited from its head. A shorter mole, with a broad head, protects the NW side of the harbour; a light (green post 5 m in height) is exhibited from the SE side of its head. The entrance faces NW, has a depth of 2·1 m and is 70 m wide. The harbour accepts vessels up to 18 m in length.

2 **Berths**. The harbour provides 350 berths, at pontoons on the SW side of the basin, in depths of 2·1 m to 2·5 m. The NE side of the basin is reserved for fishing vessels.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Marina di Capitana
9.216

1 **General information**. Marina di Capitana (39°12′·4N, 9°18′·4E) is protected from the S by mole extending S then WNW from the coast. A smaller mole extend S from the coast protecting the W side of the harbour. Lights (red and green posts) are exhibited from the mole heads. The harbour has two basins. The entrance faces W and is 40 m wide. Vessels up to 27 m in length are accepted.

2 **Berths**. The harbour provides 450 berths at pontoons in a depth of 3 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Marina di Villasimius
9.217

1 **General information**. Marina di Villasimius (39°07′·1N, 9°30′·4E) is protected from the W by a mole extending generally N from the coast. The E mole extends NNW from the coast towards the W mole. Lights are exhibited from the heads of the moles. The entrance faces NE and is 60 m wide. The harbour accepts vessels up to 25 m in length.

Berths. The harbour provides 740 berths in depths of 3·0 to 5·5 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Other names
9.218

1 Andrea, Torre Sant' (39°12′·0N, 9°19′·5E).
Carcangiolas, Torre (39°13′·4N, 9°13′·0E).
Mortorins, Torre (39°11′·8N, 9°19′·8E).
Orri (39°06′·7N, 9°00′·6E).
Poetto, Torre del (39°11′·4N, 9°10′·1E).
Quartu, Fortezza di (39°14′·0N, 9°14′·0E).

PORTO DI CAGLIARI

General information

Chart 1208

Position
9.219

1 Porto di Cagliari (39°12′N, 9°06′E) lies at the head of Rada di Cagliari, entered between La Maddalena (39°09′·3N, 9°01′·5E) and Capo Sant' Elia, 6½ miles ENE. Rada di Cagliari occupies the head of Golfo di Cagliari on the S coast of Sardegna, fronting the city of Cagliari.

2

Function
9.220

1 Cagliari is the capital of Sardegna and the principal port of the island. The port handles general cargo, containers, bulk materials including grain, coal and timber, lead, zinc, felspar, wine and foodstuffs. It is also an important ferry terminal and is used by cruise ships.

Topography
9.221

1 The city is arranged rather like an amphitheatre around the port and occupies the only elevated part of the head of Golfo di Cagliari. Close SE of the city Capo Sant' Elia, a rugged, chalky outcrop, overlooks the port and screens the city from the SE. To the W and E of Cagliari the coast is low-lying, sandy and backed by extensive saltwater lagoons. Stagno di Cagliari, to the W of Cagliari, is shallow and connected to the sea by several channels, all spanned by bridges. The city contains a number of conspicuous tall buildings, ancient fortifications, domes and towers.

2 Cagliari lies at the SE end of the Campidano Valley which extends to the mountains of the interior. The shape and extend of the valley are largely responsible for the prevailing NE wind and funnels the strong *Maestrale* into the port.

Approach and entry
9.222

1 Porto di Cagliari is approached through a traffic separation scheme at the head of Golfo di Cagliari (9.193). Porto Canale (39°11′·6N, 9°05′·7E), a new industrial port, is entered between the heads of Molo Meridionale and Molo Settentrionale. Porto Commerciale (39°12′·0N, 9°07′·7E) is entered between the heads of Nuovo Molo di Ponente and Nuovo Molo di Levante. Pontile ENICHEM Sud, 4 miles SW of the main port complex, is also part of Porto di Cagliari and approached through a traffic separation scheme.

Traffic
9.223

1 In 2002, the port was used by 297 ships with a total of 12 448 401 dwt.

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Port Authority
9.224

1 Cagliari Port Authority, Via dei Calfati, 1–09123 Cagliari, CA Italy

Limiting conditions

Controlling depth
9.225

1 The precautionary area SE of Porto Canale has a least depth of 12·7 m. The entrance to Porto Commerciale has depths of about 12 ·0 m.

Deepest and longest berth
9.226

1 **Porto Commerciale**. Molo Rinascita; length 480 m, alongside depth 9 m.

Porto Canale. Under construction (2003). The NE side of the basin is 1450 m long with a dredged depth of 14 m

Tidal levels
9.227

1 Mean spring range is 0·4 m, see the relevant volume of *Admiralty Tide Tables.*

Maximum size of vessel handled
9.228

1 **Porto Commerciale.** Maximum draught accepted 12·0 m.

Pontile ENICHEM. Length 110 m, draught 7·2 m, 10 000 dwt.

Local weather and sea state
9.229

1 The prevailing wind is NW. Cloud developing over the mountains backing the W shore of Golfo di Cagliari is an indication of SE winds but a substantial amount of cumulus cloud indicates wind from the NW within 7 hours. When a strong *Maestrale* (NW wind) is prolonged vessels berthed at Vecchio Molo di Levante may need to secure to the jetty with anchor cable.

2 Winds from the S or SE (*Scirocco*) can make the entrance difficult, particularly for small craft, because of waves reflecting off the breakwaters of Porto Canale; some berths are uncomfortable. The *Scirocco* is most common in the autumn and indicated by the usually hazy atmosphere becoming clear and good visibility between Sarroch and Cagliari developing approximately 24 hours before the wind arrives. Another indicator is the onset of swell at Sarroch. However offshore winds are most frequent and usually the most violent.

Arrival information

Port operations
9.230

1 0800–2000 local time.

Port radio
9.231

1 There is a port radio station. See the relevant *Admiralty List of Radio Signals.*

Outer anchorages
9.232

1 Anchorage areas and berths are shown on the chart and allocated as follows:

Berth	*Position, relative to Molo Nuovo di Levante Head* (39°11′·7N, 9°06′·6E)	*Remarks*
Bravo	1¾ miles SW	Divided into Waiting Areas B1 and B2. Used for vessels waiting to enter Porto Canale and Porto Commerciale.
Foxtrot	1 mile SSE	Used for vessels waiting to enter Cagliari and for vessels sheltering.
Delta	1½ miles SW	Used for vessels waiting to berth at Pontile ENICHEM Sud
Golf	3¼ miles S	For vessels not entering the port.

Pilotage
9.233

1 Pilotage is compulsory for all vessels of 500 grt or greater and available 24 hours a day. The pilot boards within 1 mile of the harbour entrances. See the relevant volume of *Admiralty List of Radio Signals* for details of procedure.

Tugs
9.234

1 Tugs are available 24 hours a day. Tug assistance is compulsory for all tankers of 3 000 grt or greater without a double hull or more than 15 years old; also for chemical carriers of 3 000 grt or greater more than 15 years old.

Traffic regulations
9.235

1 **Traffic separation schemes.** Pontile ENICHEM Sud, Porto Canale and Porto Commerciale are all approached through TSS. The TSS within Golfo di Cagliari are shown on the chart, none are IMO adopted.

Vessel Traffic Service. A mandatory VTSS with full radar surveillance is maintained for the control of shipping, for details and a list of reporting points, referred to as convergence points within this scheme, see the relevant volume of *Admiralty List of Radio Signals*. The reporting/convergence points are shown on the chart.

2 **Prohibited area**. Entry of an area extending 50 m from the coast between Torre Perdusemini (39°11′·2N, 9°08′·5E) and Torre Sant' Elia is prohibited because of the danger of rock falls.

9.236

1 **General regulations**. The loading of hydrocarbons, noxious or dangerous liquid cargoes at anchor is prohibited. Tankers due to berth at Porto di Cagliari or Sarroch carrying hydrocarbons, noxious or dangerous cargoes are permitted to wait in the designated anchorages for a maximum of 48 hours. Vessels proceeding from Porto di Cagliari and Sarroch must have authorisation to remain in the roads.

2 Vessels which do not comply with safety, and environmental protection regulations may be refused permission to navigate within the waters of the port and refused permission to enter Porto di Cagliari or Sarroch.

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When a vessel is considered sufficiently deficient to constitute a danger the Port Authority will impose the following:

Use of tugs whilst discharging cargo.

Increasing the number of tugs to assist with berthing and unberthing.

3 Tug assistance to enter and leave harbour; tug at standby within the waiting/anchorage areas.

Pilotage beyond the normal compulsory pilotage area.

Other controls or assistance considered necessary.

Harbour

General layout

9.237

1 The main areas of Porto di Cagliari are Porto Commerciale, which fronts the city, and Porto Canale close W of Porto Commercial.

Development

9.238

1 Porto Canale, still under construction, is a major development to the W of Porto Commerciale and forms a new, self contained industrial port.

Principal marks

9.239

1 **Landmarks:**

Silo (39°12′·6N, 9°06′·2E) (9.200).

Castello di San Michele (39°14′·8N, 9°06′·0E) (9.200) (Chart 1990).

Torre dell' Elefante (square, crenellated, red) (39°13′·0N, 9°06′·9E).

Torre San Pancrazio (turret on SW corner) (39°13′·3N, 9°07′·0E).

Cathedral dome (39°13′·1N, 9°06′·9E).

Sanaturário di Bonaria (white dome, numerous windows) (39°12′·5N, 9°07′·5E).

Lazaretto (light-coloured with red roof) (39°11′·5N, 9°08′·4E).

2 Castello (Forte) Sant' Ignazio (small, grey) (39°11′·5N, 9°08′·7E).

Torre Sant' Elia (39°11′·2N, 9°10′·0E) (9.200).

Major light:

Capo Sant' Elia (39°11′·0N, 9°08′·9E) (9.200).

Directions for entering harbour

(continued from 9.202)

9.240

1 **General information**. The Cagliari TSS leads from Rada di Cagliari to a precautionary area between the entrances to Porto Canale and Porto Commerciale. The W pair of lanes are for traffic entering and leaving Porto Canale; the E pair for traffic entering and leaving Porto Commerciale. Between the pairs of lanes lies a broad separation zone marked by a light-beacon (safe water) near its N end. Inshore Traffic Zones join the precautionary area from the WSW and E.

2 **Porto Canale**. From a position 2½ miles WSW of Capo Sant' Elia Light (39°11′·0N, 9°08′·9E) the TSS lane leads NNE then NNW passing, with positions relative to Capo Sant' Elia Light:

W of a light-beacon (safe water) (1¾ miles W), thence:

Into the precautionary area. The track then leads NW to the entrance to Porto Canale. A dredged channel, marked by light-beacons (lateral), leads NW from the entrance into the main harbour basin.

3 **Porto Commerciale**. From a position 1½ miles WSW of Capo Sant' Elia Light (39°11′·0N, 9°08′·9E) the TSS lane leads NNW passing, with positions relative to the light:

W of a shoal (1¼ miles WSW) with a depth of 8·5 m over it, thence:

ENE of a light-beacon (safe water) (1¾ miles W), thence:

Into the precautionary area. The track continues NNW passing:

4 SW of Nuovo Molo di Levante Head (2 miles WNW) which exhibits a light (white truncated conical tower, green band, 11 m in height).

The track then leads NE passing:

SE of a dangerous wreck (2¼ miles WNW) lying close SE of Secca della Scafa, thence:

Into the harbour entrance.

Useful marks:

5 Molo Meridonale Head Light (red column) (39°11′·5N, 9°05′·6E).

Molo Settentrionale Head Light (green column) (39°11′·7N, 9°05′·8E).

Nuovo Molo di Ponente Elbow Light (red post) (39°12′·1N, 9°06′·6E).

Nuovo Molo di Ponente Head Light (white truncated conical tower, green band, 11 m in height) (39°12′·0N, 9°06′·6E).

Torre Perdusemini (39°11′·2N, 9°08′·5E).

Basins and berths

Basins

9.241

1 **Porto Canale**. The commercial berths lie along the NE side of the main basin; a turning basin lies at its NW end. A small basin at the SE end of the harbour is for pilot vessels, tugs and other service craft.

Porto Commerciale is divided into three main areas:

Nuovo Bacino di Levante between Nuovo Molo di Levante and Vecchio Molo di Levante. Close E of the elbow of Nuovo Molo di Levante three short spurs extend N and form a berth for tankers. The charted obstruction, with a depth of 6 m over it, close E of the central spur is a large concrete block. Banchina San Bartolomeo handles bulk and dangerous cargoes. The NW side of Pennello di San Elmo (del Sale) handles new vehicles. The approach to the berth is indicated by two buoys. Berths in the NW corner of Nuovo Bacino di Levante are reserved for the Italian Navy.

2 **Porto Interno** between Banchina Ichnusa and Molo Sabaudo. Banchina Ichnusa and Vecchio Molo di Levante are reserved for the Italian Navy, the maximum draught accepted at these berths is, respectively 7·5 m and 3·0 m. A Ro-Ro berth extends WNW from the N end of Banchina Ichnusa, maximum draught accepted 6·0 m. Calata Via Roma and the basin fronting it is a passenger ferry terminal. Calata San Agostino, in the NW part of the basin, accepts vessels of maximum draught 7·6 m; used by liners and cargo vessels.

Nuovo Bacino di Ponente lies between Molo Saubado and Nuovo Molo di Ponente. The E side of Molo Sabaudo is used for cargo vessels; passenger and cargo vessels berth on the W side. Molo Renascita provides the main commercial berths in this basin. Three hulks are berthed on the outer part of Nuovo Molo di Ponente. The outer

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part of the breakwater also has a number of obstructions close off it.

Port services

Repairs

9.242

1 There are three slipways within the port and a small floating dock lies within Darsena del Sale. The floating dock accepts vessels of maximum length 90 m and up to 1500 grt. Minor repairs undertaken.

Other facilities

9.243

1 There is a hospital at Cagliari. The port has ten Ro-Ro capable berths. Oily waste disposal facilities available. Deratting and deratting certification conducted.

Supplies

9.244

1 Fuel; fresh water; provisions.

Communications

9.245

1 The nearest airport is at Elmas, 3 km N.

Small craft

Motomar Sada

9.246

1 **General information**. Motomar Sada (39°12′·7N, 9°06′·0E). The harbour lies on the SW side of the entrance to Canale Industriale, separated from the channel by a breakwater. The harbour accepts vessels up to 35 m in length.

Berths. The harbour provides 150 berths in depths of 1·6 to 2·1 m.

Facilities. There are comprehensive small craft facilities available at Cagliari including repairs.

Supplies: fuel; water; provisions.

Marina di Bonaria

9.247

1 **General information**. Marina di Bonaria (Su Siccu) (39°12′·2N, 9°07′·4E) lies in the E part of Nuovo Bacino di Levante on the S side of Pennello Bonaria. The harbour accepts vessels up to 30 m in length.

Berths at quays and pontoons in depths of 1·5 to 7·5 m.

Facilities. Cagliari provides comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Other names

9.248

1 Scafa, Torre della (39°12′·9N, 9°05′·8E)

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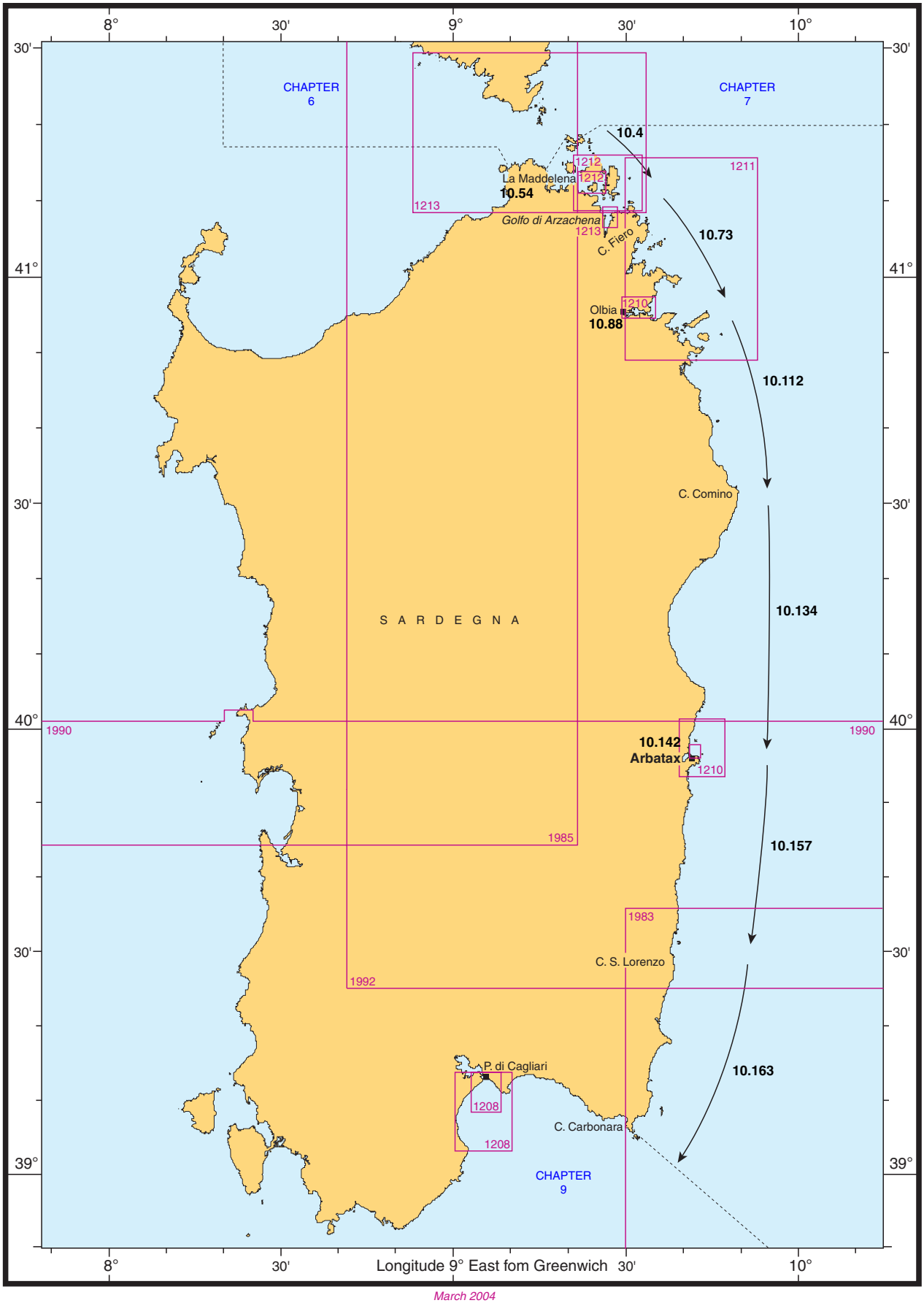
Chapter 10 - Sardegna - North-East and East Coasts



March 2004

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CHAPTER 10

SARDEGNA – NORTH-EAST AND EAST COASTS

GENERAL INFORMATION

Chart 1780

Scope of the chapter

10.1

1 This chapter describes the NE and E coasts of Sardegna between Punta Marmorata (41°15′·5N, 9°14′·1E) and Capo Carbonara (39°06′·2N, 9°30′·9E), the SE extremity of the island.

The chapter is divided into the following sections:

Punta Marmorata to Capo Ceraso (10.3).
Capo Ceraso to Capo Bellavista (10.110).
Capo Bellavista to Capo Carbonara (10.155).

Missile firing area

10.2

1 A large area of the Tyrrhenian Sea E of Sardegna is used for missile firing exercises; the area extends approximately to the 12°E meridian. Specific details of missile firing areas, launch times and regulations for passage through the area are provided in local notices to mariners and broadcast from coast radio stations before firings take place.

PUNTA MARMORATA TO CAPO CERASO

GENERAL INFORMATION

Chart 1992

Area covered

10.3

1 This section describes the NE coast of Sardegna between Punta Marmorata (41°15′·5N, 9°14′·1E) and Capo Ceraso (40°55′·2N, 9°38′·7E), 27 miles SE, including the Arcipelago di La Maddalena (41°15′·0N, 9°25′·0E).

The section is arranged as follows:

Arcipelago di la Maddalena, including the coast of Sardegna from Punta Marmorata to Capo Ferro (10.4).
Capo Ferro to Capo Ceraso (10.73).

ARCIPELAGO DI LA MADDALENA

General information

Chart 1213

Routes

10.4

1 An ocean route leads SE, from the E end of the Bonifacio Strait VTSS (6.180), to Stretto di Messina (38°16′·7N, 14°43′·5E); the route is not described.

A coastal route leads, from a position NE of Isola Razzoli Light (41°18′·5N, 9°20′·4E), 14 miles ESE to a position NE of Capo Ferro (41°09′·5N, 9°31′·6E).

2 An inshore route leads, from the vicinity of Punta Marmorata (41°15′·5N, 9°14′·0E), 14 miles ESE to Capo Ferro, between the coast of Sardegna and Arcipelago di La Maddalena. Inshore routes lead to the commercial port of La Maddalena (41°12′·6N, 9°24′·5E) and the naval base within Rada di San Stefano, close E of it.

Topography

10.5

1 The NE coast of Sardegna is rocky, rugged and indented by numerous coves and small bays. Arcipelago di La Maddalena lies up to 7 miles offshore and consists of seven principal islands; there are numerous smaller islets and rocks within the archipelago. The rocky, red granite islands are not particularly distinctive from seaward.

2 **Isola Razzoli** (48°18′·0N, 9°21′·0E) is the most NW of the archipelago, lying on the S side of the Bonifacio Strait. The island is hilly; Monte Capello, the highest point, lies in the SE part. A light (41°18′·5N, 9°20′·4E) (6.184) is exhibited from the NW part of the rock fringed island. Passo degli Asinelli, see 10.9, separates Isola Razzoli from Isola Santa Maria.

3 **Isola Budelli** (41°17′·0N, 9°21′·0E), hilly, barren and inaccessible. Monte Budello, the highest point, lies in the S part of the island. The coasts of the island provide a rare habitat for molluscs which is of special scientific interest and protected by a prohibited area, see 10.7.

Isola Santa Maria (41°18′·5N, 9°22′·5E) is covered in vegetation and of almost uniform elevation; Monte Guardia del Turco, the highest point, lies in the centre of the island.

4 **Isola Spargi** (41°14′·6N, 9°20′·7E) is rugged with high coasts. When seen from the W the island gradually slopes down to the N end. The coast is fringed by numerous rocks, especially on the W side of the island.

Isola La Maddalena (41°14′·0N, 9°25′·0E) is the most important island of the archipelago and has the largest population. Generally the island is mountainous, rocky and barren with a rocky and inaccessible coast however there are several coves with sandy beaches at their heads. The town of La Maddalena, fronted by a commercial port, lies midway along the S coast of the island; Rada Santo Stefano, a naval base, lies immediately E of the town.

5 **Isola Santo Stefano** (41°12′·0N, 9°24′·7E) separates La Maddalena roads from Rada di Santo Stefano, is flat on its W side but rises to the E then falls precipitously into the sea. The N and W sides of the the island are particularly encumbered by rocks and shoals. Punta dello Zucchero (41°12′·0N, 9°25′·0E) is the highest point of the island.

Isola Caprera (41°13′·0N, 9°28′·0E) is the most elevated and rugged island of the archipelago making it slightly more distinctive from seaward than the remainder. Isola Caprera is separated from Isola La Maddalena by Passo della Moneta. The channel is shallow and encumbered by numerous rocks and dangers.

Depths

10.6

1 The Sardegnian coast and the coasts of the islands of Arcipelago di La Maddalena are generally steep-to but are

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fringed with rocks and dangers. The coastal route, passing NE of Arcipelago di La Maddalena, remains to seaward of the 50 m depth contour and is clear of isolated dangers.

The inshore route along the coast of Sardegna is generally conducted in depths of 25m to 50 m, although the sides of the channel are steep-to they are fringed by rocks and dangers. The routes between the islands, connecting the coastal and inshore routes, have depths of 23 m to 75 m. Although these channels are also steep-to there are a number of shoals and dangers lying within them.

Prohibited areas

10.7

1 Entry to a number of areas, which are part of Arcipelago di La Maddalena National Park, see 10.9, is prohibited; the areas are shown on the chart.

The coasts of Isola Budelli (41°17′·0N, 9°21′·0E) are enclosed by a prohibited area which extends 300 m offshore. In addition to any general regulations governing this part of the national park the following are prohibited within the 300 m area:

2 Navigation stopping and anchoring by power driven vessels.
Removal or damage to any geological or mineral formation.
Fishing by any means.
Any activity which disturbs or damages animal or plant species.
The discharge of any liquid or solid refuse.

3 The introduction of arms, explosives, toxic or polluting substances.
Any activity which interferes with study or research programmes within the area.

Prohibited anchorages

10.8

1 Anchorage is prohibited in the vicinity of the following positions, the full extent of each area is shown on the chart:

41°12′·0N, 9°22′·0E (submarine cables).
41°11′·1N, 9°23′·8E (water pipeline).
41°11′·7N, 9°25′·8E (submarine cables).
41°10′·0N, 9°27′·0E (water pipeline).
41°13′·0N, 9°30′·0E (submarine cables).

Anchorage is also prohibited within other areas lying within Arcipelago di la Maddalena National Park, see 10.9.

Charts 113, 1211

Arcipelgo di la Maddalena National Park

10.9

1 Arcipelago di La Maddalena National Park encloses the islands within the jurisdiction of the La Maddalena local authority and the waters surrounding the islands to approximately 5 cables from the coasts, this includes areas enclosing Isole Nibani (41°07′·7N, 9°34′·1E), Isola Mortorio (41°04′·6N, 9°36′·3E), Isola Soffi (41°03′·8N, 9°34′·5E) and the smaller islands NE of it. The park is controlled by the Harbour Master at La Maddalena. The boundary of the park is shown on the chart and marked by buoys (special, red and yellow). The park is divided into two zones within which differing restrictions apply:

2 Zone Ma. The most important natural environment. The area is marked by buoys (special, red).
Zone Mb. An important natural environment where fewer restrictions apply.

The following restrictions apply to the areas:

Zone	*Regulations*
Ma	The following are prohibited: Fishing using any method. Unauthorised diving. Unauthorised navigation or stopping other than for patrol or rescue. The direct or indirect alteration of the chemical and physical characteristics of the marine environment, including discharge of liquid or solid refuse. Any activity which might damage the marine environment or interfere with research or study programmes. Approaching the nesting colonies of marine birds. The use of arms, explosives, toxic substances and pollutants unless authorised by the Park Authority.
Ma	The following are permitted: Navigation, stopping, anchoring and mooring, solely for the purpose of swimming, between sunrise and sunset.
Mb	The following are prohibited: Fishing using trawls, drift nets or by divers. Removal or damage of geological or mineral formations. Approaching nesting colonies of marine birds. The use of arms, explosives, toxic substances and pollutants unless authorised by the Park Authority.
Mb	The following are permitted: Sport fishing authorised by the Park Authority. Swimming and diving. Navigation, stopping and anchoring beyond 300 m from the coast. The 300 m boundary is marked by buoys (special, yellow). Navigation, stopping and anchoring within 300 m of the coast by authorised vessels. During the summer small craft powered by oars are permitted to approach beaches through approach zones marked by buoys (spherical, yellow).
Ma and Mb	During the period 1 Mar – 30 Oct the following additional restrictions apply: Navigation, approaching, stopping and anchoring in the following areas is prohibited: Porto Madonna (41°17′·6N, 9°21′·0E). The coasts may be approached by small craft propelled by oars and swimming is permitted. Navigation, approaching, stopping, anchoring, swimming and landing are prohibited in an area adjacent to the Spiaggia Rosa district (41°16′·7N, 9°21′·5E) on the SE coast of Isola Budelli. Isolotto Spargiotto (41°15′·0N, 9°19′·4E). Isole Nibani (41°07′·7N, 9°34′·1E). Isola Mortorio (41°04′·6N, 9°36′·3E). Navigation within Passo degli Asinelli (41°17′·8N, 9°21′·6E) and Passo dei Topo (41°17′·3N, 9°21′·8E) is prohibited. The following speed limits apply throughout the park: 3 kn within 1½ cables of the coast. 6 kn within 5 cables of the coast.

Mariners should also note that parts of the park are used for military exercises, both ashore and afloat, and are

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advised to confirm the details of all regulations with the park authorities.

Natural conditions

10.10

1 **Current**. Wind induced currents have the greatest effect and with strong winds can achieve a rate of 3 kn. Generally a weak SE current sets along the NE coast of Sardegna.

Chart 1213

Principal marks

10.11

1 **Landmarks**:

Isola Razzoli Lighthouse (41°18′·5N, 9°20′·4E) (6.184).

Guardia Vecchia Signal Station, disused (six-sided, large windows, red-coloured, surmounted by a tower) (41°13′·3N, 9°24′·0E), illuminated at night.

The following three peaks are clearly visible from W or E but, because of their alignment, merge when viewed from N or S:

Messa del Cervo (41°14′·0N, 9°28′·5E).

2 Poggio Stefano (41°13′·3N, 9°28′·5E).

Punta (Monte) Teialone (41°12′·9N, 9°28′·5E), a small tower stands on the summit.

Radio mast (framework, 40 m in height) (41°12′·1N, 9°28′·2E). The mast stands on a disused battery.

Offshore marks:

Isolotti Barrettinelli di Fuori Light-beacon (black tower red band, isolated danger topmark, 12 m in height) (41°18′·1N, 9°24′·1E).

3 Isolotti Monaci Light (white truncated conical tower, 16 m in height) (41°13′·0N, 9°31′·0E).

Secca dei Monaci buoy (E cardinal) (41°13′·2N, 9°32′·7E).

Major lights:

Isola Razzoli Light (41°18′·5N, 9°20′·4E) (6.184).

Capo Ferro Light (white round tower, two-storey dwelling, 18 m in height) (41°09′·3N, 9°31′·4E).

Other navigational aid

10.12

1 **Racon:**

Isola Razzoli Light (41°18′·5N, 9°20′·4E)

Directions for passage north-east of Arcipelago di La Maddalena

(continued from 6.186 and 7.65)

10.13

1 From a position approximately 3 miles NE of Isola Razzoli Light (41°18′·5N, 9°20′·4E) (6.184) the track leads SE passing, with positions relative to the light:

NE of a dangerous wreck (2½ cables NE), thence:

NE of Isola Capicciolu (1¼ miles E), thence,

NE of Isola la Presa (1¾ miles ENE). A bank fronts the N coast of the island. Spits with least depths of 10 m and 15 m at the outer ends extend respectively 5¼ cables and 3¾ cables N from the W and E ends of the bank. Groups of above water rocks stand on the inner part of both spits. Thence:

2 NE of Punta Filetto Light (tower on white two-storey dwelling, 12 m in height) (2 miles ESE), thence:

NE of Passo Santa Maria (2¼ miles E), thence:

NE of Isolotti Barrettinelli di Fuori Light-beacon (2¾ miles ESE), thence:

NE of Isola Piana (3 miles ESE), thence:

NE of Isola Barrettini (3¼ miles ESE), a distinctive cone shaped peak forms its S part, thence:

NE of Isolotti Barrettinelli (3½ miles ESE), thence:

3 NE of Passo di Barrettinelli (3¾ miles ESE).

(Directions for Passo di Barretinelli continue at 10.44)

Thence:

NE of Punta Marginetto (4¼ miles SE). Dangerous shoals and rocks extend up to 2 cables from the N part of the headland. Thence:

NE of Monte Guardia del Turco (4¾ miles SE). A white beacon stands on the summit. Thence:

4 NE of Punta Lunga (5 miles SE). A pillar stands on the summit of the headland. Thence:

NE of the N entrance to Passo della Moneta (6 miles SE).

(Directions for Passo della Moneta continue at 10.47)

Thence:

NE of Punta Galera (6½ miles SE). The NW extremity of Isola Caprera has dangers extending up to 4 cables N of it and a dangerous wreck lies close off its N extremity. Thence:

5 NE of Punta Coticcio (8½ miles SE), the high, red coloured E extremity of Isola Caprera. Thence:

NE of Isolotti Monaci (9½ miles SE) a group of low, light-coloured rocky islets standing on a steep-to shoal. A light (10.11) is exhibited from the SW islet. Thence:

NE of a shoal with a depth of 12·5 m over it (10 miles SE), thence:

6 NE of Secca dei Monaci (10½ miles SE), a detached shoal with a least depth of 2·8 m over it, marked by a buoy (10.11) moored close E and covered by a red sector (246°–268°) of Isolotti Monaci Light (10.11) and the red sector (189°–203°) of Capo Ferro lower light (12¼ miles SE) (10.11). The N extremity of the shoal has a depth of 13·5 m over it and lies within a white sector (246°–357°) of Isolotti Monaci Light (10.11). Thence:

7 NE of Secca della Bisce (11½ miles SE), an extensive shoal with a least depth of 4·5 m over it. The shoal is covered by a red sector (317°–357°) of Isolotti Monaci Light (10.11) and the red sector of Capo Ferro lower light (189°–203°) (10.11). Thence:

8 NE of Isola delle Bisce (12 miles SE). The island is barren, low-lying and not easily distinguished from its background. A light (white tower green band, 9 m in height) is exhibited from the S side of the island. The island is part of the Arcipelago di la Maddalena National Park and enclosed by Zone Ma, see 10.9; the area is shown on the chart. Thence:

9 NE of Passo delle Bisce (12¼ miles SE). The channel is recommended for vessels approaching Rada di Santo Stefano from the E.

The track then leads to a position NE of Capo Ferro Light (12¼ miles SE) (10.11).

Inshore passage between Sardegna and Arcipelago di La Maddalena

Chart 1213

Description

10.14

1 An inshore route leads generally SE, between the coast of Sardegna and Arcipelago di La Maddalena, from the Bonifacio Strait (41°17′·0N, 9°14′·0E) to a position E of Capo Ferro (41°09′·5N, 9°31′·6E). Rada di La Maddalena (41°12′·3N, 9°24′·0E) and Rada di Santo Stefano (41°12′·0N, 9°25′·8E) may be approached from W or E

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using the inshore channel. Directions for the recommended routes are provided.

Directions

10.15

1 **Punta Marmorata to Rada di Santo Stefano**. From a position N of Punta Marmorata (41°15′·5N, 9°14′·0E) (6.186) Punta Sardegna Light (white two storey building, 13 m in height) (41°12′·5N, 9°21′·8E) bearing about 130° leads towards the inshore channel. Study of the chart suggests the following marks may also be used:

2 **Leading marks**:

Secca Corsara Light-beacon (buoyant, S cardinal) (41°13′·5N, 9°20′·1E).

Punta Sardegna Light – as above.

The alignment (128°) of these marks leads SE into the channel passing, with positions relative to Secca Corsara Light-beacon:

NE of Isole Marmorata (4¾ miles WNW) (6.186). Rocks and dangers surround the islets and obstruct the passage between them and coast of Sardegna. Dangers extend 2 cables NNE of the N islet and a dangerous wreck with a mast showing lies on the N part of the shoal. Thence:

3 NE of Cala Marmorata (4½ miles WNW), thence:

NE of Punta Monterosso (3¼ miles WNW). The headland is fringed with dangers and should be given a berth of 7½ cables. Scoglio Paganetto, a shoal with a depth of 6·5 m over it, lies 5 cables NE of Punta Monterosso and is marked by a beacon (buoyant). Thence:

NE of Secca Colombo (2½ miles WNW), a rocky shoal with a depth of 7 m over it. Thence:

4 The track leads SE passing, with positions relative to Secca Corsara Light-beacon:

SW of Isolotto Spargiottello (1¾ miles NNW), thence:

SW of Isolotto Spargiotto (1¾ miles NNW). The islet is bare and shoals with depths of 2·7 and 3·0 m lie respectively 1½ cables W and 2 cables SW of it. The channel between the islet and Isola Spargi, part of which is a prohibited area, is dangerous and should not be attempted. Thence:

5 NE of the entrance to Porto Pozzo (2¼ miles W), thence:

NE of Punta della Vache (2¼ miles W), the N extremity of Isola di Culuccia. A low wall, built along the ridge climbing to Punta Macchiamala, the highest point of the island, is visible from the NW; a small house with a red roof stands on the summit but cannot be seen from the NW. Thence:

SW of a rocky bank (7½ cables NNW), with a depth of 13 m over its outer part, thence:

6 NE of a rocky shoal (1 mile WSW), with a depth of 16 m over it, thence;

NE of Secca di Macchiamala (1¾ miles SW), thence:

NE of Porto Liscia (2 miles SW), thence:

SW of Secca Corsara (1½ cables NNW), the shoal extends 4½ cables SW from the coast of Isola Spargi and has a least depth of 3 m over it. Thence:

SW of Secca Corsara Light-beacon, thence:

7 To a position on the line of bearing 103° of Scoglio Bianco Beacon (white pyramid, 16 m in height) (2¼ miles ESE). The track now leads ESE passing, with positions relative to Secca Corsara Light-beacon:

NE of Porto Puddu (1½ miles SSW), thence:

S of Cala Corsara (5½ cables NE). A prominent beacon (white pyramid) stands on the E shore of the bay.

Chart 1212

Thence:

8 N of Punta Sardegna (1½ miles SE). The headland exhibits a light, is high, rocky and free from off-lying dangers. Thence:

To a position on the line of bearing 157°of Punta Palau Light (white round truncated tower, green bands, 10 m in height) (3 miles SE). The track then leads SSE passing, with positions relative to Scoglio Bianco Beacon (41°12′·4N, 9°23′·0E):

9 WSW of a shoal (2¾ cables NW), with a depth of 2·5 m over it and marked with a beacon (red and white bands, 3 m in height), lying 1 cable SW of Punta Tegge. The headland is a rocky peninsula and has a small pier extending from its S side. Thence:

WSW of Scoglio Bianco Beacon. The conspicuous beacon stands on the largest and most SW rock of an extensive shoal bank. Thence:

WSW of Secca di Mezzo Passo (3 cables SSW). The rocky shoal has three heads awash and is marked by a light-beacon (isolated danger, 7 m in height). Thence:

10 WSW of the W entrance to Rada di La Maddalena (4 cables S).

(Directions for Rada di La Maddalena W entrance continue at 10.58)

Thence:

To a position on the line of bearing 130°, ahead, of the peak of L'Orso (2½ miles SSE) which resembles a bear. The line of bearing 310°, astern, of Punta Sardegna Light (9 cables W) may also be used. The track then leads SSE passing, with positions relative to Scoglio Bianco Beacon:

11 NE of Rada di Mezzo Schifo (1¼ miles SSW). The bay contains unexploded ordnance, probably from the wreck of the cruiser *Trieste*, sunk here during the Second World War. Thence:

SW of Secca del Palau (7 cables SSE), a rocky shoal on which stand several above water rocks. Secca del Palau SW Light-beacon (S cardinal) marks the S extremity of the shoal; Secca del Palau E Light-beacon (special) marks the NE extremity of the shoal. Thence:

12 NE of Punta Palau Light (1¼ miles S), thence:

SSW of the S entrance to Rada di la Maddalena (1 mile SSE).

(Directions for Rada di La Maddalena S entrance continue at 10.59)

Thence:

SW of Isolotto Roma (9 cables SE), bare and steep. A memorial for those lost from the ship *Roma* stands on an islet close off the W end of the island. Thence:

13 NNE of Palau ferry pier (1½ miles S), thence:

The track leads ESE passing, with positions relative to Scoglio Bianco Beacon:

The alignment (108°) of these marks leads ESE

S of Punta Santo Giorgio (1 mile SSE), thence:

14 S of Forte Santo Giorgio (1 mile SE), thence:

S of Casa Napoleone (1¼ miles SE), a square, stone, two-storey building, thence:

S of Cala di Villamarina (1½ miles SE), thence:

S of Punta Villamarina (1¾ miles SE), from which a light (green column, 6 m in height) is exhibited. A

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rocky bank with depths of less than 4 m over it extends 1 cable SW and a shoal with a depth of 2·4 m over it lies 2 cables ESE of the point. Thence:

15 N of L'Orso (2½ miles SSE), thence:

SSW of Rada di Santo Stefano (2¼ miles SE).

(Directions for Rada di Santo Stefano continue at 10.68)

Thence:

N of Capo d'Orso (2½ miles SE). The headland rises steeply to a barren rocky peak. A light (white truncated tower, 10 m in height) is exhibited from the headland. A conspicuous two-storey house stands close SSW of, and a small quay lies close below, the light.

10.16

1 **Rada di Santo Stefano to Capo Ferro**. The line of bearing 306°, astern, of Forte Santo Giorgio leads SE passing 2 cables off Capo d'Orso (41°10′·6N, 9°25′·4E). Study of the chart suggests Punta Villamarina Light (green column, 6 m in height) (41°11′·2N, 9°24′·6E) bearing 300°, astern, leads SE through the channel 1¾ cables clear of Capo d'Orso. The track passes, with positions relative to Capo d'Orso Light:

2 SW of Isolotto Fico (6 cables ENE). A beacon (white truncated pyramid on square base) stands on the islet. A buoy (starboard hand) marks the extremity of the dangers extending ¾ cable WSW from Isolotto Fico. Thence:

SW of Punta Fico (6½ cables ENE), thence:

NE of Cala Capra (5½ cables SSW). A light (green post and platform, 5 m in height) is exhibited from the head of a small pier (10.32) on the N shore of the inlet. Thence:

3 NE of Golfo Saline (1 mile S) which lies between Punta Capra and Punta Saline, 7½ cables SSE. A mooring buoy for compass adjustment lies in the middle of the bay. The head of the bay is shoal. Thence:

N of Golfo di Arzachena (2½ miles SSE), thence:

4 S of Porto Palma (1½ miles ENE). Pyramidal pillars stand on each side of the entrance and four conspicuous white buildings stand at the head of the inlet. Entry to the N part of the inlet is prohibited because of ordnance, from the second World War, on the sea bed. The extent of the prohibited area is shown on the chart. Thence:

S of Isolotto Porco (1¾ miles E). The islet, marked with a beacon on its NE corner, is fringed with rocks and shoals. An isolated shoal with a depth of 8 m over it lies 1½ cables S of the islet. Thence:

5 To a position SW of Punta Rossa (2¼ miles ESE). The track then leads ESE through the centre of Passo delle Bisce (4¾ miles ESE) passing, with positions relative to Punta Rossa Light (41°10′·1N,9°28′·2E):

NNE of Secca di Tre Monti (8 cables SSW), a shoal with a depth of 5 m over it lying at the E end of a rocky bank. The shoal is marked on its N side by a light-beacon (isolated danger).

6 **Clearing bearing** The line of bearing 300° of the SW extremity of Isola Santo Stefano (41°11′·4N, 9°23′·8E) open NE of Capo d'Orso (41°10′·6N, 9°26′·5E) leads 2½ cables NE of Secca di Tre Monti.

Thence:

SSW of Punta Rossa. The headland is the S extremity of a long narrow promontory connected to Isola Caprera by a narrow, partly sandy isthmus. The promontory is easily recognized by the roofs, bastions and walls constructed on it. A light (green post on green truncated pyramidal building, 4 m in height) is exhibited from the point. Secca di Punta Rossa, a shoal with a depth of 2·2 m over its outer end, extends 1 cable SW of Punta Rossa and is marked with a buoy (starboard hand). Thence:

1 NNE of Capo Tre Monti (1½ miles S), named after the three large, smooth outcrops of rock standing on it. Tre Monti, 3 cables SSE and shown on the chart is the largest and most N of the group. Thence:

SSW of Isolotto Pecora (1 mile NE), fringed by a shoal bank which connects it to the Rossa promontory. The islet is surmounted by a beacon (white pyramid). A shoal, with a depth of 13 m over it, lies 4½ cables S of Isolotto Pecora. Thence:

2 NNE of Punta di Battistone (1½ miles SSE). Cala di Battistone lies on the SW side of the headland. The concrete pier at the head of the inlet is unusable. Thence:

NNE of Stentino dell'Orso (1¾ miles SSE). The inlet is a yacht harbour (10.35); Poltu Quatu a resort complex lies at the head. Thence:

N of Isolotto Cappuccini (1¾ miles SE), a bunker stands on the summit. Thence:

3 N of Capo Ferro Light (2½ miles ESE) (10.11) which marks the dark, rugged, steep-to headland. A conspicuous radio mast stands close E of the light. Thence:

S of Isolotto delle Bisce (2½ miles E) (10.13). A light (10.13) is exhibited from the S coast of the island. Thence:

N of Capo Ferro NE Point Light (white truncated conical tower red band, 10 m in height) (2½ miles ESE), thence:

N of Capo Ferro Signal Station (round, red-coloured, disused) (2½ cables ESE), thence:

4 To a position E of Capo Ferro.

(Directions continue 10.79)

Chart 1213

Anchorages and minor harbour

10.17

1 **Cala Marmorata** (41°15′·0N, 9°14′·4E), anchorage can be obtained within the bay in depths of about 15 m. The head of the bay is rocky and should be given a berth of at least 1 cable. A NW wind can send a heavy swell into the anchorage.

10.18

1 **Porto Pozzo** (41°12′·0N, 9°16′·6E). With local knowledge anchorage can be obtained for small vessels in depths of about 7 m, sand and mud, near the head of this long narrow inlet. A complex of low, light-coloured houses with red roofs stands on NW side of the entrance. The W coast of the inlet is mountainous and rocky. A church standing close to the shore at the head of the inlet is a useful mark when approaching the anchorage. A wooden landing stage used by small craft (10.26) lies on the W side of the inlet.

10.19

1 **Porto Liscia** (41°12′·0N, 9°18′·4E) lies between Isola di Culuccia and Isola di Cavalli, 8 cables E. Anchorage can be obtained in depths of about 18 m, mud, 3½ cables W of

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Isola Cavalli. A more sheltered berth lies in the W part of the bay in depths of 17 to 19 m, sand. Mariners should note the 9·5 m shoal in the middle of the bay and 6·5 m shoal in the vicinity of the W anchorage.

10.20

1 **Porto Puddu** (41°11′·9N, 9°19′·7E) lies between Isola Cavalli and Punta Diego, 7½ cables E. Anchorage can be obtained in a depth of about 8 m, weed, 3½ cables W of Monte Iaccheddu (41°11′·8N, 9°20′·1E). With good local knowledge anchorage for small vessels can be obtained in depths of about 5 m at the head of the inlet, 3½ cables S of Monte Iaccheddu, S of the islet shown on the chart. However there are shoal banks on either side of the approach.

10.21

1 **Cala Corsara** (41°13′·8N, 9°20′·7E) lies at the S end of Isola Spargi. With local knowledge temporary anchorage can be obtained for small vessels, in depths of about 7 m, on the E side of the entrance to the cove, on the alignment of the W and E headlands.

Directions. The cove is approached from the S remaining closer to the E headland, which can be recognised by a light-coloured cleft rock; the headland is steep-to and free from dangers.

Chart 1212

10.22

1 **Palau** (41°10′·9N, 9°23′·1E) is a ferry harbour and marina fronting the village on the W side of the inlet; the marina is known as Porto Stagno. The ferry harbour occupies the NW part of the inlet; passenger and cargo services are provided to La Maddalena. A light (red post green bands, 5 m in height) is exhibited from the N end of the ferry pier. The marina is protected by the S part of the ferry berth complex and a breakwater extending N from a small headland ¾ cable SSE of it. Lights (red and green posts, 5 m in height) mark the entrance to the marina.

2 **Directions**. The harbour is approached from the N passing E of Punta Palau (41°11′·2N, 9°22′·9E), which exhibits a light (10.15) and W of Punta Nera, 6½ cables SE. Secca due Piagge, a rocky bank with a least depth of 1·4 m over it, extends 2 cables WNW of Punta Nera. The W extremity of the bank is marked with a light-beacon (W cardinal). A buoy (starboard hand), moored 70 m NW of the ferry berths, indicates shoal water and a light-beacon marks an obstruction lying 50 m NW of the end of the mole.

3 **Berths**. The ferry harbour is a generally L-shaped mole formed by a broad, elbowed mole extending E from the coast and a second section extending 100 m NNE. Ferries berth on the E and N quays of the mole. There are depths of 6 to 7 m alongside the E quays and 5·5 m at the N and W quays. A small wooden quay, with a depth alongside of 4·5 m, extends W from the root of the W side of the mole. Part of the mole is reserved for military vessels and controlled by the Maddalena Military Command.

Small craft see 10.30.

10.23

1 **Golfo Saline** (41°09′·7N, 9°25′·4E). Anchorage can be obtained in depths of about 16 m, weed, 2½ cables S of Punta Capra.

Chart 1213

10.24

1 **Golfo di Arzachena** (41°08′N, 9°27′E) is entered between Punta Saline and Capo Tre Monti, 2 miles ESE. Although a relatively wide inlet the shores are fringed with shoals. Small craft harbours lie within Cala Bitta, on the E shore, 6 cables S of Capo Tre Monti, and at Cannigioni at the head of the inlet. Isolotto di Ziu Paulu, a low, rocky islet, deep yellow in colour, lies 2 miles SSE of Punta Saline.

Berth. With local knowledge anchorage can be obtained in depths of about 15 m, sand and weed, 6½ cables SSE of Punta Arzachena (41°08′·2N, 9°26′·8E).

Chart 1212

10.25

1 **Liscia di Vacca** (41°08′·8N, 9°30′·5E) lies between Punta Battistone and Isolotto Cappuccini, 7½ cables NE. A bunker stands on the summit of the island and a number of light-coloured hemispherical structures stand on the S slopes above a small quay. The channel E of the island is not recommended.

2 The S side and head of the bay are fringed with a rocky shoal. An isolated rocky shoal, with depths of less than 5 m over it, lies in the S part of the bay marked with a beacon (isolated danger); the shoal should be given a berth of ½ cable. Mariners should note the beacon is often damaged and carried away by the sea. A resort complex and hotel stand on the S shore of Liscia di Vacca, fronted by a small craft jetty.

3 **Berth**. A good anchorage, in depths of about 20 m, weed, can be obtained 2½ cables SSE Isolotto Cappuccini and is shown on the chart. The anchorage is exposed to swell from the NE.

Small craft

Chart 1213

10.26

1 **Porto Pozzo** (41°12′·0N, 9°16′·6E). A small craft haven lies on the W side of the inlet. A wooden landing stage, 70 m in length, provides berths for 80 small craft in depths of 0·5 m to 3·0 m. There are limited small craft facilities.

Chart 1212

10.27

1 **Porto Rafael Yacht Club** (41°11′·8N, 9°22′·0E) is a small yacht haven fronting a resort complex. The haven is protected from the N by a breakwater which extends 50 m NNE from the coast then 60 m ESE. The entrance faces ESE and has depths of about 3 m.

Berths. The haven provides berths for 50 small craft in depths of 3 to 5 m.

Facilities. Some marina facilities. Limited repairs available.

10.28

1 **Porto Rafael** (41°11′·6N, 9°22′·0E) is a boat haven fronting a resort complex within a cove. The haven provides berths at pontoons in depths of 0·5 to 3·0 m. The haven is administered by Porto Rafael Yacht Club.

10.29

1 **Baia di Nelson** (41°11′·3N, 9°22′·0E). Within the bay lies a wooden jetty with alongside depths of 0·5 to 2·5 m.

10.30

1 **Palau, Porto Stagno** (41°10′·7N, 9°23′·1E) lies in the S part of the inlet fronting Palau, immediately S of the ferry harbour (10.22). The entrance faces SE, is 70 m wide, has a depth of about 4 m and is marked by lights (red and green posts, 5 m in height). The marina accepts vessels up to 14 m in length.

Berths. The marina provides 500 small craft berths at pontoons in two basins with depths of 2·5 to 4·0 m.

Facilities. Good small craft facilities including repairs.

Supplies; fuel; water; provisions available.

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10.31

1 **Cala di Villamarina** (41°11′·4N, 9°24′·5E). With local knowledge anchorage can be obtained for small craft in a depth of about 13 m. The shores of the inlet are fringed with rocks and shoals. A long, white, house with arched windows stands at the head of the inlet. A quay with depths alongside of 4 to 5 m lies close to the house.

10.32

1 **Cala Capra** (41°10′·0N, 9°25′·3E) is a small cove on the N side of Punta Capra. Two small piers extend from the N shore of the cove; a group of conspicuous buildings stand behind the piers. The N pier exhibits a light (10.16) and has alongside depths of 1·5 to 3·0 m. The S pier is partly demolished and unusable.

Chart 1213 Golfo di Arzachena

10.33

1 **Cannigioni** (41°06′·5N, 9°26′·6E) is a marina and fishing harbour lying at the head of Golfo di Arzachena. A mole extending 1 cable ESE from the coast protects the N side of the harbour; a light (green post, 5 m in height) is exhibited from the head. The harbour is approached from the N in depths of 3 to 5 m and entered S of the mole head. Vessels up to 25 m in length are accepted.

2 **Berths**. The harbour provides 400 berths at piers and pontoons in depths of 0·5 to 4·0 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions available.

10.34

1 **Cala Bitta** (41°07′·7N, 9°28′·3E) is a small craft haven on the E shore of Golfo di Arzachena. The haven lies within a cove protected from the W by Isolotto dei Mucchi Bianchi. The haven is approached from the NW in depths of about 6 m; within the cove are depths of 2·0 to 4·5 m. Vessels up to 30 m in length are accepted.

2 **Berths**. A T-shaped stone jetty extends ½ cable NW from the head of the cove. Part of the shore SW of the root of the jetty is also quayed and forms a small basin on the SW side of the jetty. The haven provides 183 small craft berths in depths of 1·5 to 3·0 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies; fuel; water; provisions available.

Chart 1212

10.35

1 **Marina dell'Orso, Poltu Quatu** (41°08′·4N, 9°29′·7E) is a resort complex at the head of Stintino dell'Orso, a long narrow inlet; Marina dell'Orso occupies the inlet. The entrance, protected by short moles, from which lights (red and green posts, 4 m in height) are exhibited, faces NNW, is 40 m wide and has a depth of about 5 m. The sides of the inlet are quayed and numerous pontoon jetties extend from the E shore. Small basins lie close inside the entrance and at the head of the harbour. Vessels up to 35 m in length are accepted.

2 **Berths**. the harbour provides 450 berths in depths of 2·4 to 3·4 m

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions available.

10.36

1 **Liscia di Vacca** (41°08′·4N, 9°30′·6E). A concrete pier with wooden deck extends 80 m NE from the S shore of the bay close NE of the resort complex. The jetty has alongside depths of 2 to 4 m.

Passage between Isola Budelli and Isola Spargi

Chart 1213

Description

10.37

1 **General information**. The channel between the islands is 5 cables wide and has depths of 24 to 61 m.

Submarine cables laid between the Bonifacio Strait and the W coast of Italy and between islands of the archipelago pass through this channel and are shown on the chart. Generally the cables lie in depths greater than 50 m.

Directions

10.38

1 From a position NE of Punta Marmorata (41°15′·5N, 9°14′·1E) (6.186) the track leads ESE passing, with positions relative to Isolotto Spargiottello (41°15′·2N, 9°19′·3E) (10.15):

NNE of Scoglio Paganetto (2 miles W) (10.15), thence:

2 NNE of Isolotto Spargiottello (10.15), thence:

SSW of Secca Budelli (1½ miles NNE), a shoal with a depth of 7 m over it, thence:

NNE of Isolotto Spargiotto (1 cable E) (10.15), thence:

3 SSW of Punta Lodi (Punta Cisterna) (2 miles NNE), the W extremity of Isola Budelli. The island is enclosed by Zone Mb of Arcipelago di La Maddalena National Park, see 10.9, a prohibited area extends 300 m from the coast, see also 10.7. Thence:

NNE of bank (8 cables NE). Washington Rock, a shoal with a depth of 6·6 m over it, lies on the NW part of the bank. Thence:

4 NNE of Punta Zanotto (8 cables E), the NW extremity of Isola Spargi; the headland is bare. Thence:

SSW of Monte Budello (2¼ miles NE) (10.5), thence:

SSW of Punta Sud (2 miles NE). A beacon (white) indicating the boundary of territorial waters, see 6.137, within the Bonifacio Strait stands on the headland. Thence:

5 NNE of Punta Bonifazzinca (1½ miles E), thence:

NNE of a shoal (1¾ miles E), with a depth of 20 m over it, thence:

NNE of Cala Ferrigno (1¾ miles ESE), thence:

To a position NNE of Punta Rossa (2 miles ESE), the E extremity of Isola Spargi. A bank, with depths of less than 20 m over it, extends 6 cables NNE of the headland. A shoal, with a depth of 9·2 m over it, lies at the outer end of the bank.

(Directions continue, for the channel E of Isola Santa Maria at 10.42 and for the channels N and W of Isola di La Maddalena at 10.44)

Anchorage

10.39

1 **Cala Girogio Marino** (41°17′·4N, 9°20′·0E). Temporary anchorage can be obtained in depths of 22 to 33 m in the entrance of the inlet, beyond 300 m from the coast, clear of the national park Zone Mb prohibited area (10.9) see also 10.7.

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Chart 1212

Small craft

10.40

1 **Cala Ferrigno** (41°14′·6N, 9°21′·4E). A jetty 85 m in length with depths of 3 m alongside the head, lies within the cove.

Passo Santa Maria and passage East of Isola Budelli

Chart 1213

Description

10.41

1 Passo Santa Maria (41°18′·0N, 9°23′·5E) separates Isola Santa Maria from Isolotti Corcelli, the most N of three groups of islets lying E of Isola Santa Maria and Isola Budelli. The deep, narrow channels between the groups are not described.

Directions

10.42

1 From a position WNW of Isola Razzoli Light (41°18′·5N, 9°20′·4E) (6.184) the track leads SSW through Passo Santa Maria passing, with positions relative to the light:

ESE of a shoal bank (2 miles ENE) (10.13), with a depth of 15 m over the outer end, extending N from the E end of Isola la Presa, thence:

ESE of Isola la Presa (1½ miles ENE) (10.13), thence:

2 ESE of Cala Muro (1¾ miles E), the narrow, shallow channel separating Isola la Presa from Isola Santa Maria, thence:

WNW of Isolotti Barrettinelli di Fuori (2¾ miles E), which exhibits a light (10.11), thence:

ESE of Punta Filetto (2 miles ESE). A light (10.13) is exhibited from the headland. Thence:

WNW of Secca Barrettini (2½ miles ESE), a rocky shoal lying in the middle of the channel, thence:

3 W of Isolotti Corcelli (2¾ miles E), the largest of the most N group of islets, lying on the E side of the channel. The islet is fringed with rocks and shoals. Thence:

ESE of Punta Vecchio Marino (2 miles ESE), thence:

ESE of Cala Santa Maria (1¾ miles ESE). The entrance to the bay is encumbered by a dangerous rocky shoal, marked on its SE side with a buoy (isolated danger). The bay is shallow with numerous rocks. Thence:

4 W of Isola Barrettini (3 miles ESE) (10.13), fringed with rocks, thence:

ESE of Isolotti Stramanari (1¾ miles SE) the most SE islets standing on Secca di Morto, the shoal bank which connects Isola Budelli and Isola Santa Maria at the head of Cala Girogio Marino (10.39). A shoal, with a depth of 7·7 m over it, lies at the outer end of a bank extending 2½ cables SE from Isolotti Stramanari. Thence:

5 WNW of Isolotti Barrettinelli (3½ miles SE), thence:

ESE of Monte Budello (1½ miles SSE) (10.5), thence:

WNW of Passo di Barrettinelli (3¾ miles SE), which leads between Isolotti Barrettinelli and the NW coast of Isola di La Maddalena. Thence:

ESE of Punta Sud (2 miles SSE) (10.38), thence:

To a position WNW of Punta Abbatoggia (3¾ miles SE); a beacon (white, pyramidal) stands on the S part of the headland.

(Directions for Passo di Barrettinelli and passage W of Isola di La Maddalena continue at 10.44)

Passo di Barrettinelli and passage west of Isola di La Maddalena

Description

10.43

1 **General information**. Passo di Barrettinelli (41°16′·4N, 9°24′·6E) leads between Isolotti di Barrettinelli (41°16′·6N, 9°24′·2E) and the NW coast of Isola di La Maddalena. The channel is 4 cables wide and has depths of 50 to 60 m in the middle however depths shoal quickly towards the sides and the shores are fringed with rocks and dangers.

Submarine cables laid between the Bonifacio Strait and the W coast of Italy and between islands of the archipelago pass through this channel and are shown on the chart.

Directions

10.44

1 From a position NNE of Punta Marginetto (41°16′·2N, 9°25′·1E) (10.13) the track leads WSW passing, with positions relative to Punta Abbatoggia (41°15′·7N, 9°24′·0E) (10.42):

N of Guardia del Turco (1 mile E) (10.13), thence:

NNW of a shoal (8 cables NE), with a depth of 2·7 m over it, thence:

SSE of a shoal (1 mile NNE), with a depth of 17 m over it, thence:

2 NNW of Cala Stagno Torto (5¼ cables SE). The bay should only be entered with local knowledge. Thence:

SSE of Isolotti Barrettinelli (9 cables N), thence:

NW of Punta Abbatoggia, thence:

To a position W of Punta Abbatoggia. The track then leads SSW passing, with positions relative to Punta Rossa (41°14′·7N, 9°21′·6E) (10.38):

3 WNW of a shoal (1½ miles NE), with a depth of 19 m over it.

Chart 1212

Thence:

WNW of a bank (1¼ miles ENE), with a least depth of 18 m over it, thence:

ESE of a shoal (6 cables NNE), with a depth of 9·2 m over it, thence:

ESE of Punta Rossa, thence:

4 WNW of Cala d'Inferno (1¼ miles ESE), fringed with rocks and shoals; the bay offers no shelter. Thence:

WNW of Punta Testiccioli (9 cables SE), a small pyramidal beacon stands on the point but is only visible from S. Thence:

ESE of a dangerous wreck (6¼ cables S), thence:

WNW of Cala Francese (1¼ miles SSE), thence:

5 To a position on the line of bearing 157° of Punta Palau Light (3½ miles SSE) (10.15) for passage E. Alternatively proceed to a position on the line of bearing 283°, astern, of Scoglio Bianco Beacon (2¼ miles SSE) (10.15) for passage W.

(Directions continue for the inshore route at 10.15)

Small craft

10.45

1 **Cala Stagno Torto** (41°15′·4N, 9°24′·7E). The bay is fringed with rocky banks; the shore is mainly sandy beach. A small village of white houses stands on the E shore and

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and a resort complex of white bungalows stands on the S shore. An inlet on the E side of the bay provides a small craft harbour; the entrance is marked by lights. The harbour provides berths for vessels up to 7 m in length.

2 **Cala Francese** (41°13′·6N, 9°22′·6E). With local knowledge small craft can obtain limited shelter within the bay. A quay lies on the S shore and another close E of Punta Nido d'Aquila.

Passo della Moneta

Chart 1212

Description

10.46

1 Passo della Moneta (41°14′N, 9°27′E) separates Isola di La Maddalena and Isola Caprera. The S part of the channel, suitable only for small craft, is shallow and encumbered by numerous rocks. A breakwater with a narrow gap, spanned by a low fixed bridge (10.47), further obstructs the S part of Passo della Moneta which is not described.

Directions

10.47

1 From a position W of Punta Galara (41°14′·6N, 9°27′·5E) the track leads S passing, with positions relative to the headland:

W of Cala Napoletana (1 cable S), thence:

To a position E of Isolotto Giardinelli (1 mile SW). Shoals and rocks extend up to 3 cables from the E coast of the islet. The track then leads SSW passing:

2 E of a buoy (starboard hand) (9 cables SSW) marking the SE extremity of the shoals and dangers extending from Isolotto Giardinelli. Isolotti Italiani, a group of three islets and numerous above water rocks, stand on E side of the channel. A shoal, with a depth of 2·4 m over its W side, lies 1 cable E of the buoy. Thence:

SE of a beacon (square, concrete, 1·5 m in height) (1 mile SSW), thence:

3 SE of a beacon (square, concrete, 1·5 m in height) (1½ miles SSW).

The track into Rada di Santa Stefano is only suitable for small craft and local knowledge is essential. Ponte della Moneta (1¾ miles SSW) exhibits. lights (pillars, 4 m in height) from each end of the bridge but they are reported unreliable (2004). The bridge has a vertical clearance of 4·8 m.

Small craft

10.48

1 **Cala Napoletana** (41°14′·5N, 9°27′·7E). Anchorage can be obtained in depths of 2·5 to 4·0 m within the bay, subject to Arcipelago di la Maddalena National Park regulations, see 10.9. Landing is prohibited.

2 **Cala Garibaldi** (41°13′·4N, 9°27′·5E). A jetty belonging to the nearby Club Mediterranèe resort extends from the SE part of the bay and is reserved for boats embarking or landing passengers from the resort. Temporary anchorage can be obtained in depths of 5 to 10 m in the N part of the inlet 2 cables NNW of the jetty.

Passage east of Isola Caprera

Description

10.49

1 A channel leads between the E coast of Isola Caprera (41°13′·0N, 9°28′·0E) and the islands and dangers extending 4½ miles N from Capo Ferro (41°09′·3N, 9°31′·6E) (10.16).

Directions

10.50

1 From a position NNW of Isolotti Monaci (41°13′·1N, 9°31′·1E) the track leads S passing, with positions relative to Isolotti Monaci Light (41°13′·0N, 9°31′·0E) (10.11):

W of a shoal (1¼ miles NE), with a depth of 13·5 m over it. The shoal lies at the N end of Secca dei Monaci, see 10.13. Mariners should note the shoal lies within the white sector (268°–317°) of Isolotti Monaci Light but is covered by the red sector of Capo Ferro Light lower light (189°–203°). Thence:

2 E of Punta Coticcio (1¼ miles WNW), a high, red-coloured headland. Thence:

W of Isolotti Monaci (10.13), thence:

E of Cala Coticcio (1½ miles W), thence:

E of Cala Brigantina (2 miles WSW), the cove has a beach at its head. Thence:

ENE of Cala Portese (2½ miles SW). The S part of the bay is enclosed by a prohibited area, shown on the chart. Two abandoned submarine cables, also shown on the chart, land within the bay. Strong SE winds send a heavy sea into Cala Portese. Thence:

3 To a position W of Secca della Bisce (2 miles SSE), an extensive shoal, see (10.13). The track then leads SSW passing:

ESE of Isolotto Pecora (2½ miles SSW) (10.16). Thence:

4 WNW of a shoal (2½ miles S), with a depth of 5 m over it, at the outer end of a bank extending NW from Isola delle Bisce (10.13). Thence:

ESE of a stranded wreck (2¾ miles SSE); a dangerous wreck lies close SE of it. Thence:

ESE of a shoal (3 miles SSW), with a depth of 13 m over it, thence:

5 To a position ESE of Punta Rossa Light (3½ miles SSW) (10.15).

(Directions for the inshore route are at 10.16)

Anchorage

10.51

1 **Cala Coticcio** (41°13′N, 9°29′E). Anchorage for small vessels can be obtained in depths of 10 to 20 m clear of the prohibited anchorage area shown on the chart.

Small craft

10.52

1 Cala Brigantina (41°12′·3N, 9°28′·7E). The beach at the head of the bay provides a landing.

Small craft

Porto Massimo

10.53

1 **General information**. Porto Massimo (41°15′·5N, 9°25′·6E) is yacht harbour at the head of the inlet Porto Lungo. The harbour is protected from the SE by a rubble faced mole extending S from the coast. A jetty extends E from the shore towards the head of the mole forming the harbour entrance; lights are exhibited from both heads. The entrance faces SW and has depths of about 6 m. However depths can vary within the harbour by as much as 2·5 m. A swell can set into the harbour and in strong N winds heavy seas develop which sometimes break over the mole.

2 **Berths**. The harbour provides 200 berths in depths of 1·5 to 3·5 m.

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Facilities. Limited small craft facilities.
Supplies: water; some provisions.

La Maddalena

Chart 1212

General information

10.54

1 **Position and function.** La Maddalena (41°12′·6N, 9°24′·5E) lies on the S coast of Isola La Maddalena. The commercial port, which fronts the town, gained its importance from the adjacent naval base, at the head of Rada di Santo Stefano, and its proximity to Corse and the Italian mainland. La Maddalena is an important local ferry terminal and has developed as a port of call for cruise vessels.

2 **Topography**. The S coast of Isola La Maddalena is rocky and indented with numerous coves and larger bays, although the shore fronting the town and E to Punta Moneta (41°12′·8N, 9°26′·2E) is now almost completely quayed. An extensive shoal bank fronts the coast W of the town.

3 Isola Santo Stefano (41°12′·0N, 9°24′·7E) lies close off the S coast of Isola La Maddalena; a bank with a shallow channel across it joins the two islands, effectively dividing the large bay between the SW coast of Isola Caprera and Isola La Maddalena. Isola Chiesa lies between Isola Santo Stefano and Isola La Maddalena further encumbering the shallow channel between the islands. Rada di La Maddalena, to the W of Isola Santo Stefano, is a wide, relatively deep channel fringed with rocks and shoals leading to the commercial port.

4 **Approach and entry**. La Maddalena is approached from the WSW through Rada di la Maddalena, entered between Punta Tegge (41°12′·6N, 9°22′·9E) (10.15) and Isolotto Roma, 1 m SE.

Port Authority. Ufficio Circondriale, 1–07024, La Maddalena, Sardegna, Italy.

Limiting conditions

10.55

1 **Controlling depth.** The approach to Porto Commerciale through Rada di la Maddalena has depths of 12·5 to 37 m.

Deepest and longest berths. Vecchia Banchina Commerciale, fronting the E part of Via Amendola; length 100 m, depth alongside 6·8 m. Nuova Banchina Commerciale Quay, fronting the W part of Via Amendola; Length 154 m, depth alongside about 6 m.

2 **Tidal levels**. The mean range is 0·3 m.

Maximum size of vessels handled. Length 150 m, draught 6 m.

Local weather and sea state. Strong W winds can make the harbour uncomfortable and usually blow for three to six days gradually reducing over a similar period. Fog and cloud developing over Corse indicate strong W winds are imminent.

Arrival information

10.56

1 **Port operations**, 24 hours a day.

Port radio. There is a port radio station, see the relevant volume of *Admiralty List of Radio Signals.*

Outer anchorage. Merchant vessels may obtain anchorage within Rada di La Maddalena, in depths of 12·5 to 32 m, S of the town, clear of the prohibited anchorage areas and the submarine cable shown on the chart.

2 **Submarine cables**. Areas containing submarine cables enclose the entrance to Rada di la Maddalena and extend SW from Punta Chiara. Anchoring and fishing within these areas and in the proximity of the submarine cable landed close W of Cala Gavetta are prohibited.

Pilotage. Not usually available. Pilotage assistance can be provided by arrangement with the Italian Navy.

3 **Tugs** are available.

Regulations:

There is a speed limit of 5 kn throughout Rada di La Maddalena.

Ferries have right of way.

Vessels leaving their berth are prohibited from using sound signals.

The use of anchors or off-lying wires or ropes at alongside berths is prohibited.

4 The use of oxy-acetalene, or other naked flames and electric welding must be approved by the Harbour Master before repairs or maintenance commence.

The discharge of any waste into the harbour is prohibited.

The refuelling of any type of vessel using systems or methods that compromise safety is prohibited.

All commercial, recreational or technical activity within the harbour and coastal waters under the jurisdiction of the Port Authority must be approved by the Authority.

Harbour

10.57

1 **General layout**. Porto Mercantile extends E along the front of the town and comprises: Cala Gavetta, Banchina di Via Amendola (fronted by Nuova and Vecchia Banchina Commerciale) and the W part of Cala Mangiavolpe which is divided by Pontile Poste, 1 cable NE of the E end of Vecchia Banchina Commerciale. The quays E of Pontile Poste are reserved for naval vessels.

2 **Landmarks**:

Scoglio Bianco Beacon (41°12′·4N, 9°23′·0E) (10.15).

Forte Santo Giorgio (41°11′·6N, 9°24′·1E) (10.15).

Guardia Vecchia Signal Station (41°13′·3N, 9°24′·0E) (10.11).

College (light-coloured, three-storeys) (41°12′·9N, 9°24′·2E).

Isola Chiesa Leading Light (41°12′·8N, 9°25′·1E) (10.58).

Forte Camicio Leading Light (41°12′·9N, 9°25′·3E) (10.58).

3 Forte Camicio (41°12′·9N, 9°25′·4E). A yellow building with red roof stands on the fort.

Directions for entering harbour

(continued from 10.15)

10.58

1 **West entrance**. From a position on the line of bearing 130° of the peak of L'Orso (41°10′·4N, 9°24′·9E) (10.15), 2½ miles distant, or a position on the line of bearing 310° of Punta Sardegna Light (41°12′·5N, 9°21′·0E) (10.15), 7½ cables distant, the track leads ENE. **Caution**. The following leading line can be obscured by vessels secured to the mooring buoys within Rada di La Maddalena.

2 **Leading lights**.

Front light. Isola Chiesa (white wall, black horizontal stripe, 4 m in height) (41°12′·8N, 9°25′·1E).

Rear light. Forte Camicio (mast, white wall, black stripe, 7 m in height) (1¾ cables from front light).

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The alignment (066°) of these lights leads through Rada di La Maddalena passing, with positions relative to the front light:

SSE of Secca di Mezzo Passo (1¾ miles WSW) (10.15). The danger is marked with a light-beacon (10.15) thence:

3 NNW of Secca del Palau (1¾ miles WSW) (10.15). A light-beacon (10.15) and a beacon mark, respectively, the SW and NE extremities of the danger. Thence:

SSE of Punta Tegge (1¾ miles W) (10.15), thence:

SSE of Scoglio Bianco Beacon (1½ miles WSW) (10.15), thence:

SSE of Secca di Forte Tegge (1½ miles WSW), the S extremity of a a shoal bank, with a depth of 2·7 m over it, marked with a buoy (port hand). Thence:

4 SSE of Secca Padula (1¼ miles WSW). The detached shoal has depths of 3·4 m over it and is marked with a beacon (white masonry); a second beacon (white masonry) stands 1 cable NW of it on the SW extremity of the main bank. Thence:

NNW of Forte Santo Giorgio (1¼ miles SSW) (10.15), thence:

NNW of Secca La Paura (1¼ miles SW), a shoal with a depth of 1·5 m over it, marked with a buoy (starboard hand), thence:

5 SSE of Secca di Punta Nera (1 mile WSW), a large shoal with a depth of 1·3 m over it. A beacon (white pyramid, 3 m in height) marks the NE part and a buoy (port hand) marks the SE extremity of the danger. Thence:

NNW of Secca Chiesa (6½ cables SSW), a shoal with a depth of 1·8 m over it, marked with a buoy (starboard hand), thence:

6 SSE of Cala Gavetta, (6 cables WSW). The entrance to the basin is marked by lights: W Breakwater head (red post 5 m in height), Inner Mole head (green mast, 6 m in height). Thence:

SSE of Banchina di Via Amendola (4½ cables WSW), a light (red post, 5 m in height) is exhibited from the E end of the quay. Thence:

NNW of Scoglio Nasse (4 cables SSW), a white painted rock on the NW extremity of a rocky bank. A beacon (white, pyramidal) stands on the rock. Thence;

7 SSE of Pontile Poste (4 cables W) which exhibits a light (red post green bands, 6 m in height), thence:

To a position between the head of the breakwater extending S from Punta Chiara, which exhibits a light (2¾ cables WSW) (red post, 4 m in height), and a buoy (3 cables SW) (starboard hand) marking the N extremity of a shoal bank extending N from Isola Santo Stefano. The track then leads NW into Cala Chiesa, passing ESE of Punta Chiara Breakwater and W of a bank, marked with buoys (starboard hand), extending W from the island.

(Directions for the channel between Isola Chiesa and Isola Santo Stefano continue at 10.60)

8 **Useful marks:**

La Maddalena church belfry (41°12′·8N, 9°24′·3E).

Colonna Garibaldi (41°12′·7N, 9°24′·3E).

Isola Chiesa radio masts (41°12′·7N, 9°25′·1E).

10.59

(continued from 10.15)

1 **South entrance**. From a position on the line of bearing 130° of the peak of L'Orso (41°10′·4N, 9°24′·9E) (10.15), 1½ miles distant, or a position on the line of bearing 310° of Punta Sardegna Light (41°12′·5N, 9°21′·8E) (10.15), 1½ miles distant, the track leads NNE.

Rada di La Maddalena Leading lights.

Front light. (white hut, black stripes, 1 m in height) (41°12′·8N, 9°23′·8E).

Rear light (white hut, black stripes, 1 m in height) (1000 m from front).

2 The alignment (014°) of these lights leads through the S entrance to Rada di la Maddalena in a least depth of 11·6 m passing, with positions from the front light:

W of Casa Napoleone (1½ miles SSE) (10.15), thence:

W of Forte Santo Giorgio (1¼ miles SSE) (10.15), thence:

W of an isolated shoal (1¼ miles S), with a depth of 3·5 m over it, thence:

3 E of Secca del Palau SW Light-beacon (1¼ miles SSW) (10.15), thence:

W of Isolotto Roma (1 mile S) (10.15), thence:

W of the *Roma* memorial (1 mile S) (10.15). An isolated shoal, with a depth of 2 m over it, lies ½ cable W of the memorial. A beacon (white) stands on the bank which extends NW of Isolotto Roma. Thence:

E of an isolated shoal (1 mile SSW), with a depth of 4·8 m over it, thence:

4 W of the NW extremity of the shoal bank extending from Isolotto Roma. Thence:

E of Secca del Palau E Light-beacon (1 mile SSW) (10.15), thence:

W of Secca La Paura buoy (8½ cables SSE) (10.58), thence:

To a position on the alignment (066°) of Isola Chiesa and Forte Camicio leading lights (9½ cables E) (10.58), the track then leads ENE.

(Directions for the inner part of Rada di La Maddalena continue at 10.58)

10.60

1 **Channel between Isola Chiesa and Isola Santa Stefano**. This channel is only suitable for vessels of maximum draught 3 m. Currents in the channel can be strong, particularly with strong SE or NW winds. The seabed is rocky and irregular.

(continued from 10.58)

Directions. From a position S of Punta Chiara Breakwater Head Light (41°12′·7N, 9°24′·7E) (10.58) the track leads SE, in a least depth of 3·3 m, passing, with positions relative to Isola Chiesa Leading Light (41°12′·8N, 9°25′·1E) (10.58):

2 NE of a buoy (3 cables SW) (starboard hand) marking the N extremity of a bank extending from the NW coast of Isola Santo Stefano, thence:

SSW of a buoy (1½ cables SW) marking the SW part of a bank extending SW from Isola Chiesa, thence:

NNE of a Isola Chiesa SW Light-beacon (3 cables SSW) (green beacon, 5 m in height), thence:

SSW of Isola Chiesa Breakwater Head Light (2 cables S) (red post on hut, 4 m in height).

3 The track then leads E into Rada di Santo Stefano passing:

N of Punta Sassu (3¾ cables SSE, thence:

S of a buoy (2¾ cables SE) (isolated danger) marking the S side of a shoal with a least depth of 3·4 m over it. A shoal with a depth of 4·9 m over it lies close S of the buoy. Thence:

To a position WNW of Punta Sassu (4 cables SSE).

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Berths

10.61

Cala Gavetta is a small craft harbour (10.63). Banchina Via Amendola is mainly used by ferries. The W part of Cala Mangiavolpe provides ferry berths. Pontile Poste is reserved for ferries operating between Palau (10.22) and La Maddalena. Ferry berths are Ro-Ro capable.

Port services

10.62

1 **Repairs**. Minor repairs can be undertaken by arrangement with the Italian Navy.

Other facilities. There is an Italian naval hospital within the naval base. No oily waste reception facilities.

Supplies: water; provisions.

Communications. Nearest airport is at Olbia, 35 km S.

Small craft

10.63

1 **Cala Gavetta** is a yacht and fishing vessel harbour fronting the SW side of the town. The entrance, marked by lights (10.58), lies between the breakwaters protecting the S side of the basin, has depths of 12 m and faces SE. Vessels up to 12 m in length are accepted. The basin provides 300 berths at quays and pontoons in depths of 1·4 to 6·4 m. Comprehensive small craft facilities including machinery and electrical repairs.

Rada di Santo Stefano

General information

10.64

1 **Position and function**. Rada di Santo Stefano (41°12′·0N, 9°25′·8E), a naval harbour, lies between the E side of Isola Santo Stefano and the W side of Isola Caprera.

2 **Topography**. Rada di Santo Stefano is a broad inlet and provides a sheltered roadstead. The W shore, formed by Isola Santo Stefano, is steep-to whereas the E shore, between Punta Fico (41°10′·8N, 9°26′·2E) and Punta Stagnali, 1¼ miles N, is fronted by a narrow coastal bank on which lie a number of shoals and, close inshore, several rocks. There are extensive shoals within 3½ cables SW, W and NW of Punta Stagnali. Cala Stagnali on the E side of the headland is shoal; a shallow channel leads SSE to the Italian naval establishment at its head. Shoals and dangers extend N to the S entrance of Passo della Moneta (10.46).

3 **Approach and entry**. Rada di Stefano is entered from the S between Punta Santo Stefano (41°11′·3N, 9°25′·1E) and Punta Fico, 8½ cables ESE.

Limiting conditions

10.65

1 **Controlling depth.** There are depths in excess of 20 m within the entrance and over much of the roadstead.

Tidal levels, see 10.55.

Local weather and sea state, see 10.55.

Arrival information

10.66

1 **Prohibited anchorage**. Anchorage and fishing within Rada di Santo Stefano are prohibited because of submarine cables. Should it be necessary to anchor in an emergency the Harbour Master must be informed; subsequently approval to weigh anchor must be obtained.

Mooring buoys:

Buoy No	*Position*	*Remarks*
A2	41°11′·8N, 9°26′·0E	A Class
	41°11′·9N, 9°25′·5E	A Class
	41°12′·0N, 9°25′·5E	A Class
B1	41°12′·4N, 9°25′·6E	A Class, telephone
B2	41°12′·4N, 9°26′·0E	A Class
B3	41°12′·1N, 9°26′·0E	A Class

Pilotage and tugs are available.

2 **Prohibited area**. Entry to an area extending from the E coast of Isola Santo Stefano, enclosing naval establishments, quays and jetties, is prohibited. The area, between a position close S of Punta Sassu (41°12′·4N, 9°25′·2E) and a position 1½ cables NNE of Punta Santo Stefano, is shown on the chart.

Harbour

10.67

1 **General layout**. Shore establishments of the Italian Navy occupy much of the E coast of Isola Santo Stefano, the head of Rada di Santo Stefano and within Cala Stagnali on the W coast of Isola Caprera. The main berthing areas are on the E coast of Isola Santo Stafano, including two NATO piers, and at mooring buoys within the roads. Smaller vessels can be accommodated at the head of the harbour.

Landmark:

Forte Camicio (41°12′·9N, 9°25′·4E) (10.57).

Directions for entering harbour

10.68

1 **Approaching from W**. From a position on the alignment (108°) of Punta Rossa Light (41°10′·1N, 9°28′·2E) (10.15) with Capo Ferro Light (41°09′·3N, 9°31′·4E) (10.11) the track leads ESE, passing SSW of Punta Santo Stefano (41°11′·3N, 9°25′·1E). With Molo Carbone Head Light (red post, 6 m in height) (41°12′·8N, 9°26′·0E) open E of Isola Santo Stefano, the track then leads NNE into Rada Santo Stefano. Mariners should note that Molo Carbone Head Light has been reported (2004) unreliable and beware of the unlit mooring buoys within the roadstead.

10.69

1 **Approaching from E**. From a position on the line of bearing 300° of Punta Villamarina Light (41°11′·2 N, 9°24′·6E) (10.16) the track leads 1¾ cables clear of Capo d'Orso. When NNE of Cap d'Orso, and before passing N of the headland, the track then leads NNE into Rada di Santo Stefano.

Berths

10.70

1 **Cala Camiciotto and Cala Camicia** (41°13′·0N, 9°26′·0E) lie at the head of Rada di Santo Stefano. The quays and jetties of the naval base extend E from Hospital Pier (41°12′·8N, 9°25′·5E) to Punta Moneta, 5½ cables E. Generally the berths are only suitable for small vessels. Molo Carbone provides the longest and deepest berths within this part of the naval base; E side length 250 m, alongside depth 4·5 m to 10 m.

West shore of Rada di Santo Stefano. Berths with alongside depths of 10 m lie within the naval base on the E coast of Isola Santo Stefano.

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Small craft

10.71

1 **Isola Chiesa boat channel**. A boat channel leads NE of Isola Chiesa (41°12′·8N, 9°25′·0E). The approach from Rada di Santo Stefano is marked with buoys; a shoal with a depth of 1·2 m over it lies close N of the E side of the entrance. The channel has a least depth of about 2 m and is spanned by a fixed bridge connecting Isola Chiesa and the naval barracks on Isola La Maddalena.

Other names

10.72

1 Alga, Cala d' (41°14′·0N, 9°20′·3E).
Bacca, Cala (41°11′·5N, 9°26′·3E).
Muro, Cala (41°18′·4N, 9°22′·4E).
Sambuco, Cala (41°14′·6N, 9°15′·0E).
Stopello, Punta (41°11′·9N, 9°22′·0E).
Surrea, Rio (41°11′·0N, 9°22′·5E).
Vache, Peninsola della (41°12′·8N, 9°17′·4E).

CAPO FERRO TO CAPO CERASO

General information

Chart 1211

Route

10.73

1 A coastal route leads SE, from a position NE of Capo Ferro Light (41°09′·3N, 9°31′·4E) (10.11), 18 miles SE to a position ENE of Capo Ceraso (40°55′·2N, 9°38′·7E).

An inshore route leads through Golfo di Olbia (40°57′·0N, 9°38′·0E) to Porto di Olbia (40°55′·4N, 9°30′·0E).

Topography

10.74

1 The shores of this coast are generally high and rugged with some stretches of sandy beach. The coast extends SSE in two large bays: Golfo di Congianus, which lies between Punta Capaccia (41°06′·0N, 9°34′·3E) and Capo Figiari, 7½ miles SE, and Golfo di Olbia, which lies between Punta delle Casette (40°58′·0N, 9°35′·6E) and Capo Ceraso, 3¾ miles SE. The shores are indented with numerous bays and coves and fringed with rocks and dangers. Several islands and rocky shoals lie within 3 miles of the coast between Capo Ferro and Capo Capaccia and within the N part of Golfo di Congianus.

Depths

10.75

1 The coastal route remains to seaward of the 50 m depth contour, free from isolated dangers. Generally the coasts and islands are steep-to and the 20 m depth contour lies within 5 cables of the shore. However numerous dangers lie inshore of the 50 m depth contour and considerable caution is needed.

Submarine cables

10.76

1 Areas containing submarine cables extend from the N coast of the Capo Figari peninsula (41°00′N, 9°35′E) and from Golfo di Olbia (40°57′N, 9°38′E); the areas are shown on the chart. Anchoring and fishing are prohibited within them.

Marine nature reserve

10.77

1 Isole Nibani (41°07′·7N, 9°34′·1E), Isola Mortorio (41°04′·6N, 9°36′·3E), Isola Soffi (41°03′·8N, 9°34′·5E) and the smaller islands NE of it, form part of the Arcipelago di La Maddalena National Park. The islands are enclosed by prohibited and restricted areas, see 10.9; the extent of the prohibited area is shown on the chart.

Principal marks

10.78

1 **Landmarks**:
Monte Multalonga (41°07′·4N, 9°31′·2E). The peak is barren and rugged, a small mark stands on the summit.
Punta Turritta Ouest (41°06′·7N, 9°30′·2E). The peak appears to have a conspicuous tower on the summit.
Monte Moro (41°06′·5N, 9°31′·0E).
Capo Figari (40°59′·6N, 9°39′·9E). The headland is steep-to, faced with high cliffs and riddled with caves. The N slopes are light coloured. A disused signal station stands on the summit of the headland with two radio masts close NW.

2 Monte Sa Curi (40°58′·3N, 9°32′·4E).

Offshore marks:
Isole Nibani Light-beacon (yellow, black top, N cardinal topmark, 3 m in height) (41°07′·9N, 9°34′·1E).
Isole dei Poveri Light-beacon (black post, red band, isolated danger topmark, 4 m in height) (41°05′·2N, 9°34′·8E).
Scogli Isole Mortoriotto Light (white conical tower, 3 m in height) (41°05′·2N, 9°37′·1E).

3 **Major light**:
Isola della Bocca (white tower on two-storey dwelling, 22 m in height) (40°55′·2N, 9°34′·0E).

Directions

(continued from 10.16)

10.79

1 From a position NE of Capo Ferro Light (41°09′·3N, 9°31′·4E) (10.11) the track leads SE passing, with positions relative to the light:
NE of Secche del Cervo (1½ miles SE), a rocky shoal with a least depth of 2·3 m over it extending 6 cables NE from the coast. A light-beacon (E cardinal, 2 m in height) stands on the outer part of the shoal. Thence:
NE of Porto Cervo (1¼ miles SSE), thence:

2 NE of Isole Nibani (2½ miles SE). The islands are low-lying, fringed with rocks and difficult to distinguish from the coast; a prohibited area (10.77) encloses them. A light (N cardinal) (10.78) is exhibited from the N end of the N islet. Passo della Galere, 1 cable wide and with depths of less than 10 m, leads between the islands and the coast of Sardegna. Isola delle Rocche lies at the E end of Passo delle Galere; a beacon stands on a submerged rock between the island and the coast. Thence:

3 NE of Monte Zoppu (3 miles SSE) (barren red-coloured), thence:
NE of Punta Capaccia (4 miles SSE), the headland is fringed with dangers extending 1 cable from it. Scogli Capaccia, rocks lying 1 cable S of the headland, are marked by a beacon (isolated danger) Thence:

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NE of Isole dei Poveri (4½ miles SSE). The islands stand on a rocky shoal with dangers extending up to 5 cables E and S. A light-beacon (E cardinal) (10.78), marks the E extremity of the danger. A beacon (isolated danger) and a light-beacon (isolated danger) mark, respectively, rocks at the SE and S extremities of the shoal. The channel inshore of the islands is deep and free from isolated dangers. Thence:

4 NE of Scoglio Isole Mortoriotto (6 miles SE), two dark, steep-to rocks. A light (10.78) is exhibited from the NE rock. Thence:

NE of Isola Mortorio (6 miles SSE), red-coloured rugged and bare. The summit is surmounted by a cairn. Isole Camize, bare and red-coloured, lie on a rocky shoal 5 cables W, separated from Isola Mortorio by a narrow but navigable channel. Isole le Camere, 7½ cables SW of Isola Mortorio, are rugged and covered with sparse vegetation. The NW and SE extremities of dangers in the vicinity of Isole le Camere are marked respectively with N and S cardinal beacons. Isola Sofi is fringed with rocks and dangers. Thence:

5 NE of Punta della Volpe (7¼ miles SSE), the NE extremity of a small peninsula fringed with rocks and shoals. A light-beacon (buoyant, N cardinal) marks the N extremity of the shoals. A villa, with the appearance of a stone fortress, stands on the headland and shows up well from the E. Thence:

NE of Golfo di Marinella (8¼ miles SSE). A submarine cable lands in Marinella Vecchia, the SW part of the bay. Thence:

6 NE of Punta Canigione (8½ miles SSE) from which a rocky shoal, with a depth of 2·5 m over it, extends 1½ cables NW. A light-beacon (N cardinal) marks the N extremity of the shoal. The coast between Punta Canigione and Punta del Mortale, 5 cables SE, should be given a berth of 2½ cables. Thence:

NE of Capo Figari (11¼ miles SE) (10.78), the E extremity of a conspicuous rocky peninsula covered with bushes and low trees. Thence:

7 NE of Isolotto di Figarolo (11¾ miles SSE), small, high, pyramidal in shape and covered with vegetation. A light (white hut, black bands, 6 m in height) is exhibited from the SE side of the island. Thence:

NE of Isola della Bocca Light (14 miles S) (10.78), marking the entrance to Porto di Olbia, thence:

To a position ENE of Capo Ceraso (15 miles SSE) (10.92).

(Directions continue at 10.118 and for Porto di Olbia at 10.92)

Porto di Golfo Aranci

Chart 1211

General information

10.80

1 **Position and function**. Porto di Golfo Aranci (40°59′·7N, 9°37′·3E) is primarily a ferry port with facilities for fishing vessels and small craft.

Topography. Golfo degli Aranci lies between Punta Filasca (40°59′·1N, 9°39′·2E) and Punta delle Casette, 3 miles WSW, in the N part of Golfo di Olbia. The Capo Figari peninsula protects the N and E sides of Golfo degli Aranci. The shore of the bay is indented by numerous small bays and coves and fringed with a coastal bank extending approximately 3 cables offshore.

The fishing village of Golfo Aranci occupies the NE part of the head of Golfo degli Aranci. Within the village stand several prominent buildings; the railway station (red roof, yellow walls), three blocks of flats (central red band on each) standing close NE of the harbour, further N there are two mustard coloured villas and NW of the harbour Hotel Gabbiano Azzurro stands close to the shore.

2 **Approach and entry**. The port is approached through a TSS, shown on the chart, which leads WSW through the N side of Golfo di Olbia to a position S of Golfo degli Aranci.

Port Authority. Autorità Portuale di Olbia e Golfo Aranci, Viale Isola Bianca, Olbia, Sardegna.

Limiting conditions

10.81

1 **Controlling depth.** The approach has depths of 10 m to 45 m.

Deepest and longest berth, Banchina Sud; length 125 m, depth alongside 7·5 m.

Tidal levels. The mean spring range is 0·5 m.

Abnormal water levels. Strong offshore winds, most common during the winter, will reduce predicted tidal heights; the effect is known locally as winter shoals. Strong onshore winds will increase predicted tidal heights.

2 **Maximum size of vessel handled**. The maximum draught accepted is 6·5 m.

Local weather and sea state. During the winter winds with a S component prevail however the *Maestrale* (NW wind) can be exceptionally violent and squalls descend from Capo Figari. The *Scirocco* (SE wind) makes the bay difficult and sends a sea into Porto degli Aranci.

Arrival information

10.82

1 **Outer anchorages.** Anchorage can be obtained at berths A and B, shown on the chart, see 10.90.

Prohibited anchorage. Anchoring, stopping and fishing are prohibited within the TSS and an area, shown on the chart, extending 5 cables SW from the harbour.

Pilotage is available on request.

Traffic separation scheme. A TSS leads WSW through the N part of Golfo di Olbia and is shown on the chart. A traffic separation zone separates it from the TSS leading to and from Porto di Olbia (10.90). There is an associated Inshore Traffic Zone leading S of Isolotto di Figarolo.

2 The TSS is not IMO adopted. The Italian authorities advise that the principles for the use of the routeing system defined in Rule 10 of *The International Regulations for Preventing Collisions at Sea* apply.

Regulations. Speed limits apply to HSC and any vessel of 50 grt or greater, see 10.90. Navigation within 300 m of the commercial berths is prohibited when ferries are berthing or unberthing.

3 **Prohibited area**. A fish haven, shown on Chart 1211, lies 1½ miles WSW of Capo Figaro. The area is marked with a light-float (special, diagonal cross topmark). Navigation, stopping and anchoring in the area are prohibited. Vessels must remain 1½ cables off the area.

Harbour

10.83

1 **General layout**. The harbour consists of three broad quays extending generally SW from a common root; a small craft harbour lies on the N side of the root. The quays form two basins.

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Directions for entering harbour

10.84

1 From a position S of Capo Figari (40°59′·6N, 9°39′·9E) (10.78) the track leads WSW, through the TSS, passing S of Isolotto di Figarolo (40°58′·8N, 9°38′·5E) (10.79) to a position 1½ miles S of the harbour. The passage between Isolotto di Figarolo and Capo Figari is only suitable for small vessels and requires local knowledge. Lights are exhibited from the heads of the quays; Banchina Commerciale (red post, 8 m in height), Banchina Centrale (green mast, 9 m in height) and (red mast, green bands, 8 m in height) Banchina Sud (green post, 8 m in height). The chart is sufficient guide to approach the quays.

Berths

10.85

1 Banchina Commerciale, the most N quay, is used for HSC and small commercial vessels; the maximum draught accepted is 4·5 m. The two S quays are used by conventional passenger and vehicle ferries of Italian State Railways.

Port services

10.86

Facilities. There is a small hospital in Golfo Aranci.

Small craft

10.87

1 A small craft basin, protected by breakwaters, lies on the N side of the harbour at the root of Banchina Commerciale. The entrance faces NNW, is 30 m wide and has a depth of about 7 m. Lights are exhibited from the breakwater heads. The harbour accepts vessels up to 8 m in length and is divided into two basins; the outer basin has depths of 2·0 to 4·5 m, the inner basin, with depths of about 2 m, is reserved for fishing vessels.

Porto di Olbia

Charts 1211, 1210 Porto di Olbia

General information

10.88

1 **Position.** Olbia (40°55′·4N, 9°31′·0E) lies at the W end of a long narrow inlet at the head of Golfo di Olbia.

Function. Olbia is an important ferry port which also handles general cargo services between Sardegna and the Italian mainland.

2 **Topography.** Golfo di Olbia is entered between Punta delle Casette (40°58′·0N, 9°35′·6E) and Capo Cesaro, 3¾ miles SE. The coast N of Isola Bocca (40°55′·2N, 9°34′·0E) is generally low lying but rises quickly to the conspicuous peak of Monte Sa Curi and the associated ridge. The shore is indented and fringed with rocks and shoals. To the S of the island the red-coloured, rocky coast is encumbered with numerous shoals; in the vicinity of Capo Cesaro there are a number of above water rocks and islets. Monte Maladromi rises conspicuously close SW of Capo Cesaro. The shores of the inlet leading to Olbia and the land surrounding the harbour are low and marshy; the delta of Fiume Padrogiano lies on the S side.

3 **Approach and entry.** Porto di Olbia is approached through a TSS, shown on Chart 1211, leading WSW through Rada di Olbia, to a position NE of the entrance channel. The harbour is entered N of Isola Bocca through the marked channel leading W to the port.

Traffic. In 2002, the port was used by 89 ships with a total of 10 191 087 dwt.

4 **Port Authority.** Autorità Portuale di Olbia e Golfo Aranci, Viale Isola Bianca, Olbia, Sardegna.

Limiting conditions

10.89

1 **Controlling depth.** The marked channel has a least depth of 6·3 m.

Deepest and longest berth. Pontile Isola Bianca, also known as Olbia Marittima, depths alongside of 7 to 10 m. Pontile Benedetto Brin South Quay; length 555 m, alongside depths of about 6 m.

Tidal levels. Mean spring range 0·5 m.

2 **Abnormal water levels.** Strong offshore winds will reduce predicted tidal heights, conversely strong onshore winds increase predicted heights.

Maximum size of vessel handled. The maximum draught accepted is 9 m.

3 **Local weather and sea state.** The *Ponente* (W wind) prevails during the winter and can make the harbour difficult; a heavy sea is raised at the harbour entrance.

Arrival information

10.90

1 **Port operations.** 24 hours.

Port radio. There is a port radio station, see the relevant volume of *Admiralty List of Radio Signals.*

Outer anchorages. Anchorage can be obtained at berths A, B, and C shown on Chart 1211 The anchorages are restricted to vessels of less than 100 m in length. Vessels intending to anchor or weigh anchor within Golfo di Olbia are to advise Olbia Harbour Master and the Pilot Station using VHF.

Liscia delle Saline (40°54′·5N, 9°34′·8E). Temporary anchorage, in offshore winds, for smaller vessels can be obtained in depths of about 6 m within the bay. The shore is low and marshy, Isolotto Patron Fiaso lies 1½ cables off the head of the bay.

Submarine cables. An area enclosing submarine cables extends ENE from the coast and is shown on Chart 1211. Anchoring and fishing within the area are prohibited.

2 **Pilotage** is compulsory for all vessels of 600 grt or greater and, with 2 hours notice, available 24 hours a day. The pilot boards about 1 mile from Isola della Bocca Light (40°55′·2N, 9°34′·0E), see the relevant volume of *Admiralty List of Radio Signals.*

Tug. A tug is available and obligatory for vessels of 1600 tons or greater.

Regulations. All vessels required to approach Porto di Olbia through the TSS must remain 1½ miles from the coast until they have entered the TSS.

The following speed limits apply to all HSC and any vessel of 50 grt or greater:

Position	*Speed limit/remarks*
Between the line joining Capo Figari (40°59′·7N, 9°39′·9E) and Punta Timone (40°55′·6N, 9°44′·2E) and the meridian 9°39′·7E.	23 kn (turbines disengaged)
Between the meridians 9°39′·7E and 9°38′·5E.	18 kn

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Position	*Speed limit/remarks*
Between the meridians 9°38′·5E and 9°37′·5E.	15 kn
Between the meridian 9°37′·5E and the outer end of the marked channel (40°55′·3N, 9°34′·3E)	12 kn
Within the marked approach channel W of 40°55′·3N, 9°34′·3E.	10 kn

Traffic separation scheme. A TSS leads WSW through Rada di Olbia into Golfo di Olbia and is shown on Chart 1211. A traffic separation zone separates it from the TSS leading to and from Golfo degli Aranci (10.80).

The TSS is not IMO adopted. The Italian authorities advise that the principles for the use of the routeing system defined in Rule 10 of *The International Regulations for Preventing Collisions at Sea* apply.

3 **Vessel Traffic Service Scheme.** A mandatory VTSS is in operation, for the control of shipping, for all HSC and any vessel of 50 grt or greater entering and leaving Porto di Olbi. The following reporting points have been established:

The line joining Capo Figari (40°59′·7N, 9°39′·9E) and Punta Timone (40°55′·6N, 9°44′·2E).
Longitude 9°39′·7E.
Longitude 9°37′·5E.
Outer end of the marked approach channel (40°55′·3N, 9°34′·3E).

4 Reports are to be made to Olbia Harbour Master using VHF and to include vessel speed.

Marine farms. Shellfish beds occupy large areas of the coastal banks of the inlet leading to Olbia. Mariners should note the prohibited anchorage areas enclosing the beds.

Harbour

10.91

1 **General layout.** The port comprises three areas:

Isola Bianca, the main ferry terminal at the E end of Pontile Isola Bianca (40°55′·4N, 9°31′·2E).

Porto Interno, which handles passenger ferries and Ro-Ro vessels, close E of the town. A dredged channel leads S of Pontile Isola Bianca to the basin.

Zona Industriale, comprising two piers on the N shore of the harbour; a dredged channel leads N of Pontile Isola to Pontile Palmera, the W pier.

2 **Development.** Works are in progress (1999) in the NE part of the harbour

Tidal stream. The tidal stream can attain rates of 3 to 4 kn in the vicinity of Isola Bocca but is negligible at the head of the harbour.

Landmarks:

Capo Figari Signal Station (40°59′·8N, 9°39′·2E) (10.78).
Monte Sa Curi (40°58′·3N, 9°32′·5E) (10.78). A secondary lower peak lies close S.
Cathedral dome (grey) (40°55′·4N, 9°30′·1E).

3 Monte Maladromi (40°54′·5N, 9°37′·4E) (10.88).

Major lights:

Isola della Bocca (40°55′·2N, 9°34′·0E) (10.78).
Punta Timone (white, multi-sided tower, 7 m in height) (40°55′·5N, 9°44′·2E).

Racon:

Isola della Bocca – as above.

Directions for entering harbour

10.92

1 From a position 2½ miles SE of Capo Figari (40°59′·7N, 9°39′·9E) (10.78) the track leads WSW, through the TSS, passing, with positions relative to the headland:

NW of Punta Timone (5 miles SE), the N extremity of Isola Tavolara (10.113), from which a light is exhibited (10.91). Thence:
SSE of Capo Figaro Signal Station (5½ cables WNW), thence:

2 SSE of Isolotto di Figarolo (1¼ miles SW) (10.79), Thence:
NNW of Capo Ceraso (4½ miles SSW), surmounted by a tower. Shoals extend 4 cables from the E side of the headland and are marked at the NE extremity by a buoy (E cardinal). Isolotto Barca Sconcia and an unnamed islet, marked by a beacon (white truncated pyramid, 4 m in height), stand on the shoal bank. Thence:

3 N of a light-buoy (N cardinal) (4¼ miles SSW), marking a shoal bank, on which stand numerous rocks and islets. Thence:

4 To a position at the inner end of the inbound traffic lane. The track then leads SW passing:
SE of Punta delle Casette (3¾ miles WSW), thence:
NW of Punta Ruia (5 miles SSW), high, prominent surmounted by a beacon (white, pyramidal), thence:
SE of Secca dei Porri (4½ miles SW), a shoal with a depth of 3·5 m over it. Thence:

Chart 1210 Porto di Olbia

To a position N of Punta Saline (6¾ miles SW). The track now leads W between the light-beacons marking the entrance channel. The chart is sufficient guide to approach Olbia.

Berths

10.93

1 **Isola Bianca** provides seven berths for vessels providing scheduled ferry services.

Porto Interno. The basin provides berths for commercial vessels on the S side of Molo Benedetto Brin and E side of Molo Vecchio.

Zona Industriale. Pontile Palmera is the main berth and accepts vessels of maximum draught 5·8 m alongside the pier head. The quay is 62 m in length.

2 **Anchorage:**

Inner harbour. Anchorage can be obtained in depths of about 7 m, mud, good holding ground, NE of Pontile Isola Bianca head.

Port services

10.94

1 **Repairs**. Minor repairs only.
Facilities. There is a hospital.
Supplies: fuel; water; provisions in small quantities only.
Communications: Vena Florita Airport lies 6 km S.

Small craft

10.95

1 **Porto Vitello** (40°55′·1N, 9°37′·0E). With good local knowledge the cove may be used as a boat haven.

Isolotto Porri anchorage (40°57′·5N, 9°35′·1E). Anchorage can be obtained in depths of 2 to 7 m in a cove W of the islet.

Scalo dell Draghe (40°55′·5N, 9°33′·5E) a small landing place within the N side of the harbour entrance. The cove has depths of about 2 m.

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2 **Porto Interno**. The port accepts small craft up to 20 m in length and provides 300 berths in depths of 2 to 7 m. There are comprehensive small craft facilities including repairs.

Anchorages

Chart 1211

Golfo Pero

10.96

1 Golfo Pero (41°07′·5N, 9°33′·0E) lies between Punta Pero (41°08′·0N, 9°32′·7E) and a point 1 mile SE. Anchorage can be obtained in depths of about 13 m within the bay. A rocky shoal extends NNW from the SE headland and is marked with a beacon (N cardinal). The shores of the bay are fringed with rocks.

Cala Volpe

10.97

1 Cala Volpe (41°04′·6N, 9°32′·5E) lies between Punta dei Capriccioli and Punta Ligata, 9 cables SSW. A light (white truncated conical tower, 3 m in height) is exhibited from Punta Ligata. Anchorage can be obtained in depths of about 20 m, sand and weed, 5 cables SW of Punta dei Capriccioli. Monte dell'Isola, standing above Punta Ligata is a useful mark. The entrance to a cove on the N side of Cala Volpe is marked by light-beacons: E side (white mast, black bands, square base, 6 m in height), W side (white mast, red bands, square base, 6 m in height). Small craft can obtain anchorage (10.100) within the cove.

Golfo di Cugnana

10.98

1 Golfo di Cugnana (41°02′·3N, 9°32′·4E) lies between Punta Ligata (41°03′·8N, 9°32′·4E) and Punta della Volpe, 2 miles SSE. Monte Congianus (elevation 650 m) (41°01′·2N, 9°28′·2E), close W of the head of the bay, has a small saddle in the summit. Anchorage can be obtained in a depth of 15 m, 1¼ miles W of Punta della Volpe. Isolotto Portisco, surrounded by rocks and shoals, lies 1½ miles WNW of Punta della Volpe; the islet is low, dark and difficult to distinguish from distance. Rocks and dangers fringe Punta della Volpe.

Small craft

Porto Cervo

10.99

1 **General information**. Porto Cervo (41°08′·1N, 9°31′·7E) is one of the most important yacht harbours in the Mediterranean occupying a long inlet surrounded by a resort complex. The former commercial harbour, Porto Vecchio, close inside the entrance on the S side of the inlet, now provides facilities for all types yachts. A large modern marina, Porto Cervo Marina, occupies the W end of the inlet and is protected from the E by an angled mole extending generally SE from the N shore. The marina entrance lies between the head of the mole and the S shore. Vessels up to 100 m in length are accepted. The harbour has a radio station and pilotage is available.

Regulations. Generally berths are only available to visiting yachts by prior arrangement. There is a speed limit of 3 kn in the vicinity of all berths.

2 **Directions**. From a position E of Secche del Cervo Light-beacon (41°08′·6N, 9°32′·8E) (10.79) the track leads WSW.

Leading lights:

Front light (white mast on white square tower, black stripe, 8 m in height) (41°08′·0N, 9°31′·4E).

Rear light (white square tower, black stripe, 3 m in height) (270 m from front).

The alignment (252°) of these lights leads into the outer harbour in a least depth of 12 m passing:

S of Secche del Cervo (10.79), thence:

3 Through the entrance which is marked with lights; Punta Cervo (green truncated conical tower, 5 m in height), S side (red truncated conical tower, 5 m in height). The N shore of the entrance is low and bare, the S shore higher, darker in colour and partly covered with vegetation. Thence through the outer harbour to the marina entrance which is marked with lights.

4 **Anchorage** can be obtained in depths of about 7 m in the N part of the outer harbour. The shoals extending from the N coast are marked by red buoys but should not be relied upon.

Berths. The harbour provides 800 berths in depths of 1·7 m to 7·0 m.

Facilities. Comprehensive small craft facilities including repairs. There is a slipway of 300 tons capacity.

Cala Volpe

10.100

1 Cala Volpe (41°04′·6N, 9°32′·5E). With local knowledge anchorage for small craft can be obtained, in depths of 2 to 5 m, within a cove in the N part of the bay. The entrance to the cove is marked by light-beacons (10.97). Within the cove a shoal, with a depth of 2·7 m over it, is marked with beacons. At the head of the cove a wooden pier extends 150 m from an islet; the pier has an alongside depth of about 1 m. An hotel stands on the islet.

Cala Razza di Giunco

10.101

1 Cala Razza di Giunco (41°03′·2N, 9°31′·8E). Anchorage can be obtained in depths of about 10 m, 1½ cables off.

Marina di Portisco

10.102

1 **General information**. Marina di Portisco (41°02′·0N, 9°31′·5E), also known as Marina di Santa Petra. The marina is is protected by an angled Outer Mole and an L-shaped Inner Mole. Lights are exhibited from the heads of the moles. The entrance has depths of about 12 m, is 60 m wide and faces SSE. Vessels up to 100 m in length are accepted.

2 **Anchorage** can be obtained in depths of 7 m to 10 m, sand and weed, off the harbour entrance. Smaller vessels can obtain anchorage in depths of about 6 m, mud and weed, in the mouth of Porto di Cugnana, a shallow bay S of the harbour entrance. Mariners should note the prohibited anchorage area within Porto di Cugnana which encloses a submarine power cable.

Berths. The harbour provides 600 berths at quays and pontoons in depths of 3 to 12 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions available.

Porto Rotondo

10.103

1 **General information**. Porto Rotondo (41°01′·7N, 9°32′·7E) is a marina developed from a natural cove on the SE side of Golfo di Cugnana. Villas and flats surround the basin. The harbour is protected by short breakwaters extending from the headlands of the cove and form the

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NW facing entrance, which has a depths of 5·5 m. Lights exhibited from the breakwater heads mark the entrance. A sectored light (white post, 6 m in height) is exhibited from a rubble breakwater extending NW from the root of N Mole; the red sector (215°–240°) covers the dangers extending NW and W of Punta della Volpe (10.79), 7½ cables NE of the harbour. Vessels up to 35 m in length are accepted. There is a speed limit of 3 kn within the harbour.

2 **Berths**. The harbour provides 650 berths, mainly at pontoons, in depths of 1·5 to 5·5 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions available.

Porto Oro
10.104

1 **General information**. Porto Oro (41°00′·6N, 9°33′·1E), also known as Palumbalza, is an artificial small craft haven on the W side of the head of Golfo di Marinella. A short rubble breakwater protects the NE side of the short channel leading to the harbour basin. The entrance, marked by lights, faces ESE, has a depth of 2·8 m and is 15 m wide. Vessels up to 14 m in length are accepted.

Berths. The harbour provides 50 berths in depths of 1·2 to 3·0 m.

Facilities. Good small craft facilities including machinery and electrical repairs.

Supplies: fuel; water; provisions available.

Marana Yacht Harbour
10.105

1 **General information**. Marana Yacht Harbour (41°00′·1N, 9°33′·6E) is an artificial harbour at the head of Golfo di Marinella. A short rubble breakwater extending NW from the coast forms the W side of the entrance; an angled, rubble faced, mole extending NW protects the E side. Lights exhibited from the heads of the breakwaters mark the entrance. Buoys and light-buoys mark the approach channel. The entrance faces NW, is 40 m wide and has depths of about 3 m. A short channel leads SSE into the basin. The harbour accepts vessels up to 16 m in length.

2 **Berths**. The harbour provides 320 berths mainly at pontoons in depths of 2·5 m to 3·0 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions available.

Cala Moresca
10.106

1 Cala Moresca (40°59′·2N, 9°38′·8E) provides shelter for small craft. Anchoring and fishing are prohibited within the cove because of submarine cables.

Baia Caddinas Yacht Harbour
10.107

1 **General information**. Baia Caddinas Yacht Harbour (40°59′·7N, 9°36′·2E) is a small yacht harbour at the head of Golfo degli Aranci. The entrance lies between two moles, marked by lights, faces SW and has depths of 4·5 m. Vessels up to 15 m in length and maximum draught 2·5 m are accepted.

2 **Berths**. The harbour provides 115 berths in depths of 1·0 to 2·5 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions available.

Porticciolo
10.108

1 Porticciolo (40°59′·2N, 9°35′·2E). With local knowledge the cove affords small craft shelter in offshore winds; depths are shoal close off it and Isola di Porritula lies in the entrance.

Other names
10.109

1 Liscia Ruja, Cala (41°04′·0N, 9°32′·2E).

CAPO CERASO TO CAPO BELLAVISTA

GENERAL INFORMATION

Chart 1992

Area covered
10.110

1 This section describes the E coast of Sardegna between Capo Ceraso (40°55′·2N, 9°38′·7E) and Capo Bellavista (39°55′·8N, 9°42′·8E), 60 miles S.

The section is arranged as follows:

Capo Ceraso to Capo Comino (10.112).

Capo Comino to Capo Bellavista (10.134).

Topography
10.111

1 The E coast extends generally SSE from Capo Cesaro to Capo Comino (40°31′·8N, 9°49′·7E), the E extremity of Sardegna. The appearance of the coast changes noticeably S of Punta Sabbatino (40°48′·7N, 9°41′·3E), here, and as far S as Capo Comino, it is low-lying, sandy and backed by a coastal plain which is occasionally marshy. The land here is farmed and provides a notable contrast to the rocky, rugged appearance of much of the island.

To the S of Capo Comino hills once again rise close inland and the coast extends S in a series of wide bays, often with rocky headlands separating stretches of sandy beach. In places the sandy coast is backed by low-lying marsh and saltwater lagoons. This contrast of features typifies the appearance of the remainder of the E coast S to Capo Carbonara (39°06′·2N, 9°30′·9E).

CAPO CESARO TO CAPO COMINO

General information

Chart 1992

Route
10.112

1 A coastal route leads 27 miles S, from a position ENE of Capo Ceraso (40°55′·2N, 9°38′·7E), to a position E of Capo Comino (40°31′·8N, 9°49′·7E).

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Inshore routes, suitable only for smaller vessels, lead between Isola Tavola, Isola Molara and the coast of Sardegna.

Topography

10.113

1 **General information**. The generally rugged, rock fringed coast, fronted by islands and dangers, typical of the NE coast of Sardegna, continues SE of Capo Cesaro to the vicinity of Capo Coda Cavallo (40°50′·5N, 9°43′·6E) where there is a notable change in its appearance. To the S of Capo Coda Cavallo an extensive plain lies between the mountains of the interior and the coast. The coast itself is low-lying and sandy which can show white from offshore; the plain is marshy in places. The appearance given to the land by farms and scattered villages contrasts sharply with the harsher landscape typical of much of the remainder of the E coast and Sardegna in general.

2 **Isola Tavolara** (40°54′·4N, 9°42′·8E) is narrow, high, almost inaccessible and has an almost level summit. Punta Cannone, the highest point, stands at the SW end of the island. The SE and NW coasts are steep-to but a large shoal bank extends from the SW extremity of the island towards a bank extending from the coast of Sardegna. A narrow channel separates the banks.

3 **Isola Molara** (40°52′·2N, 9°43′·6E) lies between Isola Tavolara and Punta Coda Cavallo (40°50′·5N, 9°43′·6E). The island is lower than Isola Tavolara, has an undulating shape and is partly cultivated; its shores are fringed with reefs and shoals extending up to 3 cables offshore. A bank, on which stands the dangerous shoal of Scogli Tre Fratelli (40°51′·8N, 9°45′·7E), extends 2 miles from the E coast of Isola Morola. Isola Molarotto, conical and reddish in colour stands on the NE part of the bank.

Depths

10.114

1 The coastal route remains in deep water to seaward of the 100 m depth contour and is free from isolated dangers; inshore of this, approximately 5 miles from the coast, the sea bed shoals quickly. With the exception of the dangers associated with Isola Molara (40°52′·2N, 9°43′·6E) and an isolated shoal, with a depth of 13·8 m over it, 3¼ miles S of Capo Coda Cavallo, the 20 m depth contour lies within 1 mile of the coast. There are a number of rocks and dangers close inshore, particularly in the vicinity of the islands and headlands.

Charts 1211, 1992

Tavolara-Punta Coda Cavallo Marine Nature Reserve

10.115

1 The Tavolara-Punta Coda Cavallo Marine Nature Reserve encloses an area between the S side of Capo Ceraso (40°55′·2N, 9°38′·7E) and Cala Finnocchio (40°46′·0N, 9°41′·6E), including the islands of Tavolara (40°54′·4N, 9°42′·8E), Molara (40°52′·1N, 9°43′·6E) and Molarotto (40°52′·5N, 9°46′·7E); the boundary is shown on the chart. The reserve is divided into three zones, also shown on the chart, which are subject to differing regulations:

Zone	*Regulation*
A	The following are prohibited: Navigation, except for authorised vessels. Fishing by any method. Swimming. The following are permitted: Guided visits including diving. Authorised research including landing.
B	The following are prohibited: Trawling and sport fishing. The following are permitted: Navigation at slow speed. Guided tours including diving. Swimming. Fishing using authorised methods by local fishermen.
C	The following are prohibited: Anchoring. The following are permitted: Navigation. Diving. Fishing using authorised methods.

Full details of current regulations should be obtained from the local authorities.

Chart 1992

Local magnetic anomaly

10.116

1 Local deflection of the compass is reported to occur between Golfo degli Aranci (40°59′·3N, 9°37′·0E) and Arbatax (39°56′·3N, 9°42′·2E).

Principal marks

10.117

1 **Landmarks:**

Monte di Punta Maggiore (conical, dark) (40°43′·8N, 9°34′·7E).

Castello della Fava (40°38′·4N, 9°43′·4E). The W part of the castle is ruined.

Monte Albo (40°31′·8N, 9°36′·0E). The range lies W of Capo Comino between Punta Cuppetti NE and Punta Catirina (SW) and shows white, above the darker range in front of it, when seen from distance.

2 **Major lights:**

Punta Timone (40°55′·5N, 9°44′·2E) (10.91).

Capo Comino (white square stone tower and dwelling, 20 m in height) (40°31′·7N, 9°49′·7E).

Directions

(continued from 10.79)

10.118

1 From a position ENE of Capo Ceraso (40°55′·2N, 9°38′·7E) (10.92), the track leads S passing, with positions relative to Capo Comino Light (40°31′·7N, 9°49′·7E):

ENE of Golfo Spurlattà (24 miles NNW), thence:

ENE of Punta Timone (24¼ miles NNW). The peninsula, joined to the island by an isthmus, forms the NE extremity of Isola Tavolara. A light (10.91) is exhibited from the point. Thence:

ENE of Cala del Faro (24 miles NNW), a light (yellow beacon, diagonal cross topmark) is exhibited from the SE headland of the cove. thence:

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2 E of Isola Molarotto (21 miles N), thence:
E of Isola Molara (21 miles NNW), thence:
E of Scogli Tre Fratelli (20½ miles N). The danger comprises of above water rocks and shoals, with depths of 1·8 m to 10 m over them, lying up to 4 cables from the three rocks. Mariners are advised not to attempt the channel separating Scogli Tre Fratelli from Isola Molarotto. Thence:
E of a dangerous wreck (19¾ miles NNW), thence:
E of Capo Coda Cavallo (19½ miles NNW), a reddish-coloured headland, thence:

3 E of Porto Brandinchi (18¾ miles NNW). Isola Ruia, red-coloured and easily identified, lies on the N side of the mouth of the bay. The head of Porto Brandinchi is divided into two coves, both with white sand beaches. Scoglio Testa di Moro, triangular and difficult to see, particularly in rough weather, lies 3½ cables S of Isola Ruia; Porto Brandinchi should only be entered between Isola Ruia and Scoglio Testa di Moro. Thence:

4 E of Punta Sabbatino (18 miles NNW), thence:
E of San Teodoro d'Oviddè (16¼ miles NNW). Although partly hidden by trees the village contains a white belfry; SSW of the belfry is a red-coloured cylindrical structure. This part of the coast is encumbered with numerous rocks and shoals and should be given a wide berth. Thence:
E of Punta d'Ottiolu (14¼ miles NNW), a sharp rocky headland, thence:

5 E of Isolotto d'Ottiolu (13½ miles NNW). The islet is low-lying and difficult to distinguish against the coast, rocks and shoals extend about 5 cables E of it. A light is exhibited from a beacon (E cardinal, 4 m in height) on the NE part of the island. A dangerous shoal lies 1 mile NE of the light. A marina (10.131) lies inshore of the island. Thence:

6 E of Punta Santa Anna (11 miles NNW), a low hill close behind the headland has a long white scar on it which, when seen at distance from N, has the appearance of a village. Thence:
E of Isolotti dei Pedrami (9¾ miles NNW). The islet and rocks lie up to 9 cables from the coast; the channel inshore of them is only suitable for boats. Thence:

7 E of Posada (8 miles NNW), above it stands Castello della Fava (10.117). The village occupies the summit of a steep sided, conical hill. Torpè, a smaller village lies 3 miles W; a pointed belfry stands within it. Thence:
E of La Caletta (6¼ miles NNW) (10.132). Torre San Giovanni (white, round) (40°37′·1N, 9°45′·1E) stands on Punta La Caletta, close N of the harbour. Thence:

8 E of a wave recorder buoy (6 miles NNE), thence:
E of a buoy (special) (5 miles NNW) marking the seaward end of a submarine pipeline. Thence:
E of Punta di Santa Lucia (3¾ miles NNE). A grey, partly ruined tower stands on the point; a white silo stands 3½ cables S of it. A long white sand beach and a group of red houses also stand close to the tower. The beach is conspicuous against the dark green of the land when seen from N but not from S. Thence:

9 To a position E of Capo Comino, the E extremity of Sardegna. The headland is low, rocky, fringed with dangers and should be given a berth of at least 7½ cables. When approaching from the N the extremity of the headland and the rocks off it cannot be distinguished from the high land behind them but from S are easily identified. A light (10.117) is exhibited from the headland.

10 **Useful mark:**
Monte Longu (40°40′·4N, 9°44′·3E), appears conical when seen from N. An isolated, red-coloured highways maintenance depot stands on the S slope.

(Directions continue at 10.141)

Golfo Spurlattà

Chart 1211

Description

10.119

1 Golfo Spurlattà (40°54′N, 9°39′E) lies between Capo Ceraso (40°55′·2N, 9°38′·7E) (10.92) and the NW side of Isola Tavolara (10.113), 2 miles SE.

The NW coast is fringed with dangers extending up to 3 cables offshore. The head of the bay, indented by several small bays or coves, is also encumbered by a rocky bank extending generally ENE towards Isola Tavolara. Rocks, shoals and islands stand on the bank. Similarly a rocky bank, on which stand several rocks, shoals, and islets, extends WSW from Isola Tavolara. The two banks are separated by a narrow channel with depths of 11·4 to 30·0 m. The NW coast of Isola Tavolara is steep-to.

Marine nature reserve

10.120

1 Golfo Spurlattà lies wthin the Tavolara-Punta Coda Cavallo Marine Nature Reserve and contains areas subject to regulations of the reserve, see 10.115. The areas are shown on the chart.

Directions

10.121

1 From a position W of Punta Timone Light (40°55′·5N, 9°44′·2E) (10.91) the track leads SE passing, with positions relative to the light:
E of Spalmatore di Fuori (5 cables SW). The cove is protected by two breakwaters from which lights are exhibited (red and green columns, 4 m in height). Spalmatore di Fuori lies within a prohibited area of the marine reserve. Thence:
NW of Monte Cannone (2¼ miles SW), thence:
SE of Capo Ceraso (4 miles W) (10.92) and shoals extending 4 cables E of the headland, thence:

2 NW of Isolotto dei Topi (3¼ miles SSW), the islet stands on a rocky bank; shoals and dangers extend 4 cables NW of the islet. Thence:
NW of Isolotto dei Porri (3½ miles SW). A shoal, with a depth of 9 m over it, lies 3 cables NW of the islet. thence:
NW of Punta Spalmatore (3½ miles SW), low-lying and sandy, thence:
SE of Monte Maladromi (5¼ miles WSW) (10.88), thence:

3 N of Isola Piana (4½ miles WSW), thence:
To a position N of Isolotto Cavalli (5 miles WSW); a shoal with a depth of 3·1 m over it lies 2½ cables N of the island.

(Directions for passage SW of Isola Tavolara continue at 10.125)

Porto San Paolo NATO pier

10.122

1 A NATO pier (40°52′·8N, 9°38′·2E) lies 4½ cables NW of Porto San Paolo. The berth is approached from the E passing between Isola Piana and Punta la Greca, local

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knowledge is required. A light (green post, 4 m in height) is exhibited from the head of the pier.

Small craft

10.123

1 **Porto Istana** (40°53′·5N, 9°37′·2E) occupies the SW part of the head of Golfo Spurlatta; the bay requires local knowledge.

Porto Spurlattà (40°53′·0N, 9°37′·7E) a small marina occupying an inlet about 3½ cables WNW of Punta Corallina. The E facing entrance to the haven is protected by short breakwaters from which lights (red and green posts) are exhibited. Limited small craft facilities but minor repairs undertaken.

2 **Porto San Paolo** (40°52′·7N, 9°38′·6E) is approached between Isola Piana (40°53′·3N, 9°39′·1E) and Punta la Greca, 4 cables S. Local knowledge is required.

Passage south-west of Isola Tavolara

Description

10.124

1 The channel (40°53′N, 9°40′E) leads between the shoals and islands extending ENE from the coast of Sardegna and the bank extending SW of Punta Spalmatore, the SW extremity of Isola Tavolara.

Directions

(continued from 10.121)

10.125

1 From a position N of Isola Piana (40°53′·3N, 9°39′·1E) the track leads SSE passing, with positions relative to the summit of the island:

WSW of a shoal (7 cables NE), with a depth of 9 m over it, thence:

WSW of Isolotto dei Porri (8 cables ENE), thence:

E of the E extremity of Isola Piana, and the shoals close E of it, to pass through the narrowest part of the channel. Thence:

ENE of a shoal (4¼ cables SE) with a depth of 4·6 m over it, thence:

2 WSW of Punta Spalmatore (9¾ cables E) and a shoal with depths of less than 3 m extending 2¼ cables SSW from the headland. Thence:

ENE of a group of above water rocks (6 cables SE), thence:

NNE of the stranded wreck of *Chrisso* (8 cables SE), which lies in two sections. Thence:

To a position SSW of Punta Spalmatore. The track then leads E passing:

N of Isolotto Rosso (1 mile ESE), thence:

S of Punta Spalmatore, thence:

To a position S of Spalmatore di terra (1¼ miles E).

(Directions for the channel SE of Isola Tavolara continue at 10.128)

Passage between Isola Tavolara and Isola Molara to Capo Coda Cavallo

Description

10.126

1 The channel leads SE of Isola Tavolara, from Punta del Papa (40°54′·7N, 9°44′·5E), to a position W of Isola Molara (40°52′·2N, 9°43′·6E), thence ESE between the island and Capo Coda Cavallo (40°50′·5N, 9°43′·6E). (10.118).

Marine reserve

10.127

1 The channel lies within the Tavolara-Punta Coda Cavallo Marine Nature Reserve and is subject to regulations of the reserve, see 10.115. Prohibited and restricted areas (zones) lie close to the route and are shown on the chart.

Directions

10.128

1 From a position ESE of Punta del Papa (40°54′·7N, 9°44′·5E) the track leads WSW passing, with positions relative to the point:

N of Isola Molarotto (2¾ miles SSE) (10.113), thence:

SSE of Punta del Papa, a disused lighthouse stands 2½ cables N of the headland. Thence,

N of Scogli Tre Fratelli (3 miles SSE) (10.118), thence:

2 N of Isola Molara (2½ miles SSW) (10.113), thence:

S of a light-beacon (1½ miles WSW) (yellow, diagonal cross topmark), thence:

N of Isolotto del Fico (2¾ miles SSW), the islet stands on a rocky bank which has a depth of 4·5 m over it. Thence:

S of Punta Cannone (2 miles WSW), thence:

3 To a position S of Punta La Mandria (2¾ miles SW), the E headland of Spalmatore di terra. The bay is formed by the low-lying, sandy promontory which extends from the SW side of Isola Tavolara. Several houses and a square lime kiln stand, respectively, at the head and on the E side of the bay. The track then leads SSE passing:

E of Isolotto Rosso (3¾ miles SW), the island lies at the E end of a bank extending from Punta la Greca (4½ miles WSW). A stranded wreck (10.125) lies W of the island. Thence:

4 ENE of Porto della Taverna (4¼ miles SW). The bay lies between Isolotto Rosso and Isolotto Cana, 7½ cables SSW. Isolotto Canna is smooth, grey and connected to Punta di Monte Pedrosu by a shoal bank. Thence:

ENE of a shoal (4 miles SSW), with a depth of 10 m over it, thence:

WSW of a shoal bank (3¼ miles SSW), with a depth of 5·1 m at its SW extremity, extending 3 cables SW from Isola Molara. Thence:

5 To a position E of Monte Pedrosu (4½ miles SSW), the track then leads E passing:

N of Cala Coda Cavello (4¼ miles SSW), thence:

N of Isolotto Proratora (red-coloured) (4 miles SSW), thence;

To a position N of Capo Coda Cavallo (4 miles S) (10.118). the track then leads SE passing:

S of a dangerous wreck (3¾ miles S), thence:

To a position S of Scogli Tre Fratelli (3¼ miles SSW).

Anchorages and harbours

Chart 1992

Capo Comino

10.129

1 Capo Comino (40°31′·7N, 9°49′·7E). Anchorage can be obtained in depths of 29 m, sand, 6½ cables N of Isola Ruia, a low rocky and reddish-coloured island 7 cables NNW of Capo Comino. With local knowledge small vessels can obtain anchorage in depths of about 10 m closer inshore.

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Small craft

Chart 1211

Marina di Puntaldia

10.130

1 **General information**. Marina di Puntaldia (40°48′·9N, 9°41′·2E) occupies an inlet in the SW part of Porto Brandinchi. The harbour is protected from the E by a mole which exhibits a light (red post, 6 m in height). The E facing entrance lies between the mole head and the coast; a light (green post, 6 m in height) marks the N side of the entrance. Vessels up to 24 m in length are accepted. There is a speed limit of 3 kn throughout the harbour.

2 **Directions**. Approaching from the NE the alignment (044½°) of the above water rocks of Scogli Tre Fratelli (40°51′·8N, 9°45′·7E) and the summit of Isola Molarotto (40°52′·4N, 9°46′·7E), astern, leads towards Scoglio Testa di Moro. When SE of Isola Ruia the line of bearing 283°, of the N end of the white beach close S of Punta Capecciolo, which separates the two coves at the head of Porto Brandinchi, leads between Scoglio Testa di Moro and the islet. The track then leads to a position N of the rocks and shoals 2½ cables E of the harbour entrance thence SW to approach the harbour.

3 **Berths**. The marina provides 385 berths, mainly at pontoons, in depths of 2·5 to 5·5 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Chart 1992

Marina di Porto Ottiolu

10.131

1 Marina di Porto Ottiolu (40°44′·2N, 9°42′·7E) is an artificial yacht harbour adjacent to the village of Budoni. A red-coloured highways maintenance depot stands on the slopes of Monte Longu (10.118) in the middle of Budoni. Two moles extending from the coast protect the entrance to the basin which is marked by lights, faces SE, is 50 m wide and has depths of 6 m. Vessels up to 30 m in length are accepted. There is a speed limit of 3 kn throughout the harbour. Navigation under sail within the harbour is prohibited.

2 **Berths**. the harbour provides 400 berths mainly at pontoons, in depths of 2·7 to 3·0 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions available.

Porto di La Caletta

10.132

1 **General information**. Porto di La Caletta (40°36′·6N, 9°45′·0E) is a small craft and fishing harbour. The harbour is formed by two moles, Molo di Sopraflutto, the outer mole, extends approximately 2 cables SSE protecting the N and E sides of the harbour. Molo di Sottoflutto extends ENE from the coast towards the outer section of the Molo di Sottoflutto. The harbour entrance faces SE, lies between the heads of the moles, is 100 m wide and has depths of 5 m. Lights exhibited from the heads of the moles mark the entrance. The head of Molo di Sottoflutto should be given a berth of 20 m. Torre di San Giovanni (10.118), stands close N of the harbour. Vessels up to 18 m in length are accepted.

2 **Anchorage** can be obtained off the harbour in depths of about 13 m, on the alignment (315°) of Posada (Castello della Fava) with Torre San Giovanni, clear of the submarine pipeline extending 2 miles ENE from the coast and marked with a buoy (special) at its seaward end; the pipeline is shown on the chart.

Berths. The harbour provides 600 berths, mainly at pontoons, in depths of 2 to 5 m. The inner face of Molo Sottoflutto and the basin on the W side of the harbour are are reserved for fishing vessels.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions available.

Other names

10.133

1 Chiesa, Cala (40°52′·5N, 9°43′·5E).
Sugaraccia, Punta (40°50′·7N, 9°42′·8E).

CAPO COMINO TO CAPO BELLAVISTA

General information

Chart 1992

Route

10.134

1 A coastal route leads 36 miles S, from a position E of Capo Comino (40°31′·8N, 9°49′·7E), to a position E of Capo Bellavista (39°55′·8N, 9°42′·8E).

Topography

10.135

1 The coast in the vicinity of Capo Comino is fringed with dangers. A range of hills, mainly overgrown but with large areas of reddish-coloured rock, back this part of the coast. Pine forest extends from a position 4 miles SSW of Capo Comino to Punta Nera, a low, rounded headland darker than the land behind it, which marks the N end of Golfo di Orosei.

2 From Punta Nera di Osalla, about 5 miles S of Punta Nera, the coast becomes higher and the sections of cliff are interspersed with short sandy beaches. Capo di Monte Santu, high and faced with cliffs, marks the S end of Golfo di Orosei and the N end of the Ogliastra district, which extends 21 miles S. The district is isolated from the rest of Sardegna by a chain of mountains, contains numerous villages and is extensively cultivated. The Ogliastra district is characterised by its undulating, moderately elevated landscape.

3 To the S of Capo di Monte Santu the coast gradually becomes less elevated and gives way to a sandy shore backed, in places, by marsh and continues to the vicinity of Capo Bellavista. The surrounding low-lying land gives Capo Bellavista the appearance of an island.

Depths

10.136

1 The coastal route remains in deep water, free from isolated dangers. Except in the vicinity of Capo Comino the track lies to seaward of the 1000 m depth contour. To the S of Punta Nera di Osalla the coast is relatively steep-to with the 50 m depth contour lying within 1 mile of the coast.

Exercise areas

10.137

1 Military firing exercise areas extend E from the shore in the vicinity of Arbatax. Details of the areas and their activation are contained in local notices to mariners.

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Prohibited area

10.138

1 Small craft and fishing vessels are prohibited from entering an area between the mouth of Torrente Codula di Luna (40°13′·6N, 9°37′·6E) and Punta Pedra Longa (40°01′·7N, 9°42′·5E); the area extends approximately 1 mile offshore.

Natural conditions

10.139

1 **Local magnetic anomaly**. Local deflection of the compass is reported to occur between Golfo degli Aranci (40°59′·3N, 9°37′·0E) and Arbatax (39°56′·3N, 9°42′·2E).

Wind and local weather. During autumn, winter and spring winds with a W component predominate and can be violent and unpredictable. In the vicinity of Capo di Monte Santu (40°05′·0N, 9°44′·2E) E winds can increase in strength considerably. Cloud forming over Capo di Monte Santo indicates a *Scirocco* (SE wind) is imminent. Small clouds on the mountains surrounding Golfo di Orosei indicate a N wind.

Principal marks

10.140

1 **Landmarks:**

Monte Tuttavista (40°22′·8N, 9°38′·0E).

Monte Irveri (elevation 616 m) (40°18′·5N, 9°38′·7E).

Monte Tului (40°16′·0N, 9°35′·4E). A cleft in the mountains between Monte Tului and Dorgali shows conspicuously against the lighter-coloured mountains behind.

Capo di Monte Santo (40°05′·0N, 9°44′·2E), the extremity of a steep rugged promontory, sloping towards the sea and faced with inaccessible cliffs.

Punta La Marmora (39°59′·4N, 9°19′·5E). The peak is part of the Monti del Gennargentu range.

Major lights:

Capo Comino (40°31′·7N, 9°49′·7E) (10.117)

Capo Bellavista (white dwelling, black bands, 19 m in height) (39°55′·8N, 9°42′·8E). An auxiliary light, exhibited from the lighthouse shows a red sector (164°–177½°).

Directions

(continued from 10.118)

10.141

1 From a position E of Capo Comino Light (40°31′·8N, 9°49′·7E), the track leads S passing, with positions relative to the light:

E of Scogli Cannazzellu (2 miles S). The coast in the vicinity of Capo Comino should be given a berth of at least 7½ cables. Thence:

E of Punta Ginepro (5¼ miles SSW), low and fringed with rocks, thence:

2 E of Punta Nera (9 miles SSW), the headland appears elongated when seen from NE. Fiume Cedrino enters the sea 1½ miles SW of the headland. Depths in the vicinity are unreliable up to 1 mile offshore because of deposits transported by the river. Thence:

E of Orosei (11 miles SSW). The village is partly obscured from seaward but the church belfry (square, white, with black dome) is visible. Thence:

3 E of a wreck (11 miles SSW) with a depth of 8 m over it, thence:

E of Punta Nera di Osalla (14 miles SSW), low and rock fringed with a cove on the S side. Thence:

E of Cala Gonone (17 miles SSW) (10.152), thence:

E of Capo di Monte Santu (27¼ miles S) (10.140). When seen from N it appears as a slope with a large step; from E and SE some reddish patches show up on the cliffs. Thence:

E of Punta Pedro Longa (30½ miles S), a distinctive pointed peak. However it is much less discernible from the E and merges with the rocky cliffs behind it. Thence:

4 E of Torre Santa Maria Navarrese (round, white, small windows in the top) (32¾ miles S). The tower is surrounded by new buildings of the resort of the same name. A small craft harbour (10.153) lies 2 cables NNW of the tower. The coast adjacent to the tower is fringed with rocks and shoals. Thence:

5 E of Isola dell'Ogliastra (33¾ miles S). The islet is rocky, reddish in colour and sparsely covered with vegetation. Rocks and shoals extend 2 cables NNE of the island. Isola dell'Ogliastra stands at the outer end of a bank extending from the coast with depths of 8·0 to 8·7 m over it. The red sector (164°–177½°) of Capo Bellavista Auxiliary Light (10.140) covers the dangers. Thence:

6 E of Lotzorai (33¼ miles SSW), thence:

E of Girasole (35½ miles SSW), the village stands near the NW shore of Stagno di Tortoli and is easily seen from seaward. Thence:

To a position E of Capo Bellavista (36 miles S). When seen from the N the headland is darker than the coast in the vicinity; when seen from S it stands in front of Monte Santu giving it the appearance of an island with two rounded hills, the most E being the more noticeable.

(Directions continue at 10.162 and for Porto di Arbatax at 10.146)

Porto di Arbatax

Chart 1210 Approaches to Arbatax

General information

10.142

1 **Position and function**. Porto di Arbatax (39°56′·3N, 9°42′·2E) is the port of Tortoli and lies on the N shore of Capo Bellavista. The port handles wood pulp and timber, general cargo and other bulk products. Ferry services operate to and from the port and small craft facilities are provided.

Topography. The rocky promontory of Capo Bellavista is surrounded by low-lying land giving the headland the appearance of an island when seen at distance from N or S. The E side of the headland consists of steep cliffs which are subject to rock falls and should be given a wide berth.

2 **Approach and entry**. The port is approached from the N through Golfo di Tortoli, which lies between Isola dell' Ogliastra and Capo Bellavista, and entered SW of the head of Molo di Levante (39°56′·6N, 9°42′·1E).

Traffic. In 2002, the port was used by 15 ships with a total of 571 047 dwt.

Port Authority. Ufficio Circondriale Marittimo, 1–08041, Arbatax, Sardegna.

Limiting conditions

10.143

1 **Controlling depth**. The entrance channel has a least depth of 8 m.

Deepest and longest berth. Banchina di Levante; depth alongside 11 m. Molo di Ponente; length 430 m, depth alongside 8·8 m.

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Tidal levels. The maximum tidal range is 0·2 m.

Maximum size of vessel handled. The maximum draught accepted is 7·5 m.

2 **Local weather and sea state**. Winds from W and NW can make the harbour difficult, often developing quickly and with little warning. Strong W or NW winds usually last for 4 or 5 days. White cloud developing over Capo di Monte Santu (40°04′·7N, 9°44′·2E) is an indication strong N winds are imminent. Strong SW winds are indicated by low cloud developing over the slopes of the Ogliastra mountains close inland from Arbatax. A strong SW wind can raise a heavy sea in the harbour dangerous to vessels alongside.

Arrival information

10.144

1 **Port operations**. 0800–2000 local time.

Port radio. There is a port radio station, see the relevant volume of *Admiralty List of Radio Signals.*

Notice of ETA required. Vessels must provide the Harbour Master with an ETA 1 hour before arrival.

Outer anchorage. All vessels waiting to enter harbour are to anchor in the area, shown on the chart, 1 mile N of the harbour entrance.

Submarine pipeline. A submarine pipeline extends NNE from Capo Bellavista. Anchoring and fishing within the area, shown on the chart, enclosing the pipeline are prohibited.

2 **Pilotage** is available on request. Entry is conducted in daylight hours only but departure permitted at any time. The pilot boards 1 mile NE of Molo di Levante Head. See the relevant volume of *Admiralty List of Radio Signals.*

Tug available. Tug assistance is compulsory for:

All oil and chemical tankers of 3000 grt or greater on arrival.

All tankers greater than 3000 grt, not of double hull construction and older than 15 years.

3 **Regulations**. Vessels considered by the Port Authority to breach national and international rules regarding the safety, protection and conservation of the marine environment may be refused permission to enter, navigate, anchor or berth within the waters of Porto di Arbatax. The Port Authority considers the following types of vessels to present a risk:

Tankers of 3000 grt or greater, older than 15 years, not of double hull construction, carrying dangerous or potentially polluting cargoes arriving from ports outside Italy.

4 Cargo vessels older than 20 years, carrying potentially polluting cargoes, or have onboard 200 tons or more of fuel oil or a quantity of oily waste, arriving from ports outside Italy.

When scrutiny of these vessels reveals potentially hazardous defects the vessel may be subject to the following:

Compulsory tug assistance whilst discharging cargo (tankers only).

Compulsory tug assistance to proceed to and from the waiting anchorage area.

Compulsory Pilotage beyond the normal pilotage area.

5 **Prohibited areas**. Anchoring and stopping are prohibited in an area NW of Molo di Ponente where development work to the harbour is underway (2003).

Entry of an area, extending ESE from the coast, 1¼ miles SSW of Capo Bellavista, is prohibited. The area is adjacent to Tortoli airport runway.

Chart 1210 Porto di Arbatax

Harbour

10.145

1 **General layout.** The main harbour basin is formed by Molo di Ponente, which extends 2½ cables NE from the coast, and Molo di Levante which extends 4 cables NW from the N side of Capo Bellavista. The entrance to the basin lies between the head of Molo di Ponente and a spur extending SE from Molo di Levante. Lights are exhibited from the heads of the moles; Molo di Levante (white tower, red band, 8 m in height), Molo di Ponente (green column on truncated conical tower, 10 m in height). A light is also exhibited from the head of the spur (white truncated conical stone tower, red band, 6 m in height).

2 A small craft basin which forms part of Marina di Arbatax, lies in the SE corner of the harbour.

Landmarks:

Two chimneys (paper-mill) (39°56′·1N, 9°41′·7E).

Torre San Gemiliano (grey, truncated with ruined top) (39°55′·1N, 9°42′·2E).

Capo Bellavista (39°55′·8N, 9°42′·8E) (10.140).

3 **Major light:**

Capo Bellavista (39°55′·8N, 9°42′·8E) (10.140).

Directions for entering harbour

(continued from 10.141)

10.146

1 The chart is sufficient guide to approach and enter Arbatax.

Useful mark:

Torre di Arbatax also known as Torre Guardia di Finanza (39°56′·2N, 9°42′·4E).

Port services

10.147

1 **Facilities**. There is a hospital.

Supplies: fuel; waters; provisions available.

Communications: There is an airport close S of Tortoli.

Harbour regulations. The use of bow thrusters and main engine propellers within 30 m of the quays is prohibited because of erosion to the foundations.

Small craft

10.148

1 **Marina di Arbatax** occupies the SE part of the harbour. The marina is formed from the existing basin and pontoons secured to the NE part of Banchina Sud. The marina accepts vessels up to 30 m in length and provides 350 berths, mainly at pontoons, in depths 2·5 to 8·8 m. There are comprehensive small craft facilities including repairs.

Anchorages

Chart 1992

Cala Ginepro

10.149

1 Cala Ginepro (40°26′·5N, 9°47′·4E) a small inlet close S of Punta Ginepro. With local knowledge temporary anchorage for small vessels can be obtained in depths of about 5 m. Several small inlets along this part of the coast are backed by small hamlets which have developed as resorts; the villas are scattered amongst the pine forest which stands close to the shore.

Orosei

10.150

1 Orosei (40°22′·3N, 9°44′·8E). Temporary anchorage can be obtained in depths of 18 to 30 m, moderate holding ground, 1 mile offshore on the alignment of the main road

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between the coast and Orosei. Two light-coloured, single-storey buildings stand at the coast end of the road.

Small craft

Cala Liberotto anchorage
10.151

1 Cala Liberotto (40°25′·9N, 9°46′·7E). With local knowledge temporary anchorage can be obtained close off the mouth of the stream.

Cala Gonone
10.152

1 **General information**. Cala Gonone (40°17′·0N, 9°38′·3E) is a small local ferry port, small craft and fishing harbour protected from the E by an angled breakwater, extending 1½ cables SSE from the shore, and from the S by a smaller angled mole. Lights (red and green posts) are exhibited from the heads of the breakwaters. The entrance faces SSW and lies between the head of the W mole and the elbow of the outer breakwater, it has depths of 6 to 10 m and is 50 m wide. This part of the coast is largely uninhabited and the houses close inland of the harbour are a useful guide to its position. Vessels up to 15 m in length and maximum draught 4·2 m are accepted but require prior arrangement with the Harbour Master.

2 **Berths**. The harbour provides 420 berths, mainly at pontoons, in depths 0·5 to 6·0 m. The SW part of the basin is reserved for fishing vessels, the central quay, at the head of the bay, is reserved for local passenger ferries.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions available.

Chart 1210 Approaches to Arbatax

Marina di Baunei, Santa Maria Navarrese
10.153

1 **General information**. Marina di Baunei (39°59′·4N, 9°41′·6E) is protected by two moles; the E mole extends generally 1 cable S from the coast, the W mole extends ½ cable E towards the head of the E mole. Lights are exhibited from the heads of the moles (red and green posts, 5 m in height). The harbour entrance, between the heads of the moles, faces S, is 50 m wide and has depths of 6 m. Vessels up to 30 m in length are accepted.

2 **Berths**. The harbour provides 340 berths, mainly at pontoons, in depths of 2 to 6 m. The E side of the basin is reserved for fishing vessels.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions available.

Other names
10.154

1 Dorgali (40°17′·5N, 9°35′·4E).
Marchesa, Scoglio (Pedra) (40° 28′·0N, 9°48′·4E).

CAPO BELLAVISTA TO CAPO CARBONARRA

GENERAL INFORMATION

Chart 1990

Area covered
10.155

1 This section describes the E coast of Sardegna between Capo Bellavista (39°55′·8N, 9°42′·8E) and Capo Carbonara (39°06′·2N, 9°30′·9E) (9.200), 51 miles S.

The section is arranged as follows:

Capo Bellavista to Capo San Lorenzo (10.157).
Capo San Lorenzo to Capo Carbonara (10.163).

Topography
10.156

1 Much of this part of the E coast of Sardegna is rugged and many of the rock formations show a characteristic reddish tint. However there are also extensive stretches of sandy beach, some backed by saltwater lagoons and marsh, and substantial areas of pine forest stand close to the coast. Generally to the S of Golfo di Orosei hills and mountains stand close to the coast. There are few natural harbours.

CAPO BELLAVISTA TO CAPO SAN LORENZO

General information

Chart 1990

Route
10.157

1 A coastal route leads 27 miles SSW, from a position E of Capo Bellavista (39°55′·8N, 9°42′·8E), to a position E of Capo San Lorenzo (39°29′·4N, 9°38′·6E).

Topography
10.158

1 The coast between Capo Bellavista and Capo Sferracavallo, 13 miles S, alternates between elevated, rocky sections and low-lying marshy areas fronted by sandy beach. To the S of Capo Sferracavallo the coast remains high and is of reddish rock to the vicinity of Torre Murtas (39°33′·1N, 9°39′·0E); this section of coast is fringed with rocks extending a short distance offshore. Between Torre Murtas and Capo San Lorenzo, 3¾ miles S, the coast is indented by a bay with a white sand beach; Isola di Quirra, surrounded by smaller rocks and shoals, lies 1 mile offshore in the middle of the bay. A wooded plain extends inland to the foot of Monte Cardiga (39°34′·0N, 9°30′·1E). Capo San Lorenzo is high, dark and rocky.

Depths
10.159

1 The coastal route remains in deep water, clear of isolated dangers and to seaward of the 1000 m depth contour, which lies approximately 12 miles offshore. With the exception of Capo Comino and the N part of Golfo di Orosei this coast is steep-to with the 50 m depth contour lying generally within 2 miles of the shore. Closer inshore the coast is fringed with rocks and dangers in many places.

Prohibited anchorage
10.160

1 Anchoring and fishing are prohibited in an area enclosing Isola di Quirra (39°31′·5N, 9°39′·5E) which extends SE and up to 5 miles offshore. The area contains unexploded ordnance.

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Principal marks

10.161

1 **Landmarks:**

Punta La Marmora (39°59′·4N, 9°19′·5E) (10.140).
Monte Ferru (39°43′·7N, 9°37′·8E).
Capo Sferracavallo (39°42′·9N, 9°40′·6E).
Torre San Giovanni di Sarrala (white, round, 20 m in height) (39°40′·2N, 9°39′·6E).
Castello di Quirra (ruined) (39°31′·9N, 9°36′·2E).

2 **Major light:**

Capo Bellavista (39°55′·8N, 9°42′·8E) (10.140).

Directions

(continued from 10.141)

10.162

1 From a position E of Capo Bellavista Light (39°55′·8N, 9°42′·8E), the track leads SSW passing, with positions relative to the light:

E of Punta Màstixi (4½ miles S), the headland is fringed with rocks, thence:

E of Torre di Bari (light-coloured, truncated, conical, 7 m in height) (6 miles SSW). The tower stands on a small headland; several houses stand in the vicinity of the tower. Thence:

2 E of Cala Francese (10¾ miles SSW), the rock fringed bay lies at the S end of a long sandy beach and is suitable only for landing by boat. A group of houses fronted by several small craft piers stand 1 mile S of the bay. The coast for 3 miles S of Cala Francese is rock fringed and should not be approached closer than 3 cables. Thence:

3 E of Capo Sferracavallo (13 miles SSW) (10.161). The headland is overlooked by Punta Cartucceddu, a conical peak, and, close WNW, Monte Ferru which is uneven and reddish in colour. A number of white radomes stand N and S of the cape. The stranded wreck of a small vessel lies in depths of about 2 m, 1 mile S of Capo Sferracavallo. Thence:

E of Torre San Giovanni di Sarrala (15¾ miles SSW) (10.161), thence:

4 E of Capo Palmeri (20 miles SSW). A steep ridge, approximately 7 miles in length, backs this part of the coast; Punta S'Accettori, the highest point, stands W of the headland The ridge adjacent to the headland provides the main feature on this otherwise unremarkable stretch of coast. Thence:

E of Torre Murtas (round, white) (22¾ miles SSW), which marks the N end of Cala Murtas; the shore of the bay is a conspicuous white sand beach. A number of red rocks lie E of the tower. Thence:

5 E of Castello di Quirra (24¼ miles SSW) (10.161), thence:

E of Isola di Quirra (24¼ miles SSW). The islet, surrounded by rocks of similar elevation, stands on a shoal with a depth of 3·9 m over its E extremity. From NNE the danger appears reddish in colour with a light-coloured top. With local knowledge the channel inshore of the islet is navigable. A prohibited anchorage, shown on the chart, encloses much of this part of the coast and extends offshore (10.160). Thence:

6 To a position E of Capo San Lorenzo (27 miles SSW). A tower (dark, round) stands on the dark rocky headland. A white painted resort complex of low houses stands W of the headland and is visible from N.

(Directions continue at 10.171)

CAPO SAN LORENZO TO CAPO CARBONARA

General information

Chart 1990

Route

10.163

1 A coastal route leads 32 miles SSW, from a position E of Capo San Lorenzo (39°29′·4N, 9°38′·6E), to a position SE of Capo Carbonara (39°06′·2N, 9°30′·9E).

Topography

10.164

1 The coast between Capo San Lorenzo and Porto Corallo, 3 miles S, is backed by a chain of hills with conical summits, however to the S of Torre Motta the coast gradually becomes less elevated. From Porto Corallo (39°26′·4N, 9°38′·3E) to Capo Ferrato, 7½ miles S, the coast is low, sandy, uninhabited and backed by saltwater lagoons; this part of the coast is fringed with shoals and should not be approached within 5 cables. Capo Ferrato, a steep point, projects about 1½ miles E of the general line of the coast.

2 Between Capo Ferrato and Punta de is Cappuccinus, 7 miles SSW, the coast continues low and sandy, interrupted by a few rocky points. Punta de is Cappucinus rises steeply from the sea but the coast S of it is low and rocky to the vicinity of Punta Molentis (39°08′·0N, 9°33′·4E) which forms the NE headland of Porto Giunco, a bay with a sandy beach extending SSW to Capo Carbonara.

Depths

10.165

1 The coastal route remains in deep water to seaward of the 1000 m depth contour which lies generally about 8 miles offshore. A seamount, with a depth of 46 m over it, lies 7 miles SE of Capo San Lorenzo.

2 Although the coast is relatively steep-to a coastal bank, with depths of less than 50 m over it, extends up to 3 miles offshore between a position 2½ miles SSW of Capo San Lorenzo and Capo Carbonara. Within the 50 m depth contour lie a number of dangers and small islands. Closer inshore the 20 m depth contour lies within 1 mile of the coast but there are numerous rocks and dangers fringing the coast.

Concentrations of traffic

10.166

1 Coastal traffic rounding Capo Carbonara will join or leave traffic following the ocean route S of Sardegna between Napoli and the W Mediterranean.

Prohibited area

10.167

1 Vessels are prohibited from entering an area extending 100 m from the shore of Costa su Franzesu, in the vicinity of the mouth of Fiume Flumendosa (36°25′·7N, 9°37′·7E), within the jurisdiction of the town of Villaputzu, 2½ miles WNW of the river mouth, because of the danger of rock falls.

Submarine cable

10.168

1 A submarine cable lands on the NW side of Isola dei Cavoli (39°05′·1N, 9°31′·9E). Anchoring and fishing in the vicinity of the cable are prohibited.

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Marine nature reserve

10.169

1 A marine nature reserve encloses an area between a position S of Torre Piras (39°10′·3N, 9°34′·5E) and Capo Boi (39°07′·4N, 9°26′·3E) WNW of Capo Carbonara. The reserve extends offshore to enclose Isola Serpentara (39°08′·4N, 9°36′·3E) and Isola dei Cavoli (39°05′·1N, 9°31′·9E); the boundary of the reserve is shown on the chart. Within the reserve are three types of restricted zone, see 9.198. The W side of Isola Serpentara is enclosed by a prohibited area.

Principal marks

10.170

1 **Landmarks**:

Torre Motta (truncated, conical, partly ruined) (39°27′·6N, 9°38′·5E).

Torre di Porto Corallo (white, round, 16 m in height) (39°26′·2N, 9°38′·2E).

Bruncu Nieddu Mannu (39°23′·6N, 9°33′·6E).

Punta sa Ceraxa (39°17′·7N, 9°26′·2E) (9.200).

Offshore marks:

Secca di Berni Light-beacon (truncated conical tower, isolated danger topmark, 8 m in height) (39°06′·6N, 9°32′·9E).

Isola dei Cavoli Light (39°05′·3N, 9°32′·0E) (9.203).

2 **Major light**:

Capo Carbonara (39°06′·2N, 9°30′·9E) (9.200).

Directions

(continued from 10.162)

10.171

1 From a position E of Capo San Lorenzo (39°29′·4N, 9°38′·6E) the track leads SSW passing, with positions relative to Torre di Capo San Lorenzo:

E of Torre Motta (1¾ miles S) (10.170), thence:

E of Torre di Porto Corallo (3 miles S) (10.170). A small craft harbour (10.177) lies within Cala di Porto Corallo, close N of the tower. The ruins of Castello Gibas stand on a small hill WNW of Torre di Porto Corallo. Mariners should beware of confusing Torre di Porto Corallo and Torre Corallo. The latter stands on a low point in the N part of Cala di Porto Corallo near a group of ochre coloured buildings. A bank, with depths of 50 to 90 m over it, extends 7 miles E of this part of the coast; a seamount, with a depth of 46 m over it, lies close to the E extremity. Thence:

2 E of a dangerous wreck (4½ miles S), thence:

E of a Peschiera San Giovanni (5¼ miles SSW) (10.178), a small fishing harbour, thence:

E of Torre Dieci Cavalli (red-coloured, truncated pyramid, partly ruined) (6 miles SSW). The colour of the tower makes it difficult to distinguish from the coast. Thence:

E of Torre Saline (red-coloured, square) (7½ miles SSW). The colour of the tower makes it difficult to distinguish from the coast. Thence:

3 E of Capo Ferrato (11¼ miles S). The sheer, light-coloured headland is over-looked by Monte Ferru, 1½ miles WNW, a conical peak with a tower on the summit. A light (white round tower on white dwelling, 11 m in height) is exhibited from Capo Ferrato. Thence:

E of a dangerous wreck (16 miles SSW), thence:

E of a rocky shoal (16 miles S), with a depth of 12·5 m over it, thence:

4 E of a Monte Turun (16¾ miles SSW), a rocky promontory. Monte Cannas lies 1 mile WNW and Scoglio di San Elmo, with rocks awash, lies 3 cable E of the promontory. Scoglio di San Elmo is steep-to but dangerous, with a depth of 2 m over it, lies 2½ cables N. Thence:

E of Punta de is Cappuccinus (18½ miles SSW), which rises steeply from the sea and is free from off-lying dangers. Thence:

5 E of Torre Piras (truncated, conical, light-coloured) (19 miles SSW), the tower stands on a point closely fringed with rocks. To the W of the point lies Cala Pira, a small bay with a beach at its head. Thence:

E of Isola Serpentara (21 miles S). The island is barren and rocky; the W side slopes gently into the sea whereas the E side is more sheer. Torre San Luigi (round, ruined) stands on the summit and is of a similar colour to the rock. Three rocky islets stand on a shoal bank extending 4 cables N of the island. Thence:

6 E of Punta Poceddus (Porcelli) (sand and gravel) (20½ miles SSW); rocks of the same name extend SE. Thence:

E of Punta Molentis (21½ miles SSW), the extremity of a small promontory; rocks lie close SW of it. Punta Molentis is the NE headland of Porto Giunco, a bay lined with a sandy beach, extending SW to Capo Carbonara. Thence:

E of a dangerous wreck (22 miles SSW), thence:

7 E of Secca dei Berni (23 miles SSW), the danger is marked with a light-beacon (10.170), thence:

ESE of Torre Giunco (23¼ miles SSW), thence:

ESE of Capo Carbonara Light (24 miles SSW) (9.200), thence:

ESE of Scoglio San' Elmo (24 miles SSW). The above water rock with other dangers close to it lies 3 cables NE of Capo Carbonara. Thence:

8 ESE of Isola dei Cavoli (24¾ miles SSW) (9.203), low rocky and partly overgrown. The island is fringed with dangers and should be given a berth of 3 cables. A light (10.170) is exhibited from the NE part of the island. The channel separating the island from Capo Carbonara has depths of about 15 m but shoal water extends NW from the island. Thence:

To a position SE of Capo Carbonara.

(Directions for the S coast of Sardegna commence at 9.186)

Anchorages

Chart 1210 Approaches to Arbatax

Porto di Frailis

10.172

1 Porto di Frailis (39°55′·3N, 9°42′·4E). Temporary anchorage can be obtained in depths of about 18 m, 2½ cables E of Torre San Gemiliano, which stands on the SW headland. The anchorage is little used because of the shoals encumbering it.

Chart 1990

Porto Corallo

10.173

1 Porto Corallo (39°26′·4N, 9°38′·3E). Anchorage can be obtained in depths of about 17 m, sand, moderate holding ground, 7½ cables ESE of Torre di Porto Corallo. The following marks can be used to gain the anchorage: the

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alignment (291½°) of Torre di Porto Corallo with the ruins of Castello Gibas; Torre di Capo San Lorenzo just obscured by land. When approaching from N the coast between Capo San Lorenzo and Torre Corallo should be given a wide berth. When approaching from the S mariners should beware of sandbanks extending up to 1¼ cables from the shore. A dangerous wreck, shown on the chart, lies 1½ miles SSE of Torre Torre di Porto Corallo.

Punta de is Cappuccinus

10.174

1 Punta de is Cappuccinus anchorage lies on the alignment of the headland (39°11′·1N, 9°34′·7E) with Scoglia di San Elmo, 1¾ miles N. Temporary anchorage can be obtained in depths of 20 m, sand, midway between the features.

Torre Piras

10.175

1 Torre Piras (39°10′·4N, 9°34′·5E). Anchorage can be obtained in depths of 30 m, sand, 1 mile SE of Torre Piras.

Porto Giunco

10.176

1 Porto Giunco lies between Punta Molentis (39°08′·0N, 9°33′·4E) and Capo Carbonara, 2¾ miles SW. Temporary anchorage can be obtained in depths of about 12 m, sand and weed, 7 cables ENE of Torre Giunco (39°06′·6N, 9°31′·4E).

Small craft

Porto Corallo

10.177

1 **General information**. Porto Corallo (39°26′·4N, 9°38′·3E) is a yacht and fishing vessel harbour protected from the E by Molo di Sopraflutto, which has three sections, and extends generally S. Molo Sottoflutto extends E from the coast towards the outer mole. The entrance lies between the heads of the moles, faces SW, has depths of 2 to 4 m and is marked by lights. The harbour accepts vessels up to 20 m in length.

2 **Anchorage** can be obtained in depths of 3 m, sand, SW of Torre Corallo. Mariners should note this is not Torre di Porto Corallo but a lesser structure standing on the N side of the inlet near a group of ochre coloured buildings.

Berths. The harbour provides 380 berths, mainly at pontoons, in depths of 3·5 to 7·0 m. The E side of the basin is reserved for fishing vessels.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions available.

Peschiera San Giovanni

10.178

1 **General information**. The coast between Porto Corallo (39°26′·4N, 9°38′·3E) and Torre Saline, 4¾ miles SSW, is known as Peschiera San Giovanni. A small craft haven protected by moles lies on this part of the coast.

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NOTES

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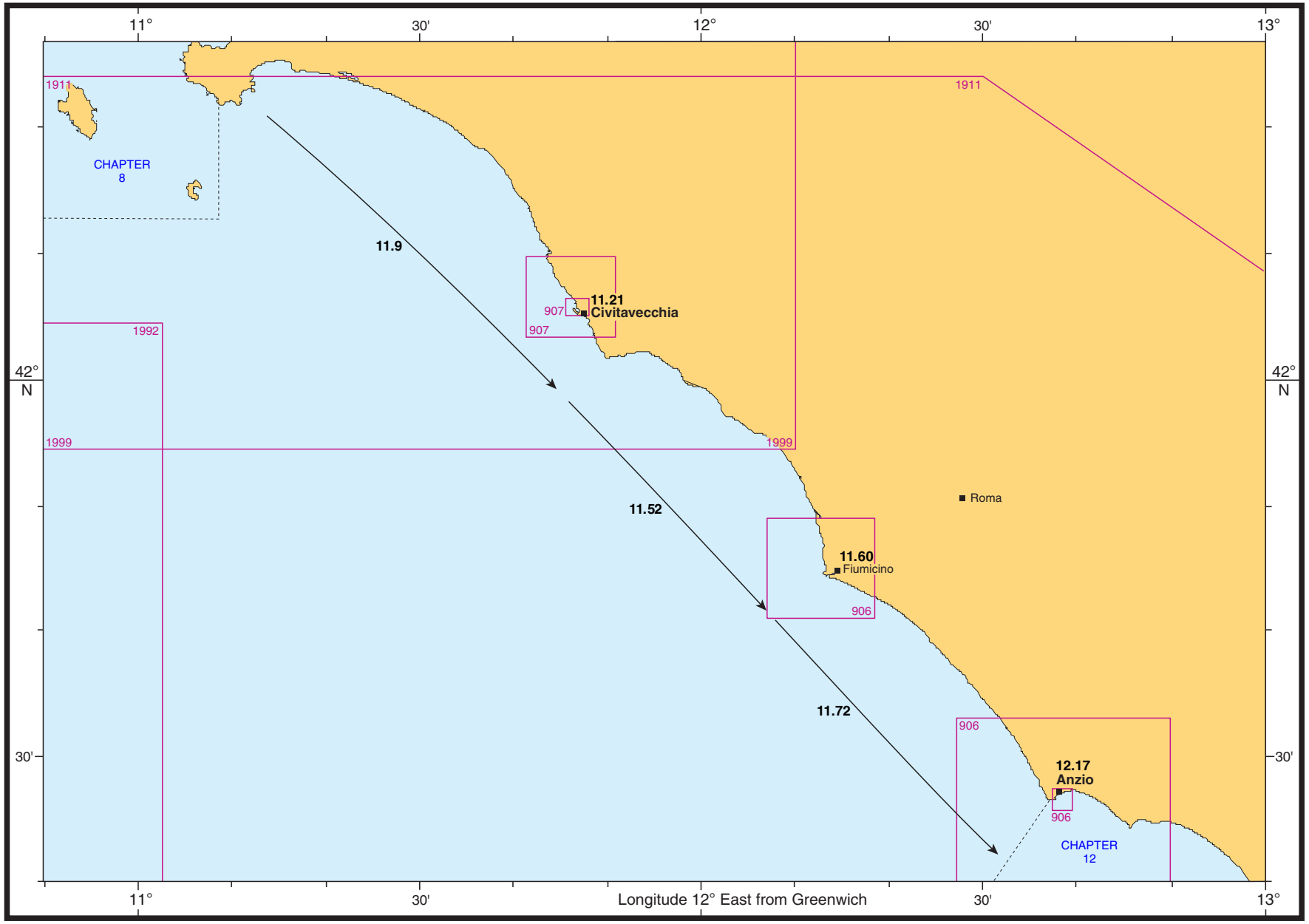
Chapter 11 - West coast of Italy - Promontorio Argentario to Cap d' Anzio



March 2004

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CHAPTER 11

WEST COAST OF ITALY – PROMONTORIO ARGENTARIO TO CAP D'ANZIO

GENERAL INFORMATION

Chart 1911

Scope of the chapter

11.1

1 This chapter describes the W coast of Italy between Promontorio Argentario (42°23′N, 11°10′E) and Capo d'Anzio, 88 miles SE. The sections are arranged as follows:

Promontorio Argentario to Capo Linaro (11.5).
Capo Linaro to Capo d'Anzio (11.49).

Through routes

11.2

1 An ocean route, between the Gulf of Genoa and the E Mediterranean, which leads through Arcipelago Toscano (8.6), lies approximately 40 miles offshore. Another ocean route, between the Bonifacio Strait (6.175) and the E Mediterranean, lies approximately 80 miles offshore. The routes are not described.

Topography

11.3

1 The NE part of the high and distinctive Promontorio Argentario is connected to the mainland by a low sandy isthmus, Tombolo di Feniglia, which joins the W side of a relatively high rocky promontory; the modern town of Ansedonia stands on Punta Ansedonia (42°24′·4N, 11°17′·0E) the S extremity of the promontory. The ruins of an ancient Etruscan city, partly hidden by dense vegetation, stand on the summit. Immediately E of Punta Ansedonia the low, sandy coast extends approximately 30 miles SE to Civitavecchia (42°06′·0N, 11°46′·5E). Inland the village of Capalbio (42°27′·2N, 11°25′·2E) stands on a conical hill at an elevation of 217 m; from an offing it appears as a white patch from which a square, grey tower rises.

Torre di Montalto, a square brick structure at the SE end of a long building, stands on the S side of the mouth of Fiume Fiora (42°19′·7N, 11°34′·5E). Numerous villas stand close E and three modern three-storey buildings rise close behind the tower making it difficult to distinguish.

2 Close N of Civitavecchia hills close the coast forming an elevated plain which slopes gently to the coast around Capo Linaro (42°01′·8N, 11°50′·0E). The S extremity of the plain lies in the vicinity of Palo, a village 13¼ miles ESE of Capo Linaro. The coast continues low and uniform from Capo Linaro to Fiumara Grande (41°44′·4N, 12°14′·0E), the S section of Fiume Tevere; the land rises only slightly for some distance inland along this part of the coast and numerous small rivers and streams flow into the sea. Roma, the capital city of Italy, lies 14 miles ENE.

3 To the SE of Fiumara Grande (42°44′·4N, 12°14′·0E) a sandy beach, sometimes backed by pine woods and with areas of dense development, extends 25 miles SE to Capo d'Anzio. Monti Albani rise behind this part of the coast, the most W of the mountains is Monte Cavo (41°44′·7N, 12°44′·0E).

Exercise areas

11.4

1 Military exercise areas lie offshore along this part of the coast. Mariners must consult local notices to mariners for details of active periods and regulations controlling access to these areas.

PROMONTORIO ARGENTARIO TO CAPO LINARO

GENERAL INFORMATION

Charts 1911 and 907 Approaches to Civitavecchia

Area covered

11.5

1 This section covers the W coast of Italy between Promontorio Argentario (42°23′N, 11°10E) and Capo Linaro, 36 miles SE. The section is arranged as follows:

Punta di Torre Ciana to Capo Linaro (11.9).
Civitavecchia (11.21).

Depths

11.6

1 The coast is relatively steep-to; the 20 m depth contour lies approximately 2 miles offshore between Promontorio Argentario and Punta Morelle (42°18′·7N, 11°36′·0E). Immediately SSW of this headland the depth contour extends, briefly, 3 miles offshore before steadily closing to within 7 cables of the coast in the vicinity of Civitavecchia and Capo Linaro. Except for a dangerous wreck 5½ miles ENE of Punta di Torre Ciana (42°21′·7N, 11°09′·2E) and several obstructions lying up to 3 miles NW of Capo Linaro (42°01′·8N, 11°50′·0E) the coast seaward of the 20 m depth contour is free from isolated dangers.

2 Inshore of the 20 m depth contour mariners should beware of Formica di Burano (42°23′·0N, 11°18′·7E) (11.13) and the shoals 1½ miles WSW and 8¼ cables SSW of Punta Morelle (42°18′·7N, 11°36′·0E). The coast between the mouth of Fiume Mignone (42°10′·6N, 11°44′·1E) and Civitavecchia, 5½ miles SSE is fronted by a rocky bank; mariners are advised to navigate at least 1 mile offshore.

Prohibited areas

11.7

1 **Marine Farms**. Anchoring and stopping are prohibited within an area containing a marine farm centred on

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(42°23′·4N, 11°14′·6E) which is shown on the chart. A light-buoy (pillar, yellow with diagonal cross top mark) is moored in the centre of the area; the corners of the area are marked by unlit buoys (yellow with diagonal cross top mark). Fishing, diving and swimming are prohibited within 5 cables of the area.

2 A marine farm, with a prohibited area of radius 150 m around it, lies 1 cable W of Torre Valdaliga (42°07′·4N, 11°45′·5E); the area is shown on Chart 907.

Explosives dumping ground. Entry to an area centred on (42°19′·0N, 11°28′·0E) containing an explosives dumping ground is prohibited. The area can be identified by two ODAS light-bouys (11.12) and is shown on the chart.

3 **Submarine cables**. Anchoring and fishing are prohibited in an area extending approximately 6 miles WSW from a position S of Fiume Mignone (42°10′·6N, 11°44′·1E) which contains submarine cables laid between the mainland and Sardegna.

Anchoring and fishing are prohibited in an area containing submarine cables extending WSW from Punta Mattonara (42°07′·0N, 11°46′·1E). These areas are shown on the charts.

4 **SPM**. A SPM connected by pipeline to the coast stands in position (42°07′·4N, 11°43′·7E). Entry of an area, radius 5 cables, centred on the installation is prohibited. Anchoring and fishing are prohibited within an area extending 5 cables either side of the pipelines landing inshore of the SPM, see 11.8. The areas are shown on the chart.

Submarine pipeline

11.8

1 A submarine oil pipeline, shown on the chart, extends SSW from 42°21′·2N, 11°31′·2E then runs 16¾ miles SE, parallel to the coast between the 20 and 50 m depth contours, to land inshore of a SPM in position (42°07′·4N, 11°43′·7E) where it is co-located with a pipeline from the mooring.

The NW end of the pipeline lies in the vicinity of seawater intakes for the Montalto di Castro power station which stands close ENE of the pipeline landing. Two groups of towers stand in the vicinity of the intakes respectively 850 m (3 towers) and 350 m (2 towers) offshore; lights are exhibited from each group. An ODAS light-buoy (11.12) is moored to seaward of the towers. Mariners are advised to remain clear of the area.

PUNTA DI TORRE CIANA TO CAPO LINARO

General information

Routes

11.9

1 A coastal route leads, from a position S of Punta di Torre Ciana (42°21′·7N, 11°09′·2E), the S extremity of Promontorio Argentario, 32 miles SE to a position SSW of Capo Linaro (42°01′·8N, 11°50′·0E).

An inshore route leads to Civitavecchia (42°06′·0N, 11°46′·5E).

Depths

11.10

1 The coastal route lies in depths greater than 100 m and is free from isolated dangers.

Local weather

11.11

1 Close E of Promontorio Argentario a local sea breeze from the N is common during the summer; wind from the ESE raises a heavy sea in this area. Elsewhere along this coast more predictable land and sea breezes develop. A NW wind becomes more frequent during late summer and raises a swell.

2 In winter a SE wind prevails and is usually accompanied by rain; in summer months it brings humidity. The SE wind can be persistent and the following patterns are common. Initially moderate the wind increases in strength after a few days and can become violent before veering SW then reducing and backing SE to repeat the cycle. Alternatively the SE wind increases, veers NW and is then followed by 5 or 6 days of strong N or NE winds.

This coast can become dangerous in strong SW or WSW winds.

Principal marks

11.12

1 **Landmarks**:

Torre Avoltore (massive, square) (42°22′·0N, 11°01′·0E).

Torre di San Pancrazio Vecchio, also known as Torre della Regina (truncated, pyramidal, upper part ruined) (42°24′·3N, 11°17′·4E).

Montalto di Castro Power Station chimneys, four in number (red and white bands, 208 m in height) (42°21′·3N, 11°32′·2E). Red obstruction light exhibited at night.

2 Tarquinia Church (belfry) (42°15′·2N, 11°45′·6E).

Punta Sant Agostino Dome (white) (42°09′·9N, 11°44′·6E).

Torre Valdaliga Nord Power Station chimney (orange and white bands, 250 m in height) (42°07′·5N, 11°45′·5NE).

Torre Valdaliga Sud Power Station chimneys (three in number, red and white bands) (42°07′·4N, 11°45′·5E).

Capo Linaro two radio masts (red and white bands) (42°02′·0N, 11°49′·9E).

3 **Offshore marks**:

ODAS Light-buoy (yellow) (42°17′·6N, 11°28′·7E).

ODAS Light-buoy (yellow) (42°20′·0N, 11°30′·6E).

Civitavecchia SPM (white post on structure) (42°07′·4N, 11°43′·7E).

Data light-buoy (yellow) (42°07′·5N, 11°44′·5E).

Valdaliga Power Station water intake tower (yellow post on tower) (42°07′·4N, 11°45′·1E).

Valdaliga Power Station water intake tower (42°07′·4N, 11°45′·3E).

Capo Linaro Wave Recorder Light-buoy (yellow, pillar, diagonal cross topmark) (42°00′·0N, 11°46′·7E).

4 **Major lights**:

Forte La Rocca, white sector only (285°–010°) (white round tower on SE corner of fort) (42°23′·4N, 11°12′·7E).

Monte Cappuccini (grey round tower, white dwelling, 30 m in height) (42°05′·9N, 11°49′·0E).

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Directions

(continued from 8.36 and 8.135)

11.13

1 From a position approximately 3½ miles S of Punta di Torre Ciana (42°21′·7N, 11°09′·2E) the track leads SE passing, with positions relative to Monte Cappuccini Lighthouse (42°05′·9N, 11°49′·0E):

NE of Punta del Capel Rosso Lighthouse, Isola di Giannutri, (8.37) (32¾ miles WNW), thence:

S of Telegrafo (Monte Argentario) (34 miles NW). Poggio Canaloni (Poggio Tondo), a peak 1 mile NNW of Telegrafo and on which stands a conspicuous iron cross, is of similar elevation and gives the appearance of a twin peaked mountain when viewed from the W and SW; a radio mast stands between the peaks. Thence:

2 S of Punta Avoltore (32½ miles NW). The headland is faced with sheer, rugged cliffs above which stands Torre Avoltore (11.12), thence:

S of Forte La Rocca Light (32 miles NW) (11.12), thence:

SSW of Torre di San Pancrazio Vecchio (29¾ miles NW) (11.12), thence:

SSW of Formica di Burano (28¼ miles NW), a low black rock, which should be given a berth of at least 3 cables. The rock is covered by the red sector (177°–285°) of Forte La Rocca Light (11.12). Thence:

3 SSW of Torre Buranaccio (26½ miles NW). The low squat, corniced tower, partly hidden by sand dunes when viewed from the W, stands at an inlet connecting the mid-point of Lago di Burano with the sea. The lagoon, 1¾ miles in length, lies close behind this part of the coast and is also obscured by sand dunes. Thence:

4 SW of Montalto di Castro Power Station (20 miles NW) (11.12), thence:

SW of an ODAS light-buoy (19 miles NW) (11.12), thence:

SW of Montalto di Castro (18¾ miles NNW). The church (11.12), a grey bell tower and a small castle with two towers are clearly visible within the town. Thence:

5 SW of Marina di Tarquinia (Porto Clementino) (8¾ miles NW). Several tall modern buildings rise amongst the houses of the town; a slender, white, mushroom-shaped tank, shown on the chart, stands at the NW end. A small mole, awash at its head, provides a landing in front of the town.

6 SW of Tarquinia (9½ miles NW). The town stands on a plateau and contains several slender towers. A conspicuous church (11.12) stands in the town. A large, windowless, red building, prominent from seaward, lies between Tarquina and Marina di Tarquinia. Thence:

7 SW of Punta della Quaglia (6¾ miles NW); Fiume Mignone enters a shallow bay 9 cables SE of the headland. The river is navigable by small craft some distance above its mouth. Submarine cables (11.7) land 5 cables S of Fiume Mignone. Thence:

SW of Punta Sant Agostino (5¼ miles NW). A conspicuous white dome (11.12) stands close to the headland. A dangerous wreck lies 6 cables SW of the headland. Thence:

8 SW of Civitavecchia SPM (4¼ miles WNW) (11.12), thence:

SW of the Torre Valdaliga Power Station complex (3¼ miles NW) (11.12). Mariners should note the water intake towers which lie 1½ and 3 cables SW of Torre Vadaliga Nord Power Station chimney; the towers exhibit lights. Two piers, 2½ cables SE of Valdaliga Sud Power Station chimneys, used to carry water intakes, exibit lights from each head. Thence:

9 SW of Antemurale Colombo Head Lighthouse (2 miles W) (green pillar with pedestal, 5 m in height), thence;

SW of Monte Cappuccini Lighthouse (11.12). The coast SE of Civitavecchia is fringed with rocks and shoals. Mariners should navigate at least 5 cables clear of the coast between Civitavecchia and Riva di Traiano.

(Directions continue for Civitavecchia at 11.39)

10 Thence:

SW of Riva di Traiano marina (2 miles SSW) (11.20). The heads of the breakwaters forming the harbour entrance, at the N end of the marina, exhibit lights. The coast between Riva di Traiano and Capo Linaro is fringed with rocks and shoals; mariners should navigate to remain at least 7 cables offshore. Thence:

11 SW of Torre Marangone (2¼ miles S). The short, square, grey tower stands close to a group of yellow, two-storey buildings. Obstructions, shown on the chart SW of the tower, inshore of the 50 m depth contour, are sections of the dredger *Asia,* sunk to protect the area from fishing and trawling. Thence:

12 SW of Capo Linaro Wave Recorder Light-buoy (6 miles SSW) (11.12), thence:

SW of Capo Linaro (4 miles SSE). The low, bare headland has two radio masts standing on it (11.12). Thence:

To a position approximately 9 miles SSW of Capo Linaro.

Useful marks

11.14

1 Fortino Stella (light coloured, conspicuous, central keep rises above a semi-circular bastion, stands on the summit of a hill with an elevation 157 m) (42°23′·1N, 11°11′·9E).

L'Isolotto (elevation 71 m at its rounded NW end sloping gradually to its SE extremity) (42°22′·8N, 11°12′·6E). The passage between the islet and Promontorio Argentario is not navigable.

Torre San Pancrazio (light-coloured, round, stands on the SW extremity of Punta Ansedonia) (42°24′·5N, 11°16′·8E).

Montalto di Castro Church (red roof, belfry) (42°21′·3N, 11°36′·2E).

(Directions continue at 11.57)

Anchorages and pier berth

Porto Ercole anchorage

11.15

1 Porto Ercole (42°23′·6N, 11°12′·5E). Anchorage can be obtained close off the harbour (11.18) in depths of about 14 m, sand, 1½ cables NE of the head of Molo Santa Barbara (42°23′·6N, 11°12′·7E); the mole protects the E side of the harbour. The alignment (176°) of the E extremity of L'Isolotto (42°22′·8N, 11°12′·6E), see 11.14,

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with the E extremity of Colle della Rocca (elevation 106 m, with Forte La Rocca on its summit) on the S side of Porto Ercole, is a useful guide to the anchorage. A light (11.12) is exhibited from the fort.

2 On a clear day the high towers in the vicinity of Talamone (8.136), particularly Torre di Capo d'Uomo (8.134), can be seen from E of Porto Ercole. Mariners should beware of the dangerous wreck 3 cables NE of the head of Molo Santa Barbara and Secca Santa Caterina, a shoal with a least depth of 5·6 m over it, 1½ cables E of Punta Santa Caterina.

3 **Directions**. Porto Ercole is approached from the SE. The white sector (285°–010°) of Forte La Rocca Light (11.12) can be used to approach the anchorage however L'Isolotto, which can be difficult to detect at night, lies inside the W limit of this sector. Consequently a track using Forte La Rocca Light bearing not more than 335° passing between L'Isolotto and the light-buoy marking the marine farm (11.7), respectively 7½ cables SSW and 1¼ miles ESE of the light, is recommended.

Punta Morelle anchorage

11.16

1 Punta Morelle (42°18′·6N, 11°36′·0E). With good local knowledge anchorage can be obtained in depths of about 12 m approximately 1 mile offshore between Punta Morelle and the mouth of Fiume Fiora (11.3), 1¾ miles NW. An hotel 5 cables SE of Fiune Fiora may be a useful mark.

2 Mariners should beware of the rocky bank which fronts this part of the coast. A rock, with a least depth of 6·9 m over it, 9 cables SSW of Punta Morelle and an obstruction with a least depth of 8 m over it, 1¼ miles NW, are both shown on the chart and indicate the outer edge of the bank. An outfall pipeline extends 1¼ miles SW from a position close SE of the hotel and a prohibited area (11.7) lies W of the anchorage. In summer vessels loading charcoal from the beach sometimes anchor close SE of Fiume Fiora.

Torre Marangone Pier

11.17

1 **General information**. A concrete and iron pier (42°03′·4N, 11°49′·1E) lies 1 cable SE of Torre Marangone (11.13). The pier extends ¼ cable SE and is reserved for vessels loading ore from local mines. A masonry road bridge with three arches stands 1 cable SE of the pier.

Small craft

Porto Ercole

11.18

1 **General information** Porto Ercole (42°23′·6N, 11°12′·5E) occupies an inlet entered between the NE extremity of Colle della Rocca, on which stands Forte La Rocca, and Punta Santa Caterina 2½ cables N. Another hill, Monte San Filippo, 2½ cables W of Punta Santa Caterina, and on which stands Forte Fillipo, when viewed from the E, has a similar rounded appearance to Colle della Rocca.

2 The harbour is protected from the E by Molo Santa Barbara, which extends 1½ cables NNW from the coast close N of Forte della Rocca. The E facing harbour entrance has a depth of 10 m and is marked by lights. Mariners should navigate to remain at least 35 m off Punta della Scoglione to avoid rocks extending from it.

3 The harbour can be approached, see 11.15 Directions, using the white sector of Forte La Rocca Light (11.12); Formica di Burano (11.13) lies within the red sector of the light. Vessels up to 24 m in length and of maximum draught 3·8 m are accepted.

Berths. The harbour provides 600 berths in depths of 1·0 to 6·8 m; some silting occurs in the vicinity of the moles and quays.

Facilities. Comprehensive small craft facilities including some repairs. There is a slipway of 400 tons capacity.

Supplies: fuel; fresh water; provisions.

Chart 1999

Cala Galera

11.19

1 **General information**. Cala Galera (42°24′·1N, 11°12′·5E) lies between Punta Santa Caterina and Punta Pertuso, 5 cables N. The harbour is protected by two moles; Molo Frangiflutto, 2¼ cables in length, which extends NE then NNE from the coast and Molo Sottoflutto which extends 1 cable E from the coast. The harbour entrance faces NNE, has a least depth of 3·5 m and lies between the mole heads, which exhibit lights. Vessels up to 50 m in length and maximum draught 3 m are accepted.

2 **Berths.** The harbour provides 700 mainly marina berths in depths of 1·5 to 6·0 m.

Facilities. Comprehensive small craft facilities available including repairs.

Supplies: fuel; fresh water; provisions available.

Chart 907 Approaches to Civitavecchia

Riva di Traiano

11.20

1 **General information**. Riva di Traiano (42°03′·8N, 11°48′·7E) is a marina protected from the W by a slightly curved mole, 5 cables in length, which extends parallel to the coast from close N of Torre Marangone (11.13). A second mole extends 1 cable W from the coast towards the head of the outer mole thus forming the N facing entrance. Lights are exhibited from the heads of the moles.

2 The entrance has a least depth of 4 m. Vessels up to 32 m in length are normally accepted. With prior arrangement two vessels up to 42 m in length can be accepted. The maximum beam accepted is 8 m.

Berths. The marina has 1182 berths, mainly at concrete piers, in depths of 2 to 4 m; 113 berths are reserved for visting yachts.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; fresh water; provisions available.

CIVITAVECCHIA

General information

Chart 907

Position and function

11.21

1 Civitavecchia (42°06′·0N, 11°47′·0E) has been the principal port for Roma, 40 miles distant, since the thirteenth century and is a long established ferry port for Sardegna. The port handles raw materials, minerals, oil products, scrap iron, manufactured steel goods including cars, chemicals, timber, wood products including paper, cement, soap and oil seed. Civitavecchia provides general cargo and container facilities and is developing as a cruise liner port.

Topography

11.22

1 Civitavecchia stands on a relatively narrow coastal plain, behind which the foothills of mountains further inland rise steadily. A bare rocky cliff on the mountains behind Civitavecchia is conspicuous amongst the dark, vegetation clad slopes and provides a good landfall for the port.

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Extensive storage tank area ENE of entrance

Civitavecchia from W (11.22)

(Photograph – Lt. K. Monaghan RCN) *(Original dated 2001)*

The city contains many fine modern buildings as well as impressive medieval fortifications designed by Michelangelo in the early 16th century. The large complex of storage tanks NW of the port is conspicuous. At night floodlighting from tall framework towers provides a conspicuous indication of the port from offshore.

Approach and entry

11.23

1 The port is approached from the SW through a Traffic Separation Scheme and entered N of Antemurale Colombo Head (42°05′·9N, 11°46′·3E).

Traffic

11.24

1 In 2001 458 vessels with a total of 15 126 380 dwt used the port.

Port Authority

11.25

1 Autorità Portuale Civitavecchia, Molo Vespucci, 00053 Civitavecchia.

Limiting conditions

Controlling depth

11.26

1 The entrance channel lies close NE of Antemurale Colombo and has a dredged depth of 12·8 m at its inner end. Major development is underway, see 11.37 Development, consequently mariners are advised to confirm available depth with the Harbour Master.

Deepest and longest berths

11.27

1 Darsena Petroli, Banchina San Fermina; length 310 m, depth alongside 11·3 m.

Antemurale Colombo Berth 13; length 370 m, depth alongside 10 m

Tidal levels

11.28

1 Spring tides achieve an average height of 0·46 m; neaps an average height of 0·34 m. See *Admiralty Tide Tables*.

Maximum size of vessel handled.

11.29

1 Length 250 m, 49 500 dwt.

Local weather and sea state

11.30

1 Strong onshore winds quickly raise a heavy sea. In gale force winds entry is impossible.

Arrival information

Port operations

11.31

1 The port operates daily between 0700–1900 local time.

Port Radio

11.32

1 There is a port radio station, see the relevant *Admiralty List of Radio Signals*.

Outer anchorages

11.33

1 Despite good holding ground anchorage outside the port quickly becomes untenable with strong SW winds (11.30).

Anchorage Area	*Position (centred on)*	*Remarks*
A	42°04′·4N, 11°45′·7E	All vessels except those carrying dangerous cargoes
B	42°03′·6N, 11°46′·5E	Vessels carrying dangerous cargoes only

Pilotage and tugs

11.34

1 Pilotage is compulsory for all vessels of 500 grt or greater and available 24 hours a day however tankers are not berthed at night. The pilot boards within 1 mile of the harbour entrance. See the relevant *Admiralty List of Radio Signals* for further details. Pilotage is also compulsory for tankers within 1 mile of Civitavecchia SPM (42°07′·4N, 11°43′·7E)

Tugs are available.

Traffic regulations

11.35

1 **Traffic Separation Scheme**. A Traffic Separation Scheme (TSS) has been established in the approaches to Civitavecchia as follows:

A Precautionary Area within the arc of a circle, radius 9 cables, centred on (42°06′·8N, 11°44′·9E) (Position A).

A separation zone, 200 m wide and 3 miles in length, extends from the edge of the Precautionary Area on a bearing of 228½° from Position A.

2 The in-bound traffic lane lies between the SE side of the separation zone and a line bearing 207° from Position A.

The out-bound traffic lane lies between the NW side of the separation zone and a line bearing 250° from Position A.

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An Inshore Traffic Zone, 5 cables wide, between Antemurale Colombo and a line joining the following points:

3 42°06′·1N, 11°46′·1E
42°06′·0N, 11°45′·6E
42°04′·9N, 11°46′·7E
42°05′·3N, 11°47′·3E.

An Area to be Avoided containing extensive harbour engineering works, see 11.37, lies inshore of a line joining the following points:

42°07′·5N, 11°45′·4E
42°07′·3N, 11°44′·8E
42°06′·5N, 11°45′·9E
42°06′·5N, 11°46′·3E.

4 **Regulations**. Only vessels with a pilot embarked are permitted to cross the lanes of the TSS. Small craft and port services vessels are prohibited from crossing the Traffic Separation Lanes however they are permitted to cross the TSS within the Precautionary Area. Anchoring, stopping and fishing are prohibited throughout the TSS.

Tankers approaching the SPM are normally prohibited from navigating within the Traffic Separation Lanes or Precautionary Area.

5 Within the the TSS the following speed limits apply;

Area	*Inbound*	*Outbound*
Traffic Separation Lanes	15 kn	15 kn until S of SPM then 20 kn
Precautionary Area	10 kn	10 kn

Harbour

General layout

11.36

1 The harbour consists of six main basins; Darsena Petroli, Darsena Albici, Bacino Vespucci, Darsena Umberto I and Bacino Michelangelo which leads to Darsena Romana. The basins front the NW part of Civitavecchia and are protected from the SW by a mole, Antemurale Colombo, which extends approximately 1 mile NW parallel to the coast.

Development (11.37) will extend the harbour 1½ miles NW creating new berths and basins as far as Valdaliga.

Development

11.37

1 **General information**. Substantial development of the port is underway (2003), it includes an extension of Antemurale Colombo, reclamation along the coast from close NW of Darsena Petroli to create new deep draught berths, extensive dredging throughout the port and the construction of a large breakwater to protect a new dock and oil berths in the vicinity of Punta Mattonara (42°07′·0N, 11°46′·1E).

2 **Caution**. Mariners should not rely on existing navigational aids and use Chart 907 with particular caution until the works are completed. Temporary marks and light-buoys will be placed to indicate the affected areas and details should be confirmed with the Harbour Master.

Principal marks

11.38

1 **Landmarks**:

Tarquinia (42°15′·0N, 11°45′·5E) (11.13), when approaching from the N.

Torre Valdaliga Nord Power Station chimney (42°07′·5N, 11°45′·5NE) (11.12).

Torre Valdaliga Sud Power Station chimneys (42°07′·4N, 11°45′·5E) (11.12).

Cemetery, surrounded by a stone wall (42°06′·2N, 11°47′·0E).

Silos (42°05′·4N, 11°47′·3E).

Forte di Michelangelo, tower at each corner (42°05′·4N, 11°47′·5E). The silos close WNW obscure the fort from that direction.

Capo Linaro (42°01′·8N, 11°50′·0E) (11.13), when approaching from the S.

2 **Major light**:

Monte Cappuccini (42°05′·9N, 11°49′·0E) (11.12).

Directions for entering harbour

(continued from 11.13)

11.39

1 **General information**. At night it can be difficult to distinguish navigational lights from the lights of the city when approaching and entering the port.

Directions. From a position 6¼ miles WSW of Monte Capuccini Lighthouse (42°05′·9N, 11°49′·0E) the track leads NE through the Traffic Separation Scheme (11.35) passing, with positions relative to the lighthouse:

SE of Civitavecchia SPM (4¼ miles WNW) (11.7), thence:

To a position NW of Antemurale Colombo Head (2 miles W). A light (green pillar on pedestal, 5 m in height) is exhibited from the mole head. Attention is drawn to port development work (11.37).

2 The track then leads SE passing:

NE of Antemurale Colombo head (2 miles W), thence:

SE of Banchina XIV Maggio Head (1½ miles W). A light (red mast) is exhibited from the head of the quay.

Useful marks

11.40

1 Banchina Compagna Roma Head, S corner, light structure (red post on metal column, 5 m in height) (42°05′·7N, 11°46′·9E) provides a useful clearing bearing for the shoal water on the NE side of the entrance channel, particularly when rounding the head of Antemurale Colombo.

An intensive yellow light exhibited from Molo del Bicchiere (42°05′·4N, 11°47′·3E) is reported to lead through the centre of the entrance channel.

Basins and berths

Alongside berths

11.41

1 **Darsena Petroli**. Banchina San Fermina is the longest and deepest berth in the oil terminal (11.27).

Darsena Albicini. Banchina Compagnia Roma is a specialised container berth. Other berths in the basin handle bulk mineral cargoes.

Bacino Amergio Vespucci. The basin is primarily a transfer terminal for Italian State Railway freight services.

Darsena Romana. The original Roman harbour now provides small craft and fishing vessel berths.

2 **Bacino Michelangelo**. The basin provides passenger ferry berths and facilities including a high speed ferry terminal at Banchina Guglielmotti.

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Darsena Umberto I. The SW side of Molo del Bicchiere handles cereal and oil seed. The S and SW berths in this basin handle general cargo including fruit.

Antemurale Colombo. The breakwater has five berths with depths of 8 to 10 m alongside and is used mainly by cruise ships.

Port services

Repairs
11.42

1 Limited repairs for medium size vessels only. There are two slipways of 300 tons capacity.

Other facilities
11.43

1 The usual facilities of a city and large port.

Supplies
11.44

1 Fuel, water and provisions available.

Communications
11.45

1 Leonardo da Vinci Airport at Fiumicino, 45 km SE.

Rescue
11.46

1 A lifeboat is stationed at Civitavecchia.

Small craft

General information
11.47

1 Civitavecchia is primarily a commercial port however small craft up to 50 m in length are accepted by arrangement with the Harbour Master. Small craft berth in Darsena Romana (42°05′·6N, 11°47′·3E) which has depths of 1·0 to 5·3 m.

Other names
11.48

1 Amiata, Mont, (42°53′·4N, 11°37′·5E)
Ansedonia, Torre (42°24′·6N, 11°17′·2N).
Tagliata, Torre (42°24′·5N, 11°17′·8E).

CAPO LINARO TO CAPO D'ANZIO

GENERAL INFORMATION

Charts 1999, 1911

Area covered
11.49

1 This section covers the W coast of Italy between Capo Linaro (42°01′·8N, 11°50′·0E) and Capo d'Anzio, 50 miles SE. The section is arranged as follows:

Capo Linaro to Fiumara Grande (11.52).
Fiumara Grande to Capo d'Anzio (11.72).

Topography
11.50

1 The coast between Capo Linaro and Fiumicino, 23 miles SE, is low, flat and slopes gently to the sea. The N part of this coast is bare whereas the S part is covered with pine woods. Several rivers and streams enter the sea between Capo Linaro and Palo, 13¼ miles SE, helping create a succession of dangerous shoals.

Between Fiumicino and Capo d'Anzio (41°27′N, 12°37′E) the coast consists of a light coloured beach backed by dense pine woods. There has also been considerable development along this coast and from approximately 8 miles SE of Lido di Ostia (41°44′N, 12°17′E) an almost continuous line of buildings stands on the shore as far as Capo d'Anzio.

At night the glare of the lights of Roma can be seen well offshore when navigating between Capo Linaro and Capo d'Anzio.

Depths
11.51

1 This coast is relatively steep-to. Between Capo Linaro and Fiumara Grande the coast is clear of isolated dangers to seaward of the 30 m depth contour which lies within 4½ miles of the shore; mariners should note the dangerous wreck close to the depth contour 17 miles SE of Capo Linaro. To the SE of Fiumara Grande the 30 m depth contour lies within 3½ miles of the coast, closing to 2 miles in the vicinity of Capo d'Anzio. With the exception of an isolated rock, with a least depth of 18 m over it, and a dangerous wreck lying on the 30 m depth contour, respectively 15¾ miles and 10½ miles NW of Capo d'Anzio the coast is clear of isolated dangers to seaward of the the 30 m depth contour.

2 Inshore of the 30 m depth contour mariners should beware of Secche di Macchia Tonda, Secche di Flavia and Secche di Palo, a series of dangerous shoals extending up to 2 miles offshore, lying respectively 6¼ miles, 10½ miles and 14 miles SE of Capo Linaro; all are shown on the chart.

CAPO LINARO TO FIUMARA GRANDE

General information

Charts 1911, 906

Route
11.52

1 The coastal route leads, from a position SSW of Capo Linaro (42°01′·8N, 11°50′·0E), 20 miles SE to a position SW of Fiumara Grande (41°44′·4N, 12°14′·0E).

An inshore route route leads through a TSS to Fiumicino offshore oil terminal and Porto di Fiumicino (41°46′·2N, 12°13′·4E).

Hazards
11.53

1 **Exercise area**. Anchoring, stopping and fishing are prohibited within an area extending 2 miles SW from the Fubara district (41°59′·5N, 12°00′·5E) used for firing exercises.

Offshore terminal. An offshore terminal handling petroleum products lies 3¼ miles WSW of Fiumicino (41°46′·2N, 12°13′·6E). An extensive TSS, see 11.54, has been established around it which includes a reporting area, for some classes of vessel entering the scheme, 12 miles offshore. In addition to any requirements of the traffic management scheme mariners should navigate in this area with caution.

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Traffic regulations

11.54

1 **Traffic Separation Scheme**. A TSS has been established in the approaches to Porto di Fiumicino (41°46′·2N, 12°13′·4E) (11.60). The scheme includes three Traffic Zones:

A Local Traffic Zone.

A Coastal Traffic Zone. All merchant vessels of 50 grt or greater are prohibited from entering the Coastal Traffic Zone unless proceeding to the oil terminal, anchorages or Porto di Fiumicino. Vessels of less than 150 grt proceeding to Canale di Fiumicino are permitted to use the Coastal Zone providing they maintain a safe distance from the Oil Terminal Restricted Area and anchorages.

An Offshore Zone.

2 Entry and Departure points are shown on the chart. Tankers carrying hydrocarbons, noxious substances or dangerous chemicals, as liquid or gas, wanting to enter the Coastal Traffic Zone must do so via the Check Point Zone (41°40′·8N, 11°59′·2E). An anchor berth must then be requested or clearance to enter obtained.

3 Vessels proceeding to anchorage area Alfa (11.62), centred on (41°46′·7N, 12°07′·5E), must pass through position E1; vessels proceeding to anchorage area Beta (11.62) centred on (41°43′·1N, 12°10′·0E) must pass through position E0.

Vessels proceeding to or from Canale di Fiumicino must pass 3½ miles N of position E1 or 4½ miles S of position E0 taking a direct route, clear of the anchorages, to the entrance.

All vessels leaving the Inshore (Local) Traffic Zone must pass through position U0.

4 A Vessel Traffic Service (VTS) is in operation for the control of shipping within the TSS, see the relevant *Admiralty List of Radio Signals*.

Prohibited areas. Anchoring and fishing are prohibited in an area 14½ miles SE of Capo Linaro enclosing submarine cables; the area is shown on Chart 1911.

5 Anchoring and fishing are prohibited within an area 18½ miles SE of Capo Linaro. The area contains a marine farm, with a least depth of 9·5 m over it, and is shown on Chart 1911. Wrecks have been positioned inshore of the area to prevent trawling.

6 Anchoring, fishing and diving are prohibited within an area enclosing Fiumicino Oil Terminal (41°44′·9N, 12°09′·0E) and the pipelines connected to it, shown on the charts. Navigation within this area is controlled by the TSS regulations.

Natural conditions

11.55

1 **Current**. A coastal current sets NNW along this part of the coast. However in the vicinity of Foce di Fiumara Grande (42°44′·4N, 12°14′·0E) the rate and direction is less predictable. Discoloured water flowing from Canale di Fiumicino and Foce di Fiumara Grande is clearly visible and a good indication of the strength and direction of the current. When moderate S winds persist the boundary between the discoloured river water and the blue sea water to windward of it is clearly defined.

Mariners navigating inshore, close to Fiumara Grande, should also beware of the current setting onto the coast in this area; at night this part of the coast should be given a wide berth.

2 **Local weather**. The prevailing wind is SW. A SE wind is usually accompanied by rain, will blow for several days and freshen steadily during the first three days of the period. If the SE wind backs E and reduces to a gentle breeze a strong, perhaps violent, SW wind is imminent.

The NW wind is known locally as *Provenza*, lasts for between 3 and 6 days reducing in strength after sunset but increasing again after midnight. In winter this wind accompanies an unsettled period but in the summer brings good weather.

Principal marks

11.56

1 **Landmarks**:

Palazzo Riviera (42°02′·1N, 11°51′·8E), a tall light-coloured building.

Monte Santo (42°02′·6N, 12°03′·0E), has a prominent rocky outcrop on its NW side, above which stands a ruined circular fort.

Torre Flavia (dark, square, appears to be split in two) (41°57′·3N, 12°03′·0E).

Ladispoli Church, belfry (square, white with pyramidal roof) (41°57′·0N, 12°04′·6E).

2 Castello Odescalchi (grey with round towers at each corner) (41°55′·9N, 12°06′·2E).

Torre di Palidoro (square, light coloured) (41°54′·9N, 12°08′·8E). Farm silos stand close SE of the tower.

Leonardo da Vinci Airport Control Tower (dark grey, irregular rows of windows in upper part, red and white squares at top) (41°47′·7N, 12°15′·2E).

3 Fiumara Grande Disused Lighthouse (eight-sided, red and white bands, 30 m in height) (41°44′·6N, 12°13′·4E), a two-storey building adjoins it.

Torre di San Michele (red, eight-sided, surmounted by a small tower) (41°44′·5N, 12°15′·1E).

4 **Offshore marks**:

Fiumicino SPM R1 (yellow mast on platform on piles) (41°45′·1N, 12°09′·2E).

Fiumicino SPM R2 (yellow mast on platform) (41°44′·6N, 12°10′·0E).

Directions

(continued from 11.13)

11.57

1 From a position approximately 9 miles SSW of Capo Linaro (42°01′·8N, 11°50′·0E) the track leads SE passing, with positions relative to Torre di San Michele (41°44′·5N, 12°15′·1E):

SW of Santa Marinella (25 miles NW), a resort which extends along the shore E of Capo Linaro. Within it stands a tower (silver cupola) (41°01′·9N, 11°50′·6E) and Palazzo Riviera (11.56). Thence:

SSW of Porto Odescalchi di Santa Marinella (24½ miles NW), thence:

2 SW of Santa Severa (21 miles NW). Part of the town is enclosed by the curtain wall of a large castle with a tower at each corner. A large, light-coloured building stands on the beach close NW of the castle; a framework mast also stands on the shore. A hill with a white summit close NNE of the town is conspicuous. Thence:

SW of Secche di Macchia Tonda (20 miles NW), a dangerous shoal with a least depth of 7·5 m over it. Thence:

3 SW of Monte Santo (20 miles NNW) (11.56), thence:
SW of Torre Flavia (15¾ miles NW) (11.56), thence:
SW of Cerveteri (16½ miles NNW). Despite its elevation the village is easily seen from offshore; a castle tower (grey) (41°59′·9N, 12°06′·0E) is prominent at the SE end of the village. Thence:

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SW of Secche di Flavia (15½ miles NW), a dangerous rocky shoal with a least depth of 5 m over it. Thence:

SW of Ladispoli (14½ miles NW), a conspicuous church stands in the town (11.56), thence:

4 SW of Palo (13¼ miles NNW), separated from Ladispoli by a thick coastal wood. Some ancient submerged ruins lie off the beach fronting the village and masonry blocks have also been placed there to protect against erosion. Thence:

5 SW of Secche di Palo (13 miles NNW), a dangerous shoal with a least depth of 6·8 m over it, thence:

SW of Torre Palidoro (11¼ miles NNW) (11.56), thence:

SW of the dangerous wreck 4 miles WSW of Fregene (7 miles NNW), thence:

SW of Focene (4½ miles NNW). A submerged rubble breakwater, connected to the shore at each end, with a depth of 0·5 m over it, lies 2 cables offshore fronting much of the S part of the village. Thence:

6 SW of Fiumicino (2 miles NNW) (11.60) and remaining SW of Fiumicino Traffic Separation Scheme Check Point area (11.54). The buildings of Leonardo da Vinci Airport (11.56) provide a conspicuous indication of the area. Thence:

To a position about 14 miles SW of Torre di San Michele.

(Directions continue, for Fiumicino at 11.64 and for the coastal route at 11.77)

Anchorages

Chart 1999

Santa Marinella anchorage

11.58

1 Santa Marinella (42°02′·1N, 11°51′·0E). With local knowledge anchorage can be obtained, 2½ cables offshore, in depths of 12 m, weed, 5 cables ESE of Palazzo Riviera (42°02′·1N, 11°51′·8E) (11.56). Small vessels can obtain anchorage in depths of 9 m, 5 cables E of Palazzo Riviera, off Porto Odescalchi breakwater head.

Santa Severa anchorage

11.59

1 Santa Severa (42°01′·2N, 11°57′·4E) (11.57). With good local knowledge anchorage can be obtained in depths of about 11 m, sand, 2½ cables SW of the castle.

Fiumicino

Chart 906 plan of Fiumicino

General information

11.60

1 **Position and function**. Porto di Fiumicino (41°46′·2N, 12°13′·4E) lies at the seaward end of Canale di Fiumicino. The port provides access to Porto di Roma, in the S part of the city, 13 miles NE.

The port handles bulk oil and petroleum products at the offshore terminal 3 miles SW of the entrance. The harbour is used by small coastal tankers and cargo vessels and provides an operating base for vessels servicing the offshore berths; local ferry services operate from the port. Canale di Fiumicino is also a small craft harbour and fishing port.

2 **Topography**. Canal di Fiumicino forms the N branch of the lowest reach of Fiume Tevere (Tiber); the S branch enters the sea 2 miles further SSE where it is known as Fiumara Grande. Isola Sacra, the area of land between the channels, is low, flat, partly cultivated and without distinctive features. The shore between the channel mouths extends to seaward by 3 to 4 m a year.

Fiume Tevere follows a tortuous course between Porto di Roma and the coast, is subject to rapidly changing water levels and silting and is difficult to navigate.

3 **Port limits**. The seaward limit of the port is contained by the Traffic Separation Scheme, shown on Chart 1911. The 2 Giugno (Second of June) lifting bridge, 7½ cables E of the harbour mouth, is the E boundary of the canal-port.

Approach and entry. Porto di Fiumicino is approached from the SW through a TSS and entered between the breakwaters extending from the W entrance to Canale di Fiumicino.

Port Authority. Capitaneria di Porto di Roma (Fiumicino), Guardia Costieria, Viale Traiano, 37, Fiumicino.

Limiting conditions

11.61

1 **Controlling depth.** The harbour entrance has a least depth of 4·1 m. Although periodic dredging maintains an average depth of 4 m within the port appreciable silting occurs. Depths are also subject to the condition of Fiume Tevere; in addition to the influence of natural conditions the river is used for generating hydro-electricity. Mariners should confirm available depth with the Port Authority.

2 **Vertical clearance**. A pedestrian swing bridge and the 2 Giugno lifting bridge, respectively 2½ cables and 7½ cables E of the harbour entrance, obstruct the canal when closed. The pedestrian bridge swings clear of the channel; the lifting bridge has a vertical clearance of 23 m when open.

Longest and deepest berth. Banchina Commerciale; length 200 m, maximum draught permitted 3·2 m. The maximum permitted draught at all other berths is 2·5 m.

3 **Tidal levels**. A maximum range of 0·5 m is normal at the port, for further information see *Admiralty Tide Tables.*

Maximum size of vessel handled. Vessels up to 290 000 dwt, maximum draught 15·2 m at R1 SPM, 150 000 dwt, maximum draught 13·7 m at R2 SPM.

Current restrictions on access to Canale di Fiumicino must be obtained from the Port Authority.

4 **Local weather and sea state**. A strong wind from the SW quickly raises a heavy sea at the entrance to Canal di Fiumicino making it extremely difficult and dangerous for small craft. Very strong winds from SE to NW make the anchorages and offshore berths untenable.

Heavy seas from SW, W and NW set into the the harbour making the berths within the canal, downstream of the pedestrian swing bridge, untenable for small vessels; they will need to shift berth upstream of the bridge.

Arrival information

11.62

1 **Port operations**: 0800–2000 local time.

Port radio. There is a port radio station see the relevant *Admiralty List of Radio Signals.*

Notice of ETA. Pass via Roma 72 and 24 hours in advance.

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2 **Outer anchorages**.

Anchorage	*Position (centred on)*	*Remarks*
Alfa	41°46′·7N, 12°07′·5E	Tankers greater than 30 000 tons.
Beta	41°43′·1N, 12°10′·0E	Tankers less than 30 000 tons.
Delta	41°45′·0N, 12°12′·0E	Vessels with draught of less than 3 m.

Anchorage and fishing are prohibited within areas enclosing the SPM berths, pipelines and cables close WSW of Fiumicino; the areas are shown on the charts.

3 **Pilotage** is compulsory for tankers berthing at the offshore terminal and for all vessels transiting Canale di Fiumicino or Fiume Tevere. Pilots are available by day only. The pilot boards within the Pilotage Zones which extend 1 mile from the SPMs or off the entrance to Canale di Fiumicino, see the relevant *Admiralty List of Radio Signals* for further details. The Pilot Station is equipped with radar.

Tugs are compulsory and available during port working hours for vessels berthing at the offshore terminal and any vessel greater than 30 000 tons carrying flammable liquids.

4 **Traffic Regulations**. The approaches to the offshore terminal, anchorages and port are controlled by a Traffic Separation Scheme and Vessel Traffic Service see 11.54 and the relevant *Admiralty List of Radio Signals* for details of procedures and specific routes.

It is prohibited to approach within 500 m of a tanker loading, discharging or manouvering in the vicinity of the SPMs.

Berthing at the SPMs must be authorised by Raffineria di Roma.

5 The movement of commercial vessels at Canale di Fiumicino is only permitted by day however small craft and fishing vessels are permitted to enter or leave the port at night and to proceed as far upstream as the pedestrian swing bridge. During the day small craft are permitted to proceed upstream of the lifting bridge, as far as their draught allows, only when the bridge is open. The 2 Giugno lifting bridge is only opened by prior arrangement with the Port Authority. The normal opening times of the pedestrian footbridge are:

	For passage upstream	*For passage downstream*
Weekdays	0725, 1155, 1625	0735, 1205, 1635
Public holidays	0855, 1555	0905, 1606

6 The pedestrian footbridge will also be opened to coincide with the opening of 2 Giugno lifting bridge.

Vessels leaving Canale di Fiumicino have right of way. There is a speed limit of 3 kn within Canale di Fiumicino.

Harbour

11.63

1 **General layout**. Quays line the N and S sides of Canale di Fiumicino from close inside the harbour entrance to the 2 Guigna lifting bridge, 7½ cables E, providing berths for commercial and fishing vessels. The canal is approximtely 50 m wide from the harbour entrance to the pedestrian swing bridge; channel width reduces to approximately 30 m up-stream of it. Darsena Traiano, a square basin on the S side of the harbour, is a small craft marina.

2 **Traffic signals**. The following signals are exhibited from the Pilot Station (41°46′·3N, 12°13′·3E):

Signal	*Meaning*
	Entry prohibited
	Entry permitted
	Natural conditions prohibit entry, vessels must not approach the harbour entrance.

Pilot Station – Traffic signals (11.63)

A red flag flown by a dredger working in the canal indicates the entrance is obstructed by wires holding the vessel in position.

3 **Natural conditions**. The current within Canale di Fiumicino is normally about 2 kn but can achieve a maximum rate of 6 to 7 kn and has a strong local effect to seaward of the harbour mouth (11.55). Heavy overfalls develop off the entrance, particularly with an onshore wind, which can make it difficult or possibly dangerous for small craft.

Principal marks:

Leonardo da Vinci Airport Control Tower (41°47′·7N, 12°15′·2E) (11.56).

Pilot Station Tower (113 m in height) (41°46′·3N, 12°13′·3E).

Water tower (concrete, six-sided on pillars) (41°46′·3N, 12°13′·9E).

2 Giugno lifting bridge (41°46′·2N, 12°14′·1E).

Storage tanks (silver-grey colour) (41°46′·2N, 12°13′·2E).

Directions for entering harbour

(continued from 11.57)

11.64

1 **General information**. The chart is sufficient guide to transit the TSS and approach the harbour entrance however sufficient allowance for the effect of the coastal current (11.55), setting generally NW, must be made.

The track leads N of a light exhibited from the head of the S mole (green column, 5 m in height) (41°46′·2N, 12°12′·9E). The harbour entrance, 50 m wide, lies between the head of the N mole and a knuckle on Molo Sud immediately S of it and is marked by lights; Molo Nord Head (red column on red pedestal, 6 m in height), Molo Sud knuckle (green post, 5 m in height). At the entrance the strength of the outgoing current will quickly set the bows onto the moles consequently mariners must navigate to pass through the middle of the entrance with sufficient speed to overcome the effect of the current.

2 At night the entrance can be approached by keeping the light exhibited from the root of South Mole (white structure, 17 m in height) midway between the lights exhibited from the mole heads.

Directions for leaving harbour. Vessels leaving harbour after berthing bows E should normally turn within the harbour. However in good conditions it is possible to make a stern-first departure.

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Basins and berths

11.65

1 Quays on the N side of the harbour are allocated as follows:

Banchina Piloti: pilot vessels, harbour service vessels and tugs.

Banchina Pescherecci: vessels servicing the offshore terminal, fishing vessels greater than 10 grt.

Banchina Commerciale: fishing vessels less than 10 grt.

2 Quays on the S side of the harbour are allocated as follows:

Banchina Petroli: product tankers.

Berthing platform: high-speed ferries.

Banchina Merci Secche: general cargo vessels, tugs.

Darsena Traiano: yachts and small craft.

Port services

11.66

1 **Repairs**: minor repairs only.

Other facilities: Local doctor, hospitals in Roma; limited oily waste disposal. Deratting certification available from Roma.

Supplies: fuel in limited quantities; water; provisions available.

Communications: Leonardo da Vinci Airport is adjacent to Fiumicino.

Small craft

11.67

1 **Canale di Fiumicino**. Small craft up to 50 m in length are accepted.

Darsena Traiano. Vessels of 18 to 25 m in length are accepted. The basin provides 200 berths at quays and pontoons in depths of 2·0 to 3·5 m. Good small craft facilities including repairs.

Small craft

Chart 1999

Porto Odescalchi di Santa Marinella

11.68

1 **General information**. Porto Odescalchi di Santa Marinella (42°02′·2N, 11°52′·4E) is a fishing port and yacht harbour, at the E end of the town of Santa Marinella, protected from the S and E by two moles. The harbour entrance is 120 m wide, has a least depth 5·7 m and is marked by lights.

A fortification (dark, surmounted by a tower, surrounded by pine trees) stands close W of the harbour. Palazzo Riviera (42°02′·1N, 11°51′·8E) (11.56) is another useful landmark when approaching the harbour. Onshore SE winds raise a heavy sea making the entrance dangerous. Vessels up to 15 m in length are accepted. There is a speed limit of 3 kn within 500 m of the harbour entrance.

2 **Berths**. The harbour provides 285 berths, in depths of 1·7 to 5·5 m, at pontoons and quays. Darsena Pescatori Professionisti, a small inner basin on the W side of the harbour, is reserved for local fishing vessels.

Anchorage can be obtained off the harbour see 11.58.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions available.

Chart 906 plan of Fiumicino

Fiume Tevere

11.69

1 **General information**. Fiume Tevere (41°46′·7N, 12°16′·8E) provides access, for small craft and vessels up to 56 m in length and of maximum draught 1·8 m, to Port di Roma, also known as Porto di San Paolo, in the S part of the city 13 miles NE. The meandering nature of this part of the Tevere is typical of the lower course of a river. In addition to the natural problems of silting, shoaling and variations of water level the river is also used for hydro-electric power which can significantly and rapidly affect water level in the river.

2 **Depths** in the river between Fiumicino and Port di Roma are extremely unreliable. With a low water level in the river many of the sand banks and shoals that have developed recently are barely awash or dry. Dredging of the channel is underway (2003).

Pilotage is compulsory for commercial vessels greater than 15 tons and for yachts greater than 10 tons.

3 **Traffic regulations**. Fiume Tevere falls under maritime jurisdiction as far inland as the Roma-Pisa railway bridge, which stands upstream of Porto di Roma; this waterway is controlled by the Harbour Master at Porto di Roma. The Harbour Master's office at Fiumicino will provide authorisation for a vessel to proceed up-stream from the port.

4 Currently (2003) the port and river authorities consider navigation between Fiumicino and Porto di Roma to be dangerous.

There is a speed limit of 5 kn between the sea and Ponte Circonvallazione Tor di Quinto.

Porto di Roma has 250 m of quays on each side of the river arranged to suit the average highest and lowest water levels of the river. The river channel is approximately 75 m wide between the quays.

Fiumara Grande

11.70

1 **General information**. Fiumara Grande (41°44′·4N, 12°14′·0E), the S branch of Fiume Tevere, is an important yachting centre with berths and boatyards on both sides of the river. The mouth of the river is subject to considerable silting and mariners must navigate with caution in this area. Periodic dredging maintains a channel with a depth of 2 m over the bar.

2 **Directions**. From a position 2¾ miles WSW of Torre di San Michele (41°44′·5N, 12°15′·1E) (11.56) the track leads ENE to the mouth of Fiumara Grande. The white sector (066½°–071½°) of River Tevere Sectored Light (white pedestal) (41°44′·7N, 12°15′·0E) clears the dangers on the S side of the entrance. The track passes, with positions relative to Torre di San Michele:

N of a dangerous wreck (2¼ miles WSW). The wreck is covered by the green sector (061½°–066½°) of River Tevere Sectored Light. Thence:

S of Fiumara Grande disused lighthouse (1¼ miles W) (11.56), thence:

SSE of River Tevere light (9½ cables W) (red pedestal), thence:

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NNW of River Tevere light (8 cables WSW) (green pedestal).

3 The effect of current in this area is significant see 11.55.

Other names

11.71

1 Maccarese, Torre di (41°52′·0N, 12°11′·6E).
Tonda, Macchia (41°59′·8N, 11°59′·0E).
Velletri (41°41′·1N 12°47′·0E).

FIUMARA GRANDE TO CAPO D'ANZIO

General information

Route

11.72

1 A coastal route leads, from a position SW of Fiumara Grande (41°44′·4N, 12°14′·0E), 22 miles SE to a position SW of Capo d'Anzio (41°27′·0N, 12°37′·6E).

Depths

11.73

1 The coastal route lies in depths greater than 200 m and is free from isolated dangers.

Submarine cables and pipelines

11.74

1 Anchoring and fishing are prohibited within an area, shown on Chart 1911, enclosing a submarine cable landing at the SE part of Lido di Ostia (41°44′·0N, 12°16′·7E).

Anchoring and fishing are prohibited within an area, shown on Chart 1911, containing submarine cables which land in the vicinity of Villa Campello (41°38′·9N, 12°25′·7E). The boundaries of the area are indicated ashore by groups of three yellow and black posts (spherical topmark with white letter T).

Marine reserve

11.75

1 A marine reserve lies within the Villa Campello cable area (11.74) extending up to 2 miles from a submerged, isolated rock, with a least depth of 18 m over it, charted in position (42°36′·3N, 12°20′·5E).

Principal marks

11.76

1 **Landmarks**:
Lido di Ostia Church, dome (grey) (41°43′·9N, 12°16′·9E).
Lido di Ostia Water Tower (round, upper part dark-coloured) (41°43′·8N, 12°17′·3E).
Monte Cavo (41°44′·7N, 12°44′·0E), a large building stands on the summit.
Castel Porziano (white tower) (41°44′·6N, 12°24′·1E), rises above a small group of houses.

2 Villa Campello, also known as Palazzina Borghese, (low, red, two square towers at sides) (41°38′·9N, 12°25′·8E).
Pomezia civic tower (square, brick-coloured) (41°40′·1N, 12°30′·3E).
Lido dei Coralli (chalice-shaped building) (41°33′·8N, 12°31′·4E).
Torre San Lorenzo (red, square with cornice, 9 m in height) (41°32′·8N, 12°32′·7E).

3 **Major light**:
Capo d'Anzio (white round tower on dwelling, 21 m in height) (41°26′·7N, 12°37′·3E)

Directions

(continued from 11.57)

11.77

1 From a position 14 miles SW of Torre di San Michele (41°44′·5N, 12°15′·1E) the track leads SE passing, with positions relative to the tower:
SW of Porto di Roma marina (4½ cables SSW) (11.78), thence:
SW of Lido di Ostia (Roma) (1½ miles ESE). The resort contains numerous villas and hotels surrounded by gardens; a large masonry lido is prominent on the beach. Within the town a dome and water tower (11.76) are good landmarks; at night sea front illuminations are conspicuous. Canale della Stagno, spanned by a road bridge, is navigable only by small craft with good local knowledge; the channel enters the sea close SE of the town. Thence:

2 SW of Castel Porziano (6¾ miles E) (11.76), thence:
SW of Practica di Mare (11½ miles ESE) which stands on a long, level ridge. Within the village stands Torre Practica di Mare, a large light-coloured building with its upper part destroyed. The building is obscured from the W by trees. Thence;
SW of an isolated submerged rock (9 miles SSE) (11.51), thence:

3 SW of Villa Campello (9¾ miles SE) (11.76). A light-buoy (special) (10 miles SE) marks the seaward end of an outfall pipeline extending from the coast 5 cables SW of Villa Campello. A dangerous wreck lies 8 cables W of the light-buoy. Thence:
SW of a dangerous wreck (13¾ miles SE), thence:
SW of Monte Cavo (22 miles E) (11.76), thence:
SW of a light-buoy (special) (15¾ miles SE) marking the seaward end of an outfall pipeline extending from the coast at Lido dei Coralli, thence:
SW of a buoy (special) (17 miles SE) marking the seaward end of an outfall pipeline which extends from the coast 3 cables NW of Torre San Lorenzo (11.76), thence:
SW of Torre San Lorenzo (17¾ miles SE) (11.76), thence:
SW of a light-buoy (special) (19½ miles SE) marking the seaward end of an outfall pipeline, thence:
SW of a light-buoy (special) (23 miles SE) marking the seaward end of an outfall pipeline, thence:
SW of a dangerous wreck 2½ cables W of Capo d'Anzio Light (11.76), thence:

4 To a position SSW of Capo d'Anzio (24¼ miles SE), a steep sided headland of porous rock with many caves in the cliffs. A natural arch, known as Arco Muto, forms the

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extremity of the headland and is clearly visible from S. A light (11.76) is exhibited from the SW part of the headland.

(Directions continue at 12.11)

Small craft

Porto di Roma, Ostia

11.78

1 **General information** Porto di Roma, Ostia (41°44′·2N, 12°14′·8E) is a large modern marina close SE of Foce di Fiumara Grande at the NW end of Lido di Ostia. The harbour is formed by two slightly curved breakwaters extending from, and parallel to, the coast. The large Y-shaped heads of both breakwaters create a SW facing entrance basin. The outer entrance is marked by lights; W mole (red round tower) E mole (green round tower). The entrance has a depth of 5 m. Vessels up to 60 m in length are accepted.

2 **Berths**. The marina provides 808 mainly pontoon berths in depths of 3·5 to 5·0 m.

Facilities. Comprehensive small craft facilities including repairs. There is a hospital at Lido di Ostia.

Supplies: fuel; fresh water; provisions available.

Other names

11.79

1 Albano Laziale (41°43′·6N, 12°40′·2E).
Anastasio, Torre San (41°33′·3N, 12°32′·8E).
Caldara, Torre (41°29′·2N, 12°35′·5E).

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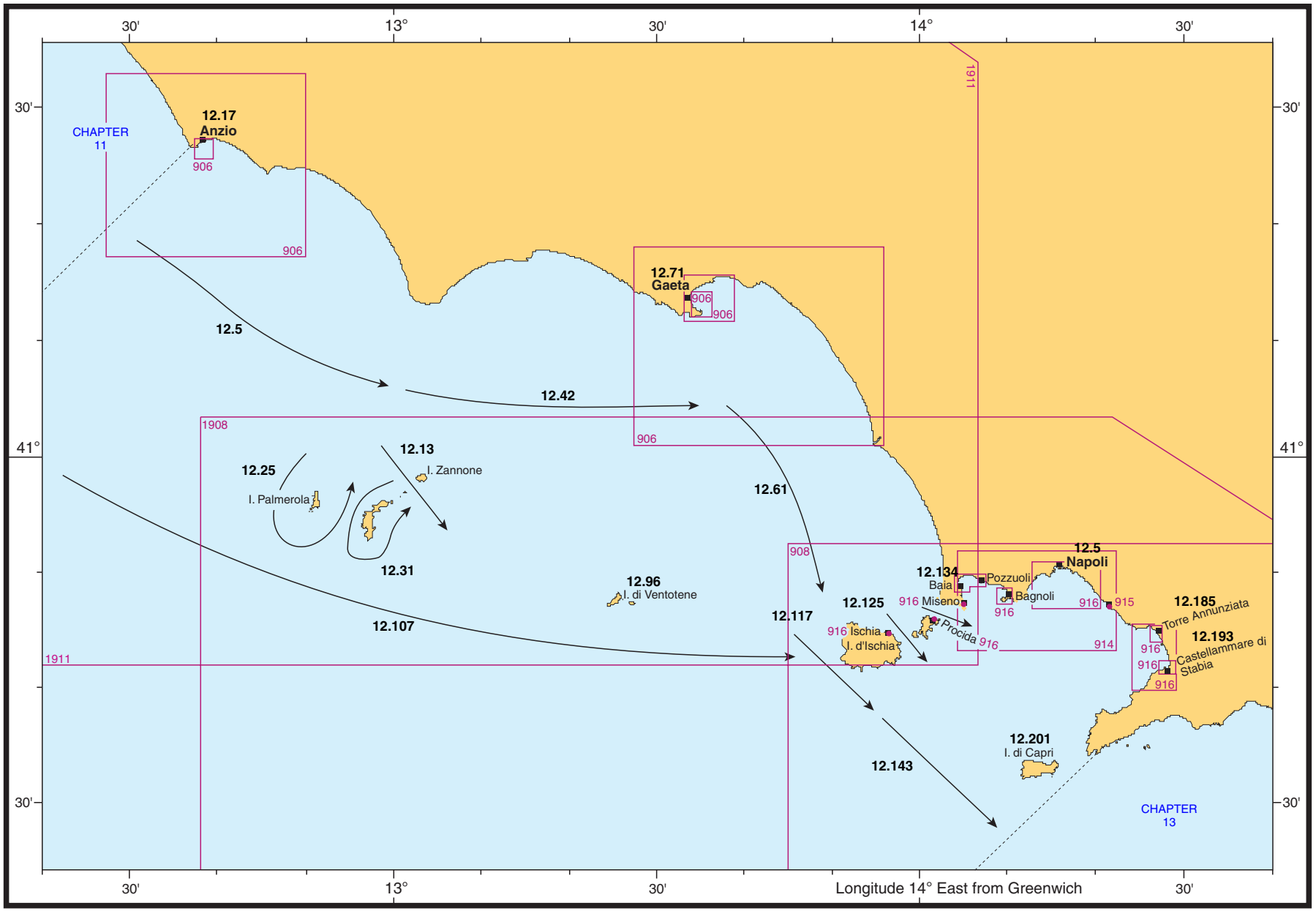
Chapter 12 - West coast of Italy - Capo d'Anzio to Punta Campanella



March 2004

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CHAPTER 12

WEST COAST OF ITALY – CAPO D'ANZIO TO PUNTA CAMPANELLA

GENERAL INFORMATION

Charts 1780, 1911

Scope of the chapter

12.1

1 This chapter describes the W coast of Italy between Capo d'Anzio (41°27′·0N, 12°37′·6E) and Punta Campanella, 95 miles SE, including the archipelagoes of Isole Pontine (40°53′·0N, 13°15′·0E), Isole Flegree (40°46′·0N, 13°58′·0E) and the island of Capri (40°33′·0N, 14°13′·0E). The sections are arranged as follows:

Capo d'Anzio to Punta di Torre Fumo (12.4).
Punta di Torre Fumo to Punta Campanella (12.112).

Topography

12.2

1 This part of the mainland coast extends ESE in a series of wide gulfs to the famously volcanic Golfo di Napoli. The relatively broad and low coastal plain extending SE from Roma, carrying the ancient Appian Way, gives way to the more rugged volcanic topography symbolised by Monte Vesuvio overlooking Napoli. Much of the coast is low and fronted by sandy beach, occasionally rocky headlands and hills close inland provide remarkable and distinctive features. Offshore Isole Pontine extend ESE parallel to the coast. The rugged and distinctive appearance of the islands provides further evidence of the volcanic origin of the area.

Depths

12.3

1 The coasts are relatively steep-to; the 30 m depth contour lies within 3½ miles of the mainland coast which is free from isolated dangers to seaward of it. Within Golfo di Gaeta deposit from rivers entering the gulf has created a more extensive coastal bank.

Around the offshore islands the 100 m depth contour lies generally within 3 miles of the coast. Within it are numerous charted dangers. Outside the 100 m depth contour the only isolated danger is the rock Scoglio della Botte (40°50′·4N, 13°06′·3E).

CAPO D'ANZIO TO PUNTA DI TORRE FUMO

GENERAL INFORMATION

Chart 1911

Area covered

12.4

1 This section covers the mainland coast of Italy between Capo d'Anzio (41°27′·0N, 12°37′·6E) and Punta di Torre Fumo 75 miles SE, including the islands of Isole Pontine. The section is arranged as follows:

Capo d'Anzio to Capo Circeo (12.5).
Isole Pontine (12.25).
Capo Circeo to Monte Orlando Light (12.42).
Monte Orlando Light to Punta di Torre Fumo (12.61).
Passage South of Isole Pontine (12.107).

CAPO D'ANZIO TO CAPO CIRCEO

General information

Chart 1911

Route

12.5

1 A coastal route leads, from a position SW of Capo d'Anzio (41°27′·0N, 12°37′·6E), 25 miles ESE to a position S of Capo Circeo (41°14′·0N, 13°04′·0E).

Topography

12.6

1 The coast between Capo d'Anzio and Capo Circeo is low, sandy and unremarkable. A chain of narrow lakes, some of which are connected by canals, lies close behind the coast between Foce Verde (41°24′·9N, 12°48′·7E) and Capo Circeo.

2 Capo Circeo, also known as Monte or Promontorio Circeo or Circello, is an isolated rocky mass which rises steeply and is covered with sparse vegetation. The promontory is connected to the mainland by low, flat land and when seen from the NW it appears to be a high conical island with a large light-coloured patch on its seaward side. A number of inconspicuous buildings and a beacon stand on the summit of the headland. When viewed from the SE the promontory appears to be a long, undulating ridge.

3 Offshore the W and more important group of Isole Pontine, an archipelago formed from the remains of the crests of vast volcanic craters, lies approximately 18 miles SSW of Capo Circeo. The group comprises of Isola Palmarola (40°56′·0N, 12°51′·5E), Isola di Ponza (40°54′·5N, 12°57′·4E), Isolotto di Gavi, close NE of Isola di Ponza, and Isola di Zannone (40°58′·2N, 13°03′·5E). Isola di Ventotene and Isola di San Stefano, 22 miles SE of Isola di Ponza form the E group.

Depths

12.7

1 The coastal route lies in deep water free from isolated dangers. Between Capo d'Anzio and Lago di Caprolace, 16 miles ESE, the 30 m depth contour lies within 3¾ miles of the coast, gradually closing to less than 5 cables close S of Capo Circeo.

The W islands of Isole Pontine are relatively steep-to with the 100 m depth contour lying generally within 4 miles

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of the islands; close inshore there are numerous rocks and dangers.

Exercise areas

12.8

1 Naval surface and air firing areas lie between Anzio (41°27′·0N, 12°37′·6E) and Sabaudia, 19¾ miles SE. Details of the areas and their activation are published in local notices to mariners.

Natural conditions

12.9

1 **Local weather**. When the islands of Palmarola, Ponza and Zannone (40°56′N, 12°57′E) are clearly visible a change in weather is indicated.

Wind. During the summer the sea breeze is usually W or NW along this part of the coast. In the winter the *Tramontana* (N) and *Grecale* (NE) winds are frequent; the *Grecale* can be fresh and persist for several days. The *Garigliano* (E) can be violent during the winter.

Current. The coastal current is weak and sets NW parallel to the coast; strong SE winds increase the rate.

Principal marks

12.10

1 **Landmarks**:

Chiesa di Santa Teresa belfry (slender, grey) (41°27′·1N, 12°37′·5E), the cathedral is brick built with a red roof.

Castello San Gallo (large, solidly-built with heavy towers at each corner) (41°27′·4N, 12°39′·4E).

2 Nettuno high rise building (pyramidal top) (41°27′·4N, 12°40′·5E).

Le Grottacce masts (two in number, framework, painted red and white bands) (41°25′·7N, 12°44′·3E).

Torre Astura (dark coloured) (41°24′·5N, 12°45′·9E). The fortress stands close off a low point and is connected to it by a stone bridge with several spans.

Latina belfry (tall, light-coloured, square) (41°27′·8N, 12°54′·1E). Torre Comunale stands a short distance below the belfry. A high rise building and a water tower also stand within the town.

3 Sabaudia belfry (slender, white) (41°18′·0N, 13°01′·6E).

Monte Tramontana (elevation 235 m) (40°56′·7N, 12°51′·5E).

Monte Guarniere (elevation 249 m) (40°55′·8N, 12°51′·4E).

Monte della Guardia Signal Station (40°53′·0N, 12°57′·4E).

Monte Pellegrino (40°58′·2N, 13°03′·4E).

4 **Offshore mark**:

Sabaudia light-buoy (special) (41°18′·0N, 12°59′·5E). The light-buoy marks the seaward end of an outfall pipeline.

5 **Major lights**:

Capo d'Anzio (41°26′·7N, 12°37′·3E) (11.76).

Punta della Guardia (white tower on red dwelling, white band, 17 m in height) (40°52′·6N, 12°57′·3E). The light is partly obscured by Isola di Palmerola and the peaks of Isola di Ponza when viewed from N of Isole Pontine.

Capo Circeo (white round tower, 8-sided base, dwelling, 18 m in height) (41°13′·3N, 13°04′·1E).

Directions

(continued from 11.77)

12.11

1 From a position 12 miles SSW of Capo d'Anzio (41°27′·0N, 12°37′·6E) the track leads ESE passing, with positions relative to Capo d'Anzio Light (41°26′·7N, 12°37′·3E):

S of Porto d'Anzio (5 cables ENE) (12.17), thence:

S of Nettuno (2 miles NE). The town is prominent from seaward; a large marina (12.38) fronts the town. Thence:

2 S of Le Grottacce radio masts (5¼ miles ESE) (12.10), thence:

S of Torre Astura (6¾ miles ESE) (12.10), a rocky reef, on which stand extensive ruins, awash in places, extending 1¾ cables S and SE of the tower. Fiume Astura enters the sea 6½ cables NE of the tower. Valli Montori, a village on the E side of the river mouth, contains two prominent low, square, brick houses. Thence:

3 S of Torre di Foce Verde (8¾ miles ESE), a square brick tower. A large industrial plant lies 5 cables N of the tower, within it stands a large, grey, cube-shaped building. A pier carrying a water intake extends 4 cables SSE from close SW of Torre di Foce Verde; a light (yellow mast, 9 m in height) is exhibited from the pier head. Thence:

N of Isola Palmerola (32½ miles SSW) (12.25), thence:

4 SSW of Porto Rio Martino (13¾ miles ESE) (12.39). Rio Martino provides small craft access to Lago di Fogliano and Lago dei Monaci. The lagoons lie close behind this part of the coast. Small vessels transporting charcoal from the area anchor close off the coast during the summer; large heaps of timber and charcoal may be seen on the beach. Thence:

5 N of Isola di Ponza (35½ miles SSE) (12.31). The island has a high, rugged appearance and an irregular outline. Thence:

SSW of Sabaudia light-buoy (18½ miles ESE) (12.10), thence:

SSW of Sabaudia (20 miles ESE). The light-coloured buildings of the town stand out well against the woods surrounding it. The town is overlooked by the church and its belfry (12.10), which is easily distinguished from other towers in the area by its height and uniform section. A distinctive modern building, with appearance of a beehive, having arched windows and three sections, stands on the shore below the town. A terrace fronting the building is surrounded by small spires. Thence:

6 SSW of Torre Paola (22 miles ESE), a short, round, grey tower, upper part ruined. The tower is difficult to distinguish against a rocky background when viewed from the W. Torre Paola stands on the S side of a Roman canal, partly obstructed by rocks, connecting Lago di Sabaudia (Paola) with the sea. Thence:

SSW of Monte Circeo (22½ miles ESE), the principal peak of Capo Circeo, thence:

7 N of Isola di Zannone (34½ miles SE) (12.37). A light (white eight-sided tower on white building, 13 m in height) is exhibited from Capo Negro, the N extremity of the island. Thence:

To a position approximately 8 miles S of Capo Circeo Lighthouse (24 miles SE) (12.10). A disused signal station

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stands on the summit of Monte Circello (Punta Cristoforo) 4 cables N of the lighthouse.

Useful marks

12.12

Church belfry (grey) (41°27′·5N, 12°39′·6E). The church has a tall facade and stands close E of Castello San Gallo.

Chiesa Santa Maria Goretti (San Rocco) (a large brick building, square belfry) (41°27′·4N, 12°40′·1E).

(Directions continue at 12.50)

Passage between Isolotto di Gavi and Isola di Zannone

Chart 1908, Italian Chart 126

Description

12.13

1 A rocky bank with depths of less than 30 m, on which stand numerous dangers, extends between Isolotto di Gavi (40°56′·2N, 13°00′·0E) and Isola di Zannone (40°58′·2N, 13°03′·5E) (12.37). Although encumbered by dangers the channel can be used, with care, by large vessels.

Directions for passage north-east of Scoglio Grosso

12.14

1 From a position approximately 2½ miles W of Capo Negro (40°58′·6N, 13°03′·0E) a channel leads SE passing, with positions relative to Punta Varo Light (40°57′·8N, 13°03′·0E) (12.37):

2 SW of Secca del Varo (3½ cables SW), a rocky shoal with a least depth of 2·5 m over it. A bank with a least depth of 11·9 m over it and a shoal with a least depth of 10·2 m over it lie repectively 3 cables SW and 5½ cables W of Secca del Varo. The channels SW and NE of Secca del Varo are deep however mariners should note a shoal, with a least depth of 18·2 m over it, 8¼ cables SW of the danger. Thence:

3 NE of Scoglio Grosso (1½ miles SW), moderately high and conical, is the most easily distinguished danger in the passage. The islet is steep-to on the W side but a rocky spit, with depths of less than 2 m over it, extends ½ cable E of the rock. Thence:

To a position about 1½ miles S of Isola di Zannone.

Directions for passage south-east of Scoglio Grosso

12.15

1 From a position approximately 1 mile N of Isolotto di Gavi (40°56′·2N, 13°00′·0E) the channel leads SE passing, with positions relative to Punta Varo Light (40°57′·8N, 13°03′·0E) (12.37):

NE of Scoglietelli (Le Scoglietelle) (2½ miles SW), a group of low rocks 3 cables NE of Isolotto di Gavi. Shoals with depths of 8·2 m and 9 m over them lie respectively 4 cables ESE and 2 cables E of Isolotto di Gavi; otherwise the channel between the islet and Scoglietelli has depths of 15 to 22 m. Thence:

2 NE of Piana di Mezzo (2 miles SW) a low bare rock standing on a rocky shoal extending 4 cables WNW of it. A rock with a depth of less than 2 m over it lies close SW of Piana di Mezzo. Thence:

SW of Scoglio Grosso (1½ miles SW) (12.14). The channel SW of Scoglio grosso has depths of 24 to 54 m however a shoal, with a least depth 16 m over it, lies 4 cables W of the danger. Thence:

To a position approximately 1½ miles S of Isola di Zannone.

Anchorage

Chart 906 Approaches to Anzio

Torre di Foce Verde anchorage

12.16

1 **General information** Torre di Foce Verde (41°24′N, 12°49′E). Anchorage can be obtained by small vessels in depths of about 6 m, sand and rock, 2½ cables SSE of Foce Verde water intake pier head; the anchorage is shown on the chart. Torre di Foce Verde (12.10) bearing 347° and Torre Astura (41°21′·5N, 12°45′·9E) (12.10) bearing 275° are also useful guides to the anchorage.

Porto d'Anzio

Chart 906 plan of Anzio

General information

12.17

1 **Position and function**. Porto d'Anzio (41°26′·7N, 12°38′·0E) is a small commercial and ferry port, lying on the E side of Capo d'Anzio, fronting part of the resort town; it is also an important fishing port. The port handles processed steel, vegetable oil, cereals, flour and general cargo. Anzio was the birth place of the Roman emperor Nero.

Topography. Anzio extends uniformly along the coast NE of Capo d'Anzio to the vicinity of Villa Borghese (41°27′·3N, 12°38′·5E). The grey, rectangular, flat roofed villa, surrounded by a group of trees, marks the boundary with the neighbouring town of Nettuno; the villa is only visible from S.

2 **Approach and entry**. The port is approached from the E and entered between Molo Innocenziano Head (41°26′·6N, 12°38′·3E) and, 1 cable N, the Entrance N side Light-beacon.

Traffic. In 2002 the port was used by 5 vessels with a total deadweight of 84 550 tonnes.

Port Authority. Ufficio Circondriale Marittima di Anzio, Porto Innocenziano, 42 Anzio.

Limiting conditions

12.18

1 **Controlling depth**. The entrance channel has a least depth of about 5 m, however depths in the channel become unreliable after winter storms.

Deepest and longest berth. Molo Innocenziano (E of elbow) length 200 m, depth alongside 5·3 m.

Maximum size of vessel handled. The maximum draught accepted is 4·5 m.

2 **Local weather and sea state**. The prevailing SE wind can make manoeuvring within the harbour difficult; SW winds make the entrance channel difficult. Strong winds with a S component make the entrance channel dangerous. The Harbour Master will close the port when entry or departure is considered dangerous.

3 The ESE facing entrance exposes the harbour to swell from winds with an E component but is otherwise sheltered. The *Scirocco* (SE wind) and *Levante* (E wind), known locally as *Garigliano*, create particularly difficult conditions.

Current. The *Garigliano* also drives water into the harbour creating a strong E current along the face of Molo Innocenziano.

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Arrival information

12.19

1 **Port operations**. The port operates 24 hours a day however movements between sunset and sunrise must have prior approval from the Harbour Master.

Port radio. There is a port radio station, see the relevant *Admiralty List of Radio Signals* for details.

Outer anchorages. Anchorage can be obtained in depths of 6 to 12 m within an anchorage area lying in the roadstead generally SE of the harbour entrance. Within the area are five anchor berths; the anchorage is shown on the chart.

2 **Pilotage** is compulsory for all vessels of 200 grt or greater. See the relevant *Admiralty List of Radio Signals* for details of procedure.

Local knowledge. Vessels not required to take a pilot should not attempt to enter the port at night or in difficult conditions without local knowledge, see 12.18 Local weather.

Harbour

12.20

1 **General layout**. The S side of the port is protected by Molo Innocenziano, which extends 3½ cables E from the E side of Capo d'Anzio, and on its NE side by Inner Mole, extending generally 1½ cables SSE from the coast. Small shipyards and slipways occupy the NW side of the port.

Development. Plans for substantial development of the port were announced in 2001.

2 **Principal marks**.

Landmarks:

Capo d'Anzio Lighthouse (41°26′·7N, 12°37′·3E) (11.76).

Chiesa di Santa Teresa (41°27′·1N, 12°37′·5E) (11.76).

Hotel Paradiso (white, surmounted by two black domes) (41°27′·0N, 12°38′·0E).

Major light:

Capo d'Anzio Light – as above.

Directions for entering harbour

12.21

1 From a position 3 miles SE of Capo d'Anzio Light (41°26′·7N, 12°37′·3E) (12.11) Villa Borghese (41°27′·3N, 12°38′·5E) (12.17) bearing not more than 342° leads towards the harbour entrance passing, with positions relative to Capo d'Anzio Light:

E of Scoglio Sconciglio (4 cables ESE) a rocky shoal with depths of less than 2 m over it. The shoal stands on a coastal bank extending up to 2 cables S of Capo d'Anzio. The light on Molo Innocenziano (7 cables E) (red pedestal, 5 m in height) is obscured over Scoglio Sconciglio when bearing more than 045°. Inshore of Scoglio Sconciglio the ruins of the ancient Porto di Nerone create numerous dangers some of which are awash. Thence:

E of Molo Innocenziano Head (7 cables E), thence:

2 To a position ENE of Molo Innocenziano Head. The track then leads WSW into the harbour entrance passing between Molo Innocenziano and the Entrance N side Light-beacon (1 cable N) (mast with platform, 6 m in height). Mariners should remain S of the light-beacon (1½ cables NW) marking shoaler water N of Molo Innocenziano.

Basins and berths

12.22

1 **Basins**. The main basin, formed by the breakwaters, provides access to Darsena Piccola Pesca and Darsena or Porto Pamphili which lie, respectively, in the NW and N corners of the port.

Alongside berths. The port is subject to considerable silting and alongside berths have the following draught limitations:

Berth	*Use*	*Maximum draught*
Molo Innocenzaio	Commercial vessels.	4·5 m
Molo Neroniano	Local ferries and fishing vessels, visiting yachts.	1. 4·0 m for section extending 50 m N of Molo Innocenziano only. 2. 3·0 m for remainder of quay.
Darsena Piccola Pesca	Local fishing vessels and yachts.	Confirm with Harbour Master.
Porto Pamphili	Military vessels and yachts.	Confirm with Harbour Master.

Port services

12.23

1 **Repairs**. Limited repairs for small vessels; divers, a slipway of 500 tons capacity.

Other facilities. The town has all the usual facilities including a hospital.

Supplies: fuel; water; provisions.

Rescue. There is a lifeboat stationed at Porto d'Anzio.

Small craft

12.24

1 **General information**. Although the port is well equipped for servicing small vessels and offers 500 berths in depths of about 2·5 m there are currently (2003) few berths for visiting yachts. The port development plan (12.20) aims to significantly improve all small craft facilities however until these works are completed Marina di Nettuno (12.38) 1½ miles ENE is likely to be more suitable for visiting small craft.

ISOLE PONTINE

Isola di Palmarola

Chart 1911, Italian Chart 126 (see 1.13)

General information

12.25

1 **Description**. Isola di Palmarola (40°56′·0N, 12°51′·5E) is the uninhabited W island of Isole Pontine. The island has high, irregular coasts which are difficult to access. Despite its barren appearance parts of the island are cultivated by the islanders of Ponza (12.31). Isola di Palmarola has two principal peaks; Monte Tramontana (40°56′·7N, 12°51′·5E) (12.10) in the N and Monte Guarniere (40°55′·8N, 12°51′·4E) (12.10) in the S.

12.26

1 **Topography**. The W coast extends, in a series of coves separated by rocky headlands, 1¼ miles SSW from Punta Tramontana (40°57′·0N, 12°51′·3E), the N extremity of the

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island, to Punta delle Grottelle. The coast then continues S for a further 2½ cables to Punta di Mezzogiorno, the S extremity of the island.

2 The sandy beach at the head of Cala del Porto, 5 cables S of Punta Tramontana, provides the best landing place on the island. Cala del Porto is overlooked by La Forcina, an outcrop rising on the E coast of the island, which appears to have three peaks when viewed from the W but only one when seen from the E. Several huts on the shore of the cove and some of the caves in the cliffs overlooking it contain survival equipment.

3 Between Promontorio di San Silverio (40°56′·3N, 12°51′·3E) and Punta delle Grottelle, 6 cables SSW, the coast is divided into two broad bays by a rugged, rock fringed headland. The rugged, rock fringed coast continues to Punta di Mezzogiorno, which is connected by a ridge of shingle to Faraglione di Mezzogiorno (40°55′·3N, 12°50′·9E).

4 Faraglione di Mezzogiorno is the largest of a group of islets and rocks standing on the inner end of Banco di Mezzogiorno, a rocky ridge with depths of less than 20 m over it, extending generally 2 miles WSW from Punta di Mezzogiorno.

5 The E coast of Isola di Palmarola, extending 1¼ miles S from Punta della Brecce (40°56′·9N, 12°51′·7E) to Punta Vardella, consists mainly of unremarkable sheer cliffs.

The S coast extends in a wide bay between Punta Vardella (40°55′·7N, 12°51′·7E) and Punta di Mezzogiorno 6 cables SW.

Directions for the W coast

12.27

1 From a position NW of Punta Tramontana (40°57′·0N, 12°51′·3E) the track leads S passing, with positions relative to Punta Tramontana:

W of Punta Tramontana and Scoglio Scuncillo, a bare conical rock (½ cable N), thence:

W of La Galere, two small rocks (2½ cables WSW), thence:

W of I Piatta (4 cables S) two small islets in the entrance to Cala del Porto (12.26). Thence:

2 W of Scoglio San Silverio, an above water rock (6 cables S) lying ¾ cable WSW of Promontorio di San Silverio. A small white chapel stands on the summit of the headland. Thence:

W of an unnamed rugged, rock fringed headland (9 cables S), thence:

W of Scoglio di Pallente (1¼ miles S), high, conical and covered with bushes, it is the largest of a group of five rocks lying 1 cable SW of Punta Grotelle. Thence:

3 W of Faraglione di Mezzogiorno (1½ miles S) (12.26), thence:

W of a shoal with a least depth of 3·2 m over it (1¾ miles SSW). The shoal lies at the W end of a an underwater ridge extending from Scoglio del Pidocchio, the most W of a group of large rocks close S of Faraglione di Mezzogiorno. Scoglio Fucile, a small rock with a natural arch, lies in the channel between Scoglio del Pidocchio and Faraglione di Mezzogiorno. Scoglio di Capello lies close E of Scoglio del Pidocchio; when seen from the SW Scoglio di Capello appears mushroom shaped. Thence:

4 W of Piana di Mezzogiorno (1¾ miles SSW). The black rock is just awash. Dangerous underwater rocks lie within ½ cable of it. A shoal with a least depth of 9·3 m over it lies 2 cables NW of the rock.

Directions for the south coast

12.28

1 From a position SW of Piana di Mezzogiorno (40°55′·2N, 12°50′·5E) the track leads ENE passing, with positions relative to Punta Vardella (40°55′·7N, 12°51′·7E):

SE of Punta Mezzogiorno (1 mile SW) (12.27) and a shoal, with a least depth of 3·4 m over it, which lies 2½ cables WSW of the rock, thence:

SE of Scoglio Capello (8 cables SW), thence:

SE of Cala Brigantina (3 cables W), the W part of the wide bay forming much of the S coast. Thence:

SE of Scoglio Suvace (1 cable SSW), a long narrow rock, thence:

SE of Secca Zirri (2¼ cables SE), a dangerous shoal, on the outer part of a bank, with depths of less than 6 m over it. Breaks occur over the shoal even in calm weather. Thence:

SE of Punta Vardella.

Directions for the east coast

12.29

1 From a position E of Punta Vardella (40°55′·7N, 12°51′·7E) the track leads N passing, with positions relative to the headland:

E of Scoglio Forcina (6 cables N), a small islolated rock; a shoal with a least depth of 2·3 m lies close E of it. Thence:

E of Scoglio Spamaturo (1 mile N), a low flat rock, thence:

E of Punta della Brecce (1¼ miles N), thence:

E of a rock (1½ miles N) with a least depth of 5 m over it.

12.30

1 **Anchorage**. With local knowledge anchorage can be obtained in depths of 8 to 9 m, sand, 1½ cables N of San Silverio Chapel (12.27). Small craft can moor within 1 cable of the N shore of the bay securing stern ropes to natural mooring posts ashore.

Isola di Ponza

General information

12.31

1 **Description**. Isola di Ponza (40°54′·5N, 12°57′·4E), the largest island of Isole Pontine, is crescent shaped, high and rugged with an irregular outline. Monte della Guardia (40°53′·0N, 12°57′·4E), near the S extremity, is the highest point of the island; a disused signal station (12.10) stands on its summit.

The island has a flourishing fishing industry.

Topography

12.32

1 The N coast of the island extends 1½ miles WSW from its NE extremity, Punta dell' Incenso (40°56′·0N, 12°59′·7E), to Punta del Papa. Generally this coast is high, rugged and steep-to. Isola di Gavi, a high steep-sided and uninhabited islet, is separated from Punta dell'Incenso by a narrow channel suitable only for boats. A rocky bank, on which lie numerous dangers, see 12.13, extends 2¾ miles NE from Islotto di Gavi to Isola di Zannone (12.37).

2 The W coast extends generally SSE for 3 miles, in a series of small, relatively shallow, bays separated by rugged points and headlands, between Punta del Papa and Punta della Guardia (40°52′·6N, 12°57′·3E), the S extremity of

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the island. Although the shores of the bays are rocky several provide anchorage.

3 The SE coast extends 1½ miles NE from Punta della Guardia to Punta della Madonna (40°53′·7N, 12°58′·3E). Scogli di Calzone Muto, two islets, lie close inshore midway along this bare rugged coast. Le Formiche, a group of dangerous shoals and rocks, lies 7 cables E of the islets. Scoglio della Botte, a bare, steep sided rock, 19 m in height, lies 6 miles ESE of Le Formiche.

4 The E coast of the island extends generally 2½ miles NE, in a series of five bays, from Punta della Madonna to Punta dell' Incenso (40°56′·0N, 12°59′·7E). Within the bays and generally in the vicinity of the headlands there are depths of less than 10 m. Porto di Ponza (40°53′·8N, 12°58′·0E) (12.36) lies close W of Punta della Madonna. The coast of the NE part of island is characterised by high, rocky cliffs which extend approximately 1 mile SW of Punta dell' Incenso.

Directions for the west coast

12.33

1 From a position N of Punta dell' Incenso (40°56′·0N, 12°59′·7E) the track leads SW passing, with positions relative to Punta dell' Incenso:

NW of Isolotto di Gavi (2 cables NE). Punta Rossa, the NE extremity of the islet, is formed from red coloured rock. thence:

NW of Punta del Papa (1½ miles WSW) on which stands an ancient fort with the appearance of a farmhouse. An area of foul ground fronts the headland. Thence:

2 NW of Cala dell' Acqua (1½ miles WSW). The bay lies between Punta del Papa and Punta Corte, 3 cables SSW, and is identifiable by two groups of white houses standing high close inland of its head. The N group stands above the entrance to a cave, the S group includes a church. A disused metal pier extends 120 m SW from the head of Cala dell' Acqua. The pier, its associated dolphin and mooring buoys were used to load minerals but are now in a state of disrepair and dangerous. Tankers supplying drinking water to the NW part of Isola di Ponza anchor S of the pierhead close off the Scorgenti district. Thence:

3 NW of Cala di Feola (1¾ miles WSW). The bay lies between Punta Corte and Punta dei Formi, 3 cables WSW. Its shores are almost sheer, fringed with rocks and more elevated in the vicinity of the headlands. A large rock lies 50 m off the head of the bay; the village of La Forna (I' Forni) stands on a hill above the E side of the bay. A rubble breakwater, see (12.40), extends NE from the shore 2½ cables E of Punta dei Forni. An outfall pipeline, lying parallel to the coast, extends about 2 cables W from close W of the breakwater root. Thence:

4 NW of Capo Bosco (2¼ miles WSW). The red coloured headland has a distinctive jagged outline. A small flat-sided rock, visible from the NE, slopes towards and is attached to the extremity of the headland. Anchoring and fishing are prohibited within an area of radius 100 m enclosing an archaeological site 2½ cables NW of Capo Bosco. Thence:

5 To a position approximately 1¼ miles W of Capo Bosco. The track then leads S passing:

W of I Faraglioni (2¾ miles WSW). The prominent group of rocks stand on a rocky bank extending 3½ cables W of the S headland of an unnamed bay S of Capo Bosco; rocky cliffs form most of the coastline of this shallow bay. Faraglione Bianco, the largest and highest of I Faraglione, lies close off Isola di Ponza; the outermost rocks of the group are dangerous and should be given a berth of at least 1¼ cables. Thence:

W of Monte Core (2¼ miles SW) (elevation 203 m). A radio mast, from which red obstruction lights are exhibited, stands on the summit. Thence:

W of Secca dei Mattoni (3¼ miles WSW), a dangerous rocky shoal with a least depth of 2·4 m over it, the most W of a number of rocks and dangers lying off this part of the coast.

6 **Clearing bearings**. Punta del Papa (40°55′·7N, 12°57′·9E) bearing more than 053° and open NW of Capo Bosco, 9½ cables SW, clears NW of Secca dei Mattoni.

Punta della Guardia Light (40°52′·6N, 12°57′·3E) (12.10) bearing less than 154° and open SW of Capo Bianco, 1¼ miles NNW, clears SW of Secca dei Mattoni.

From a position W of Secca dei Mattoni the track leads S passing;

W of two rocks, with depths of 5·5 and 4·0 m over them, 4 cables SE of Secca dei Mattoni. Thence:

W of Capo Bianco (3¼ miles SW), bare white cliffs, thence;

7 W of Cala Chiai di Luna (3¼ miles SW). The bay, entered between Capo Bianco and Punta Fieno, 7 cables SSE, has the shape of an amphitheatre. Much of the head of the bay is fronted by a narrow sandy beach fringed with rocks; behind it rise vertical cliffs of yellow rock with occasional dark strata. In the S part of the bay the cliffs drop at a narrow opening within which lies the entrance to a Roman tunnel easily seen from seaward. Thence:

8 W of Monte della Guardia disused signal station (3½ miles SW) (12.10), thence:

W of Punta della Guardia (3¾ miles SW), the S extremity of the island. The steep, rocky headland rises to a conical summit. Lights are exhibited from Farraglione della Guardia which is connected to Isola di Ponza by a short isthmus. Punta della Guardia Light (12.10) is supplemented by a sectored light (12.34); the sector covers the danger of Le Formiche (40°53′·1N, 12°58′·8E) (12.34). Thence:

To a position WSW of Punta della Guardia.

Directions for the east coast

12.34

1 From a position S of Punta della Guardia (40°52′·6N, 12°57′·3E) (12.33) the track leads ENE passing, with positions relative to Punta della Guardia:

SSE of Scogli di Calzone Muto (7 cables NE), two islets standing on a bank with depths of less than 10 m over it, thence:

SSE of Punta della Madonna (1¼ miles NE). Lights are exhibited from Rotonda della Madonna; principal light (white conical tower and dwelling, 18 m in height), a supplementary sectored light (see clearing bearings) covers the dangerous rocks and shoals of Le Formiche (1¼ miles ENE).

2 **Clearing bearings**. Le Formiche is covered by the following lights:

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Punta della Guardia supplementary sectored light (hut at foot of white tower on red dwelling with white band; hut 2 m in height) (40°52′·6N,12°57′·3E) (235°–265°).

Rotonda della Madonna supplementary sectored light (exhibited from terrace of white conical tower and dwelling) (40°53′·7N, 12°58′·3E) (301°–341°).

Thence to a position SE of Le Formiche.

3 The track then leads NE passing:

ESE of Scogli della Madonna (1½ miles NE) the most E islet extending from Punta della Madonna, thence:

ESE of Cala di Ponza (1¼ miles NNE). The bay is entered between Punta Pilato, the NE extremity of Rotonda della Madonna, and Punta Santa Maria, 5 cables NW. Several rocks front Punta Santa Maria; Scoglio Ravia, the largest and outermost exhibits a light (green hut, 3 m in height). The islet is steep-to and surmounted by a white house; a stout mooring post stands on the NE extremity of the islet. The town and small port of Ponza (12.36) occupies the head of the bay. Thence:

4 ESE of Scoglio Rosso (1½ miles NE), the islet is steep-to, thence:

ESE of Cala del Frontone (1¾ miles NNE). A marine farm lies 2½ cables E of Punta Frontone, the rocky N headland of the bay. Light-buoys (special) mark the S and E corners of the farm area which has sides 110 m in length. Thence:

5 ESE of Cala d'Inferno (2½ miles NNE). The cove is surrounded by steep cliffs. Two strips of yellow rock separated by white limestone at the head of the cove are a useful identification feature. A natural quay at the foot of the cliffs affords a landing; steps cut into the cliff lead to the interior of the island. A marine farm lies 4 cables SE of Cala d'Inferno, light-buoys (special) mark the S corners of the area which has sides 110 m in length. Thence:

6 ESE of Punta Nera (2¾ miles NNE), thence:

ESE of Scoglio Evangelista (3 miles NE), a high prominent rock. Another smaller, red coloured rock covered with vegetation and having a natural arch, lies 1¼ cables NNW of Scolio Evangelista. Thence:

ESE of an unnamed shoal (3¾ miles NE) with a least depth of 7·9 m over it, thence:

ESE of Punta dell' Incenso (3¾ miles NE), thence:

ESE of Isolotto di Gavi (4 miles NE), thence

E of an unnamed shoal (4¼ miles NE) with a least depth of 8·2 m over it, thence:

To a position E of Isolotto di Gavi.

Anchorages

12.35

1 **Cala dell' Acqua** (40°55′·5N, 12°58′·0E). With good local knowledge temporary anchorage can be obtained in a depth of about 17 m, 187° 1½ cables from Punta dell Papa. Mariners should beware of a shoal, with a least depth of 3·5 m over it, 140 m W of the disused pierhead (12.31). Small vessels may anchor in depths of about 5·5 m, approximately 100 m off the N shore of the bay, or in depths of 5 to 6 m between the 3·5 m shoal and the SE shore. The S shore of the bay, E of Punta Corte is fronted by rocks and shoals whereas the N shore can be approached close to. During the winter the current within the cove usually sets against the wind.

2 **Cala di Feola** (40°55′·3N, 12°57′·8E). With local knowledge temporary anchorage can be obtained in a depth of about 12 m 200 m SSW of Punta Corte; smaller vessels can anchor in depths of about 10 m closer in. The anchorage is preferable to others on the W coast of the island.

3 **Cala Chiai di Luna** (40°53′·5N, 12°56′·9E). Anchorage can be obtained in depths of about 9 m, sand, 3 cables NNE of Punta Fieno. At night Rotonda della Madonna Light (40°53′·7N, 12°58′·2E) (12.34) is visible from the S side of Cala Chiai di Luna and may be used to approach the anchorage. An indication of the anchorage is provided when Punta della Guardia Light (40°52′·6N, 12°57′·3E) (12.10) is obscured by the high ground N of it. Small vessels can anchor off a moderately high, conical rock which lies approximately 50 m off the head of the bay; stern ropes can be secured to the rock. Mariners should note that with winds from S or SSE the sea rounds Punta della Guardia and enters the bay. A SE wind is often accompanied by violent squalls which render the anchorage untenable.

4 **Cala del Frontone** (40°54′·2N, 12°57′·8E). Anchorage can be obtained in depths of 5 to 10 m, 3 cables SSW of Punta Frontone. Mariners should note the isolated rock which lies on the 5 m depth contour close SW of the anchorage.

Porto di Ponza

12.36

1 **General information**. Porto di Ponza (40°53′·8N, 12°58′·0E) is the main harbour of the island with facilities for small commercial vessels, ferries and small craft. The harbour accepts vessels up to 60 m in length. The port lies on the S shore of Cala di Ponza (12.34). A bank, with depths of less than 5 m over it, extends up to 1 cable from the shores of the bay. Scoglio Sotto Torre lies close to the S side of Cala di Ponza. The cupola of a church 1½ cables W of Rotunda della Madonna Light (40°53′·7N, 12°58′·2E) (12.34) and a white rectangular castle close NE of the church are prominent. Rotonda della Madonna, Punta della Madonna (12.34), Scoglio Rosso (40°53′·8N, 12°58′·4E) (12.34) and the light exhibited from Scoglio Ravia (40°54′·0N, 12°57′·9E) (12.34) are all useful marks.

2 The harbour is protected from the NE by a rubble shelter breakwater extending 120 m WNW from the shore 3 cables W of Punta Pilato (40°53′·7N, 12°57′·3E); a light (red mast, 7 m in height) is exhibited from the head of the breakwater. Molo Musco, which forms the NE side of the harbour lies parallel to and 30 m SSW of the shelter breakwater. A light (red tower, 12 m in height) is exhibited from the head of Molo Musco. Mariners should note that during strong NE winds the sea breaks over the shelter breakwater and the area between it and Molo Musco cannot then be used for shelter.

3 **Local weather and sea state**. Winds from the ENE and ESE raise a high sea in the roads and heavy swell within the port. Strong NE winds can make the anchorage dangerous. Winds from the S increase the water level within the harbour; strong offshore winds reduce water level.

During the winter ENE winds prevail; the strong *Greco-Levante* (ENE), known locally as *Garigliano*, generally lasts for 3 to 5 days and typically increases in strength during the night, blowing hardest at about day break, before gradually reducing during the afternoon. In hard winters, when there have been heavy falls of snow on

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the mainland mountain ranges, NE winds are particularly frequent.

4 In spring the *Scirocco* (SE) prevails and is replaced by W winds during the summer. During the autumn rain and squalls accompany the prevailing S wind.

When the coast of the mainland is clearly visible a NE wind is imminent. An increase in water level, air temperature and humidity in the spring, accompanied by a marked increase in the number of migratory birds, indicates a strong S wind.

5 **Directions**. From a position approximately 1 mile NE of Molo Musco Light (40° 53′·7N, 12°57′·9E) the light bearing 230° leads towards the harbour passing, with positions relative to the light:

SE of Punta Frontone marine farm (8 cables NNE), thence:

NW of Scoglio Rosso (4 cables ENE), thence:

SSE of Secca della Ravia (3 cables NNE), a rocky shoal with depths of 4 m over it.

The track then leads WSW into the harbour passing at least 25 m clear of both breakwater heads.

6 **Prohibited anchorage**. Anchoring and fishing are prohibited in an area containing submarine cables; the rectangular area is 1 cable wide, its N side extends 3 cables ESE from a position 1½ cables WSW of Scoglio Ravia Light (40°54′·0N, 12°57′·9E).

Anchoring is also prohibited E of a line joining Punta Santa Maria (40°54′·0N, 12°57′·8E) (12.34) and Punta Giancos, 3½ cables SSW; the area is used by ferries manoeuvring to approach or leave the ferry berths.

7 **Anchorage**. Small vessels may obtain temporary anchorage in depths of 4 to 7 m, mud, close SE of Punta Torrione (40°53′·9N, 12°57′·7E). Generally holding ground is better in the S part of the anchorage area.

Berths. Molo Musco; in good weather vessels of less than 3 m draught can moor stern-to, with bows W, on the outer part of the SW side. Banchina Nuova; occupies the W part of the S side of the harbour, has a dredged depth of 6 m alongside. A spur at the E end of this quay is used by ferries of up to 4 m draught providing regular services with the mainland.

8 **Repairs**. Small vessels only; three patent slipways, the largest has a capacity of 100 tons.

Supplies: fuel; water; provisions available in small amounts.

Small craft. The harbour provides 200 small craft berths in depths of 2 to 4 m. Vessels up to 35 m in length are accepted. During the summer months pontoons provide additional small craft berths for vessels with a maximum draught of 3 m.

Isola di Zannone

General information

12.37

1 **Description**. Isola di Zannone (40°58′·2N, 13°03′·5E) is the most N island of Isole Pontine and lies within Parco Naturale di Circeo. Monte Pellegrino (elevation 194 m) (40°58′·2N, 13°03′·4E) is the highest point and stands in the N part of the island. Isola di Zannone is wooded in several places and slopes gradually down to the S coast.

2 Although the coast of Isola di Zannone is rocky and steep-to landing is possible W and E of Capo Negro, the N extremity of the island, which exhibits a light (40°58′·3N, 13°03′·4E) (12.11) and at a small quay with an alongside depth of 1 m at Il Varo, a cove with a rocky shore, close NW of Punta Varo the SW extremity of the island. Punta Varo also exhibits a light (white, framework tower, 5 m in height) (40°57′·8N, 13°03′·0E).

3 Casa di Caccia, a white, two-storey villa with a portico of four arches, stands on a summit (elevation 119 m) 3 cables SW of Capo Negro.

Dangers. Scoglio Mariolo (1 m in height) lies 5 cables WSW of Capo Negro; Secca Mariolo, a rocky shoal with a least depth of 4 m over it, lies 1½ cables W of Scoglio Mariolo. Secca del Varo, a dangerous shoal (12.13), lies 3½ cables SW of Punta Varo Light. A bank extending up to 2 cables offshore, with depths of less than 9 m over it, fronts the NE coast of the island.

4 **Regulations**. The island lies within the Circeo Nature Park; hunting and any activity which might harm the environment are prohibited. Landing on the island is only permitted when authorised by the Council of Ponza.

Small craft

Chart 906, plan of approaches to Anzio

Marina di Nettuno

12.38

1 **General information**. Marina di Nettuno (41°27′·2N, 12°39′·6E) fronts the town of Nettuno. The harbour is protected from the W by Molo di Sottoflutto and from the S and E by Molo di Sopraflutto. Lights exhibited from the heads of the moles mark the S facing harbour entrance which is 100 m wide and has depths of about 3 m. Several landmarks within the town (12.10) can be used to lead to the entrance. Immediately within the entrance lies Avamporto which leads to two further basins; Bacino Nuovo and Bacino Vecchio, respectively N and NE. Vessels up to 20 m in length and maximum draught 3·5 m are accepted.

2 **Berths**. The marina provides 850 berths in depths of 3 to 4 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Chart 1911

Porto di Rio Martino

12.39

1 **General information**. Porto Rio Martino (41°23′N, 12°55′E) is small craft haven at the mouth of Rio Martino which connects Lago di Fogliano and Lago dei Monaci with the sea. Breakwaters extend SW from each side of the channel mouth and exhibit lights (red and green poles, 4 m in height). There are depths of about 2 m in the entrance and within the channel. The entrance becomes dangerous in strong winds. Berths are available within the channel and within the lagoons. Small craft facilities are limited; fuel water and provisions available.

Punta dei Forni

12.40

1 **General information**. (40°55′·2N, 12°57′·6E). A small harbour lies close E of Punta dei Forni protected by a rubble mole extending 115 m NE from the shore. The E side of the mole is quayed for about 50 m; two smaller quays form the root of the mole. There are depths alongside of 1 to 4 m. Currently (2002) the quays are in poor repair and berthing on them is not permitted.

Other names

12.41

1 Giancos, Spiaggia (40°53′·6N, 12°57′·8E).
Fogliano, Torre di (41°23′·0N, 12°55′·2E).
Fossa Papale (41°22′·1N, 12°56′·8E).

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San Antonio, Spiaggia (40°53′·8N, 12°57′·6E).
Torrione, Punta del (40°53′·8N, 12°57′·7E).

CAPO CIRCEO TO MONTE ORLANDO LIGHT

General information

Chart 1911

Route

12.42

1 A coastal route leads, from a position S of Capo Circeo (41°14′·0N, 13°04′·0E), inshore of Isole Pontine, 20 miles ESE to a position SSW of Monte Orlando Light (41°12′·4N, 13°34′·7E).

Topography

12.43

1 This part of the mainland coast forms the N part of Golfo di Gaeta which extends from Capo Circeo 45 miles SE to Isola d'Ischia (40°43′N, 13°54′E); the islands of Isole Pontine lie across the mouth of the gulf further offshore. The shores of the gulf are generally low and flat, except in the vicinity of Terracina (41°17′N, 13°15′E) and Gaeta (41°13′N, 13°34′E). Several rivers flow into this part of Golfo di Gaeta, some provide havens for fishing vessels and small craft.

Depths

12.44

1 The coastal route lies in deep water. Generally the mainland coast is steep-to however the 30 m depth contour lies up to 3½ miles SE of Capo Circeo (41°14′·0N, 13°04′·0E), closing the coast to 1½ miles SSE of the mouth of Fiume Sisto (41°15′·9N, 13°09′·0E). From this position the contour remains parallel to the coast for approximately 9 miles before closing the coast again to lie within 1 mile of the shore between Lago Lungo (41°16′·2N, 13°24′·3E) and Monte Orlando Light (41°12′·4N, 13°34′·7E). The mainland coast is free from dangers to seaward of the 30 m depth contour.

2 The N side of Isole Pontine is steep-to and free from isolated dangers to seaward of the 50 m depth contour which lies at 2 miles or less from the islands.

Prohibited areas

12.45

1 Anchoring and fishing are prohibited within a sector enclosing submarine cables which land close E of Torre del Fico (41°13′·4N, 13°05′·4E). The prohibited area, shown on the chart, extends approximately 3 miles S of the tower.

Anchoring, fishing and diving are prohibited within an area protecting an historic wreck, radius 300 m, centred on (41°13′·7N, 13°06′·7E).

2 Entry is prohibited to an area, enclosing a dangerous wreck, centred on (41°16′·2N, 13°14′·3E); the area is shown on the chart.

A votive statue of the Madonna del Carmine lies in position (41°16′·9N, 13°16′·9E) and is enclosed by an area of radius 5 cables; entry to the area is prohibited.

Landslip

12.46

1 Navigation, anchoring, stopping, fishing and swimming within 50 m of rocky sections of the coast of the Gaeta Maritime District are prohibited because of the danger of landslip. In some areas the prohibited area extends 250 m offshore, they are marked by local authority signs.

Exercise areas

12.47

1 Military exercise areas lie within Golfo di Gaeta; details of the areas and active periods are contained in local notices to mariners.

Natural conditions

12.48

1 **Wind**. In spring and summer winds with a N component prevail; during the winter winds with a W component are most common. Strong S winds are usually accompanied by mist which obscures the coast from more than 1 mile offshore.

Weather. An increase in sea level along this coast indicates a strong S wind. Cloud covering the mountains inland indicate a SE wind whereas cloud forming E of Monte di Terracina indicate S or SW winds.

2 **Current**. A weak SE current sets along the coast between Torre Sant' Agostino (41°13′·3N, 13°30′·2E) (12.50) and Punta della Stendardo, 4 miles ESE.

Principal marks

12.49

1 **Landmarks:**

Torre del Fico (tall, round, painted black and white squares) (41°13′·4N, 13°05′·4E).

Torre Vittoria (square, corniced with windows) (41°14′·2N, 13°06′·2E). The tower stands amongst a number of prominent villas and modern buildings.

Torre Olevola (Olivola) (square, grey, corniced with windows) (41°15′·0N, 13°07′·2E). The tower stands above the corner of a cylindrical guard house.

2 Torre Badino (square, surmounted by a turret, adjoins villa with a red roof) (41°16′·9N, 13°12′·0E).

Terracina belfry (brown) (41°17′·6N, 13°15′·0E).

Arcade of the Temple of Jupiter or Giove (Jove) Anxur, known locally as Palazzo di Teodorico (arches of the base of ruined Roman temple standing above a conspicuous limestone cliff) (41°17′·7N, 13°15′·7E).

3 Pesco Montano (remarkable rock column) (41°17′·5N, 13°15′·7E).

Punta della Trinità signal station (41°12′·3N, 13°34′·3E).

Mausoleo di Lucio Munanzio Pianco (Torre Orlando) (white, round with stone embellishments, 14 m in height) (41°12′·4N, 13°34′·6E).

4 **Major lights**:

Capo Circeo (41°13′·3N, 13°04′·1E) (12.10).

Monte Orlando (round tower, 14 m in height) (41°12′·4N, 13°34′·7E).

Directions

(continued from 12.11)

12.50

1 From a position 8 miles S of Capo Circeo Light (43°13′·3N, 13°04′·1E) the track leads ESE passing, with positions relative to light:

S of Torre del Fico (1 mile E) (12.49), thence:

S of San Felice (1¼ miles NE). The village stands half-way up the E slope of the headland above the yacht harbour San Felice Circeo (12.56). Thence:

S of Torre Vittoria (1¾ miles NE) (12.49), thence:

S of Torre Olevola (3 miles NE) (12.49), two frame work masts (red and white bands) adjacent to a high-rise building stand close to the tower. Thence:

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2 S of Fiume Sisto (4½ miles NE), the river mouth provides a haven (12.57) for small craft. Thence:
S of Torre Badino (7 miles NE) (12.49). A small craft haven (12.58) lies close within the the river mouth. Thence:
S of a prohibited area enclosing a dangerous wreck (8 miles NE) (12.45), thence:
S of Terracina (9 miles ENE) (12.52). The remains of the ancient Temple of Giove Anxur (12.49) stand isolated on the flat summit of Monte San Angelo above the town, close N of the harbour. The temple arcade is a good landmark, particularly from S and E, and flood lit at night. Thence:
3 S of a prohibited area containing a votive statue (10¼ miles ENE) (12.45), thence:
S of Foce Canneto (10¾ miles ENE) the W stream discharging from Lago di Fondi, which lies 1½ miles inland from this part of the coast. The stream is navigable by boat and its mouth protected by two breakwaters. Thence:
S of Canale di Sant Anastasia (13 miles ENE), the E stream discharging from Lago di Fondi. The stream is navigable by boat and a boat haven (12.59) lies close within the mouth. Thence:
4 S of a rubble breakwater (11¼ miles ENE), 5 cables E of Foce Canneto. The breakwater extends 300 m from the coast; the inner 50 m is awash, the remainder of the breakwater submerged and dangerous to navigation. Thence:
SSW of the canal entrance to Lago Lungo (15½ miles ENE). The canal is ¾ cable in length, 10 m wide and has a depth of 0·9 m. Two stone jetties extend from the mouth of the canal; one is ¾ cable in length. Thence:
5 SSW of Sperlonga (16¾ miles E), a village standing on a rocky promontory. The headland reduces in elevation towards its extremity, on which stands Torre Truglia (tall, square, grey standing on a plinth). A white, four-storey building stands 5 cables NW of the tower. The promontory is fringed by dangerous rocks and should be given a berth of at least 2¼ cables. Small vessels can obtain anchorage (12.53) SW of the promontory and a boat haven (12.60) lies close E of Torre Truglia. Thence:
6 SSW of Torre Capovento (round, ruined) (17¾ miles E). The remains of the tower stand at the NW end of a rocky cliff which has sea caves at its foot. Thence:
SSW of an aircraft wreck, dangerous to navigation, (19 miles E), thence:
SSW of Torre Sant' Agostino (round, partly ruined) (19¾ miles E). The tower stands at the SE end of a long section of beach. Further ruins stand close behind and a small villa close by it. Thence:
7 SSW of Torre Scissura (Scessura) (grey, round) (21 miles E) stands isolated on the spur of a rocky hill. A light, red coloured, two-storey villa stands close behind the tower. Thence:
SSW of Torre Viola (two buildings, one round with heavy cornices, one square and lower) (21¼ miles E). Thence:
SSW of Insentura di Serapo (22¼ miles E) which lies between a rocky point 4 cables ESE of Torre Viola and Punta della Trinità (22¾ miles E), a high, rugged, brown cliff with three deep clefts called Montagna Spaccata; a small chapel stands in one of them. A sandy beach fringes much of the bay and a red chimney stands midway along its coast Anchorage can be obtained in the entrance to the bay (12.55). Thence:
8 SSW of Mausoleo di Lucio Munanzio Pianco (23 miles E) (12.49). The mausoleum stands on the summit of Monte Orlando, the highest point of Promontorio di Monte Orlando, a high, rocky promontory connected to the mainland by a low isthmus W of it.

The track then leads to a position approximately 12 miles SSW of Monte Orlando, Light (23 miles E) (12.49).

(Directions for Rada di Gaeta are given at 12.76 and for the coastal route continue at 12.70)

Anchorages and harbours

Capo Circeo anchorage
12.51

1 Anchorage can be obtained E of Capo Circeo (41°14′·N, 13°04′·0E), in depths of 12 to 14 m, with Torre del Fico (41°13′·4N, 13°05′·4E) (12.49) bearing 245°, distant 2 miles A shoal with a least depth of 9 m over it lies 2½ cables NE of the anchorage. Smaller vessels may anchor closer inshore, in depths of 7 m ENE of Torre Vittoria (41°14′·2N, 13°06′·2E) (12.49).

Terracina
12.52

1 **General information**. Terracina (41°17′·0N, 13°15′·5E) is primarily a fishing port which also provides local ferry services and small craft facilities; the port dates from the Roman period. The harbour fronts the new town which occupies the plain between the coast and the foot of a rocky hill; the old town stands on the S slopes of the hill within it are two turreted buildings and a conspicuous square belfry. The ruins of the Temple of Jupiter (41°17′·7N, 13°15′·7E) (12.49) stand in a commanding position close N of the harbour entrance.

2 The harbour is protected from the S by Molo Gregoriano, which extends 2 cables E from the coast, and from the NE by an angled Outer Mole. Lights are exhibited from the heads of the moles; Molo Gregoriano (red column on pedestal, 9 m in height), Outer Mole (green mast, 6 m in height). The moles form the outer harbour which provides access to Canale Pio VI, within which lies the inner harbour, and Darsena di Levante a small craft basin on the N side of the outer harbour.

Within Pio VI the canal is lined with stone quays and Vecchia Darsena, a small craft basin, lies on the S side of the channel, 1½ cables from the canal entrance. A stone bridge spans the canal 2½ cables within the the entrance.

3 The outer harbour entrance has a least depth of 3·1 m but Terracina is subject to silting, particularly with strong SW winds, and periodic dredging is conducted; mariners are advised to confirm available depths in the approach and within the harbour. The maximum draught permitted (2001) is 2·7 m. There is a speed limit of 3 kn within the harbour.

4 **Directions**. The harbour is approached from the E. The track leads W to pass between the heads of Molo Gregoriano and Outer Mole then leads WNW to enter Pio IV; the entrance to the canal is marked by lights; S side (red mast 12 m in height), North side (green mast, 12 m in height).

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5 **Anchorage** can be obtained in depths of 5 to 15 m, sand, good holding ground, E of the harbour. Mariners should note the prohibited area (12.45) containing a votive statue.

6 **Berths**. Molo Gregoriano accepts vessels with a maximum draught of 2·7 m; it is normally used by ferries and scheduled services, other vessels must make prior arrangements. The head of the mole is frequently shoaled. A jetty, 270 m in length and 5 m wide, extends S from the shore close E of the harbour; the jetty has an alongside depth of 6·5 m at its head.

7 **Small craft**. The port accepts small craft up to 14 m in length, there are 300 yacht berths and 150 fishing vessel berths.

Other facilities. Comprehensive small craft facilities including repairs; there are two patent slips of 50 tons capacity. There is hospital in the town.

Supplies: fuel; water; provisions.

Sperlonga anchorage

12.53

1 Temporary anchorage for small vessels can be obtained SW of Sperlonga (41°15′·6N, 13°26′·2E) in depths of 5 m. Depths shoal rapidly to less than 2 m approximately ½ cable offshore. The anchorage quickly becomes dangerous with onshore winds. A remarkable rocky cliff, with inconspicuous ruins standing on it, forms part of a dark green slope E of Sperlonga. Two groups of white houses stand on the beach E of the cliff.

Chart 906 Golfo di Gaeta

Torre Sant' Agostino anchorage

12.54

1 With good local knowledge anchorage for small vessels can be obtained E of Torre Sant' Agostino (41°13′·3N, 13°30′·2E). Local vessels frequently shelter here from NE squalls, known locally as *Garigliano*.

Chart 906 plan of Approaches to Rada di Gaeta

Insenatura di Serapo anchorage

12.55

1 Anchorage can be obtained at Insenatura di Serapo (41°12′·5N, 13°34′·0E), in depths of 10 to 20 m, on a line joining the headlands of the bay; depths shoal rapidly inshore of this line. Scoglio La Nave, an above water rock, lies close SE of the W headland and is difficult to distinguish against the similar coloured coast behind it. Mariners are advised to anchor close to Scoglio La Nave in NW winds and close to Punta della Trinità, the W headland (12.50), in NE winds.

Small craft

Chart 1911

San Felice Circeo

12.56

1 **General information**. San Felice Circeo (41°13′·5N, 13°05′·7E) is a small craft and fishing harbour protected from the S by an outer rubble breakwater and from the E by a mole. The harbour is approached from the E through a short channel, marked by light-buoys, passing between two shoals; the channel has depths of about 3 m. The entrance faces NE, lies between the breakwater heads and is marked by lights exhibited from metal posts. The entrance has depths of 3·2 to 4 m but is subject to silting. Vessels up to 20 m in length and maximum draught 2 m are accepted. There is a speed limit of 3 kn within the harbour.

2 **Berths**. The harbour provides 380 berths, mainly at pontoons, in depths of 0·8 m to 4·0 m. Berths on N part of the mole are reserved for fishing vessels.

Facilities. Comprehensive, including repairs.

Supplies: fuel; water; provisions.

Fiume Sisto

12.57

1 **General information**. Fiume Sisto (41°15′·9N, 13°09′·0E) provides a small craft haven at quays close within the river mouth. Breakwaters extend 100 m SSE from each side of the river mouth. A dangerous wreck lies 4 cables SW of the entrance. Entry and departure is prohibited at night.

Berths. The basin provides 250 berths in depths of 1·5 to 2 m. Vessels up to 6 m in length are accepted.

Facilities. Limited.

Supplies: fuel; water.

Porto Badino

12.58

1 **General information**. Porto Badino (41°16′·8N, 13°12′·1E) is a small craft and fishing harbour close within the mouth of Fiume Portatore. Torre Badino (12.49) stands 1½ cables NNW of the entrance; other useful marks are a tall slender belfry and a white high rise building, respectively 5 cables W and close E of the tower. A short rubble breakwater extends SSE from the W bank of the river mouth, concrete jetties line the entrance; a low stone bridge spans the river 300 m upstream. The entrance has depths of 1·4 m to 3·0 m. Vessels with a maximum draught of 1·5 m are accepted. Normally the river flows with a rate of 1 to 2 kn but this is subject to the amount of rainfall. The entrance becomes difficult or dangerous in strong E winds. Entry and departure are prohibited at night.

2 **Berths**. The haven provides 200 berths at quays in depths of 2 to 3 m.

Facilities. Good small craft facilities including repairs.

Supplies: fuel; water; provisions.

Canale di Sant Anastasia

12.59

1 **General information**. Canale di Sant Anastasia (41°17′·3N, 13°20′·7E) is a boat haven close within the mouth of the E stream discharging from Lago di Fondi. The entrance to the channel is protected by short breakwaters; immediately upstream of the a bridge spans the channel. The haven provides 50 berths in depths of less than 2 m.

Sperlonga

12.60

1 **General information**. Sperlonga provides a boat haven on the SE side of a rocky promontory close S of the village (41°15′·6N, 13°26′·2E). A mole extends 1 cable SE from close S of Torre Truglia (41°15′·3N, 13°26′·2E) (12.50), a short, narrow access channel on its NW side leads to a basin. The haven and its approaches are subject to heavy silting and depths within the access channel and

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basin are less than 2 m. Entry and departure are prohibited at night or in poor visibility.

MONTE ORLANDO LIGHT TO PUNTA DI TORRE FUMO

General information

Charts 1911, 906

Routes

12.61

1 A coastal route leads, from a position SSW of Monte Orlando Light (41°12′·4N, 13°34′·7E), 18 miles SSE to a position W of Punta di Torre Fumo (40°47′·5N, 14°02′·8E).

Inshore routes lead to the ports of Gaeta (41°13′·0N, 13°34′·0E) and Formia (41°15′·2N, 13°36′·7E).

Topography

12.62

1 The E part of Golfo di Gaeta (41°04′·0N, 13°36′·0E) (12.43) extends generally SSE from Promontorio di Monte Orlando (41°12′·5N, 13°35′·0E) to the islands of Isole Flegree (40°46′·0N, 13°58′·0E) which separate Golfo di Gaeta from Golfo di Napoli (40°42′·0N, 14°16′·0E). Much of this coast is low lying and fronted by a sandy beach although in the vicinity of Gaeta (41°13′·0N, 13°34′·0E), Monte Scauri (41°15′·0N, 13°41′·5E) and Mondragone (41°06′·8N, 13°53′·6E) high ground lies close to the coast; to the N of Punta di Torre Fumo volcanic peaks overlook the coast. Close behind the sandy beach substantial lengths of this coast are lined by nearly continuous low density development.

2 Offshore the E group of Isole Pontine are formed from the remains of a volcanic crater.

Depths

12.63

1 The coastal route lies in deep water and generally the 30 m depth contour lies within 4 miles of the mainland coast. Closer inshore there is considerable silting off the rivers entering Golfo di Gaeta creating shoals and sandbanks. Mariners navigating inshore waters should not rely on charted depths.

Hazards

12.64

1 **Exercise area**. A military exercise area lies in the vicinity of Torre Patria. Details of the areas and periods of activation are published in local notices to mariners.

Marine farms. A marine farm lies in the NW part of Rada di Gaeta (41°14′N, 13°37′E). The area is marked by light-bouys (special) and shown on Chart 906 plan of Approaches to Rada di Gaeta; close N of it are two shellfish beds, also shown on the chart.

2 A marine farm lies 2½ miles SSW of Torre Patria (40°55′·1N, 14°01′·6E). The seaward side of the area is marked by two light-buoys (special); the inshore side by two unlit buoys (special). Entry to the area is prohibited, vessels must remain at least 2½ cables clear of the farm and proceed parallel to the side of the area at a maximum speed of 10 kn; the area is shown on the chart.

Nature reserve

12.65

1 The Oasi blu di Monte Orlando nature reserve lies on the S coast of Promontorio di Monte Orlando (41°12′·5N, 13°35′·0E), between Punta della Trinità (41°12′·2N, 13°34′·1E) (12.50) and a position on the coast approximately 7 cables ENE. The area extends up to 1½ cables offshore; three light-buoys (special) mark the seaward boundary.

Entry and stopping within the area is restricted to authorised research vessels. Fishing within the area is prohibited. Navigation by power driven vessels is prohibited within 100 m of the shore.

Prohibited area

12.66

1 Entry of an area containing explosives, 1¼ miles SSW of Monte Cicoli (41°09′·0N, 13°51′·5E), is prohibited; the area is shown on Chart 906 plan of Golfo di Gaeta.

Submarine cables

12.67

1 Submarine cables land on the E side of Rada di Gaeta (41°14′N, 13°37′E) close E of Formia and also NW of Monte Cuma (40°51′·1N, 14°03′·2E). Anchorage is prohibited within 5 cables of them.

Submarine cables between the Italian mainland and Isole Flegree (40°46′·0N, 13°58′·0E) land 2½ cables NE of Torre Gaveta (40°48′·8N, 14°02′·3E). Anchorage and fishing are prohibited within an area bounded by a line joining a position on the mainland coast W of Monte Cuma and Punta Vico (40°45′·6N, 13°53′·2E), on the NW coast of Isola d'Ischia The SE boundary lies within the channels between the islands of Isole Flegree; the area is shown on the charts.

Natural conditions

12.68

1 **Local weather**. Dark clouds forming inland of Monte Cuma (40°51′·1N, 14°03′·2E) precede S *(Mezzogiorno)* or SE (*Scirocco*) winds. Clouds covering Monte Epomeo (40°43′·8N, 13°53′·8), the highest point of Isola d'Ischia, indicate SW or WSW winds.

Current. Currents in the vicinity of Porto di Gaeta can be unpredictable and stronger than expected. Prior to and during periods of SW and SE winds (*Libeccio* and *Scirocco*) the current sets SSW along the coast from Formia to Gaeta-Port Salvo, then sets ESE through the S part of roads N of Punta dello Stendardo (42°12′·6N, 13°35′·4E).

2 Generally the current is weak close inshore and sets NW elsewhere strength and direction is determined by the wind.

Principal marks

12.69

1 **Landmarks**:

Mausoleo di Lucio Munanzio Pianco (41°12′·4N, 13°34′·6E) (12.49).

Monte Orlando Lighthouse (41°12′·4N, 13°34′·7E) (12.49).

Maschio Angioino (fortress with tower) (41°12′·4N, 13°35′·1E).

Monte Conca (41°14′·6N, 13°34′·1E).

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Castello Baldoni (Castello Miramare) (white, crenellated tower) (41°15′·5N, 13°35′·9E). The castle stands isolated on a green hill.

2 Chiesa di Santa Teresa (grey dome) (41°15′·3N, 13°36′·4E).

Torre di Mola (tall, round, white) (41°15′·5N, 13°36′·8E). A high rise building stands close to the shore SW of Torre di Mola.

Castellonorato (41°16′·9N, 13°40′·9E). The village stands on the summit of a hill. Within it stand two square towers, a small spire and a radio mast.

Promontorio di Scauri (41°14′·8N, 13°41′·2E). The headland is bounded by cliffs, the following structures stand W to E along the promontory; a square grey belfry with spire, a red roofed hangar and adjoining red chimney, a white building with flight of steps and a white belfry with green spire.

3 Torre Scauri (square, part ruined) (41°14′·9N, 13°41′·9E). The tower stands on Punta Scauri.

Torre Argento (round) (41°14′·4N, 13°44′·3E). The tower stands on Monte Argento, a low hill, which breaks the otherwise low coastline.

Minturno (41°15′·7N, 13°44′·8E). The village contains two large, dark factories and a white belfry. A square tower stands close N of the village.

Monte Cicoli (surmounted by square, red coloured tower) (41°09′·0N, 13°51′·5E). The peak is a spur of Monte Massico (2¾ miles ENE) which thrusts towards the sea interrupting the otherwise uniform coastal plain.

4 Monte Petrino, also known as Rocca di Mondragone, (conical with pointed summit surmounted by ruined fortress) (41°07′·8N, 13°54′·0E). A large white ravine lies at the foot of the mountain.

Castelvolturno church (white square belfry, silver dome) (41°02′·0N, 13°56′·6E). A tall water tower also stands within the village; much of the village is hidden by trees.

5 Coppola Pinetamare (tourist complex and yacht harbour) (40°58′·0N, 14°00′·0E).

Torre Patria (square, dark) (40°55′·0N, 14°01′·6E).

Monte Barbaro (40°50′·6N, 14°06′·5E) is the highest of the volcanic peaks overlooking this part of the coast.

6 **Major lights**:

Monte Orlando (41°12′·4N, 13°34′·7E) (12.49).

Porto Nicola (white tower and dwelling, 16 m in height) (40°47′·8N, 13°26′·1E).

Directions

(continued from 12.50)

12.70

1 From a position approximately 12 miles SSW of Monte Orlando Light (41°12′·4N, 13°34′·7E) the track leads ESE passing, with positions relative to the light:

SSW of Gaeta-Sant' Erasmo (4½ cables ENE). The citadel stands on a promontory which falls sheer into the sea. Within the citadel stand the fortress and tower of Maschio Angioino (3½ cables ENE) (12.69) and Chiesa di Santa Teresa (4½ cables ENE) (12.69). Thence:

2 SSW of Punta della Stendardo (6 cables ENE), the headland marks the SW side of Rada di Gaeta (2½ miles NE).

(Directions for Gaeta are given at 12.76 and for Formia at 12.85)

Thence:

SSW of Promontorio di Scauri (5¼ miles ENE) (12.69), thence:

SSW of Torre Scauri (6 miles ENE) (12.69). A small craft harbour (12.101) lies 2 cables NE of the tower. Thence:

3 SSW of Monte Argento (7½ miles ENE) (12.69). Torre Argento (12.69) stands on the hill. Thence:

NNE of Isola di Ventotene (25½ miles SSW) (12.95). A light is exhibited from Porto Nicola (12.69) thence:

NNE of Isola di San Stefano (25¾ miles SSW) (12.100), thence:

4 SSW of Fiume Garigliano (8¼ miles E). Torre di Punta Fiume, a slender square tower with heavy cornices, stands on the S bank 2½ cables inland; a dense area of tall trees close to it is more easily identified. A white tower stands within Casteloforte, a small town 5½ miles NNE of the river mouth. Charted depths in the vicinity of the river mouth are unreliable due to silting. A boat haven (12.102) lies within the river. Thence:

5 SSW of two seawater pipelines (10¼ miles E) extending ½ cable from the shore. The pipelines stand on tubular supports close above the surface. Thence:

SSW of Baia Domizia (10½ miles E). The modern buildings of the resort are conspicuous; a white water tower with grey roof stands amongst them. The area is brightly lit at night. Thence:

SW of Monte Cicoli (13 miles ESE) (12.69), thence:

6 SW of a prohibited area (12¾ miles ESE) (12.66)

SW of Monte Petrino (15¼ miles ESE) (12.69), thence:

SW of Mondrogone (15 miles ESE). Within the town stand a blue spire and the dome of Chiesa di Sant Ruffino. A tall, grey dehydration tower stands, isolated, close S of the town. Thence:

7 To a position approximately 12 miles WSW of Fiume Volturno (19 miles SE). Castelvoturno (12.69) lies 1½ miles above the mouth; the lower reach of the river provides a small craft haven (12.103). The bar across the river mouth extends a considerable distance seaward; the area should be given a wide berth. Several high radio masts (red and white bands) stand on the S bank of the river. An isolated yellow building stands 2½ miles SE of Fiume Volturno.

Chart 1911

8 The track then leads S passing:

W of Coppola Pinetamare (22½ miles SE) (12.69), thence:

W of Torre Patria (26½ miles SE) (12.69). The tower stands at the mouth of a canal connecting Lago di Patria with the sea. Thence:

W of the prohibited area (26¾ miles SE) (12.64) enclosing shellfish beds. Thence:

W of Monte Cuma (29¾ miles SE). Ruins stand on the peak. Thence:

W of Monte Corvara (31½ miles SE). A large building stands on the summit. Thence:

9 W of Torre Gaveta (31¾ miles SE). The ruined tower cannot be identified from seaward but the steep, rocky, light-coloured promontory on which it stands is prominent. Two piers (12.93) lie close S

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of the tower. A dangerous wreck and rocky shoals lie 2½ cables SW of the tower. Thence:

W of Monte Barbaro (32¼ miles SE) (12.69), thence:

W of Scoglio San Martino (32 miles SE). The high, flat topped rock is surmounted by a square tower. Dangerous rocky shoals lie ½ cable NW and 4½ cables N of Scoglio San Martino. A causeway connects the rock to the coast. Thence:

10 E of Porto Nicola Light (25½ miles SSW) (12.69). Isola di San Stefano (12.100) lies 1 mile ESE of it, thence:

W of Monte di Procida (32½ miles SE). The town stands high above the coast; the church (grey belfry, conical spire) is clearly visible. A pier (12.94) lies close SW below the town. Thence:

To a position approximately 18 miles W of Punta di Torre Fumo (32¾ miles SE). Porto di Acquamorta (12.105), a small craft harbour, lies on the N side of the headland.

(Directions continue at 12.124)

Gaeta

Chart 906 plans of Approaches to Rada di Gaeta and Rada di Gaeta

General information

12.71

1 **Position and function**. Gaeta (41°13′·0N, 13°34′·0E) occupies the SW part of Rada di Gaeta which lies between Promontorio di Monte Orlando (41°12′·5N, 13°35′·0E) and Promontorio di Scauri (12.69), 4¾ miles NE, at the head of Golfo di Gaeta (12.43). The ancient and historically important town is also an important resort. The town is fronted by the port which extends N from Promontorio di Monte Orlando. Gaeta handles bulk crude oil and general cargo, is an important fishing port and provides small craft facilities.

2 **Topography**. The town is divided into two parts, Gaeta-Sant' Erasmo, which partly occupies the rocky spur projecting E from Promontorio di Monte Orlando (12.50) and partly the N side of the promontory itself, and Gaeta-Porto Salvo (Elena) which extends 1 mile N from the N side of the isthmus connecting Promontorio di Monte Orlando with the mainland.

High ground lies close to most of the W and NW shores of Rada di Gaeta sheltering the bay.

3 **Approach and entry**. The port is approached through Golfo di Gaeta (12.43).

Traffic. In 2002 the port was used by 176 vessels with a total of 2 672 018 dwt.

Port Authority. Capitanerie di Porto, Via Docible 25, 1–04024, Gaeta LT.

Limiting conditions

12.72

1 **Deepest and longest berths**. Anchor berth R lies in a depth of 45 m.

Banchina Salvo d'Aqisto length 260 m, depth alongside 7·6 m.

Pontile Petroli length 250 m, depth alongside 15 m.

Tidal levels. The normal maximum height of spring tides is 0·3 to 0.4 m.

2 **Local weather and sea state**. Gales from the SE or SSW cause a heavy swell within the port, particularly affecting Gaeta-Port Salvo. The *Garigliano* (NE to ENE) makes berthing and unberthing difficult, particularly during the winter, when it can be violent. A N wind is infrequent but during the winter can develop unexpectedly into violent squalls making the harbour dangerous.

3 During the summer land and sea breezes develop predictably; generally wind speed is least before midday and after sunset. The *Maestrale* (NW) can freshen and, interspersed with calmer periods, last for several days without becoming violent.

Arrival information

12.73

1 **Port operations**. Daily 0700–1900 local time.

Port radio. There is a port radio station see the relevant *Admiralty List of Radio Signals*.

Notice of ETA. 72, 48 and 24 hours in advance via Roma Coastal Radio Station.

2 **Outer anchorages**. Vessels arriving at Gaeta and Formia and awaiting entry will be directed to one of the designated anchorages within Rada di Gaeta shown on the chart. The holding ground is good, generally black mud and clay.

Berth	*Remarks*
A, B, C, D and R	Merchant vessels other than tankers.
E and F	Tankers
F1, F2	Vessels entering Formia.

Prohibited anchorages. Areas within which anchoring and fishing are prohibited lie N of Punta dell Stendardo (41°12′·6N, 13°35′·4) and are shown on the chart.

Anchoring and fishing are also prohibited within a circular area, radius 5 cables, 1 mile NE of Punta dell Stendardo. Removal of a tanker mooring has created a number of obstructions in this area.

3 **Submarine pipeline**. A disused oil pipeline extends WNW from the circular prohibited anchorage within the roadstead to a position 1½ cables N of Nuova Banchina Commerciale.

Restricted areas. Entry to an area enclosing Pontile Petroli (41°13′·3N, 13°34′·5) is restricted to vessels using or providing services to the berth.

4 **Pilotage** is compulsory and available 24 hours a day for all vessels of 500 grt or greater. The pilot boards 2½ miles E of Punta del Mulino (41°13′·3N, 13°34′·3E), see the relevant *Admiralty List of Radio Signals* for details.

Tugs are available; additional tugs can be provided from Napoli.

Harbour

12.74

1 The main commercial berths lie within Nuovo Porto Commerciale at the N end of Porto Salvo, which extends 5 cables N of Punta del Mulino (41°13′·3N, 13°34′·3E). Pontile Petroli extends E from Punta del Mulino to provide the tanker terminal. Porto Peschereccio, the main fishing harbour, occupies a basin close SW of the tanker berths.

Small craft harbours lie W of Punta dello Stendardo and on the W side of Porto Sant' Antonio.

Principal marks

12.75

1 **Landmarks**;

Monte Orlando (41°12′·4N, 13°34′·6E) (12.49).

Mausoleo di Lucio Munanzo Planco (41°12′·4N, 13°34′·6E) (12.49).

Monte Orlando Lighthouse (41°12′·4N, 13°34′·7E) (12.49).

Maschio Angioino (41°12′·4N, 13°35′·1E) (12.69).

Chiesa di San Francesco (cross) (41°12′·6N, 13°34′·9E).

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2 San Erasmo Cathedral (belfry) (41°12′·5N, 13°35′·2E).
Punta dello Stendardo signal station (painted with black and white squares) (41°12′·5N, 13°35′·5E).
Punta dello Stendardo Lighthouse (red, round tower, 6 m in height) (41°12′·6N, 13°35′·4).
Torre del Municipo (red, resembles a belfry) (41°12′·8N, 13°34′·3E). The town hall tower is visible from the SW).
Monte Conca (41°14′·6N, 13°34′·1E).

3 **Major light**:
Monte Orlando (41°12′·4N, 13°34′·7E) (12.49).

Directions for entering harbour

(continued from 12.70)

12.76

1 **Approaches.** Rada di Gaeta is approached from the SE through Golfo di Gaeta. The chart is sufficient guide to reach the anchorages in the outer roadstead or a position from which a berth can be approached.

Gaeta-Porto Salvo is approached from the roadstead E and SE of the harbour; again the chart is sufficient guide.

Leading lights. The alignment (269°) of Porto Salvo Leading Lights leads close N of Pontile Petroli:
Front light (41°13′·4N, 13°34′·3E).
Rear light (190 m from front).

2 **Useful marks**:
Molo Sant' Antonio Head Light (red metal column on round pedestal, 5 m in height) (41°13′·0N, 13°34′·7E).
Porto Salvo Mole Head Light (green column on pedestal, 5 m in height) (41°13′·2N, 13°34′·4E).
Pontile Petroli Head Light (metal mast, 7 m in height) (41°13′·3N, 13°34′·5E).

Basins and Berths

12.77

1 **Anchorages and moorings**. Anchor berths are shown on the chart. Numbered mooring buoys in the vicinity of Punta del Mulino, also shown on the chart, are for use by tankers berthing at Pontile Petroli. Mooring buoys for use by naval vessels lie off the head of Molo Sant' Antonio and within the E part of Porto Sant' Antonio.

Banchina Caboto: two alongside berths or five Mediterranean moorings, maximum draught accepted 5 m. Berthing is prohibited between 15 June and 15 September.

2 **Porto Sant' Antonio**: the E side of the basin is reserved for the Italian Navy and enclosed by a floating oil barrier, marked by light-buoys (yellow). Steel tubes projecting 2 to 3 m from the seabed within the E part of the basin are the charted obstructions with a least depth of 7 m over them.

The head of the Molo Sant' Antonio should be given a berth of at least 50 m to avoid obstructions lying off it.

Pontile Petroli provides two tanker berths, see 12.72. A short pier, extends SE from the the root of Pontile Petroli. The head of the jetty carries machinery for handling flexible hoses and also exhibits a light; tankers berth stern-to its head.

Port services

12.78

1 **Repairs**. Minor repairs to small vessels undertaken. There is a slipway of 200 tons capacity.

Other facilities. There is a hospital at Gaeta. Oily water disposal.

Supplies: fuel; water from jetty connections; provisions.

Small craft

12.79

1 **Porticciolo Santa Maria** (41°12′·6N, 13°35′·3E) lies between Punta dello Stendardo and Punta della Sanità, 1 cable W. The haven has depths of about 12 m reducing to a least depth of 2·4 m alongside the quays lining the basin; the basin provides 30 berths. The SE quay is fouled by submerged concrete blocks. Vessels up to 20 m in length and maximum draught 4 m are accepted. The W quay is reserved for naval craft. Anchorage can be obtained 40 m to seaward of a line joining the headlands.

2 **Flavio Gioia Nautical Base**. The marina provides 250 small craft berths in depths of 2 to 5 m; a further 250 vessels are kept on hardstanding. Vessels up to 50 m in length are accepted. comprehensive small craft facilities including repairs.

3 **Port Peschereccio** lies close S of Punta del Mulino. The basin is reserved for fishing vessels however the Harbour Master may authorise small craft to berth in it. The basin has depths of 1·5 to 4·6 m. Secca Colonna, a rocky bank with depths of less than 2 m over it, lies ½ cable SSW of the entrance.

Formia

Chart 906 plan of Approaches to Gaeta

General information

12.80

1 **Position and function**. Formia (41°15′·0N, 13°36′·5E) is a small ferry and fishing port with facilities for small craft.

Topography. The town of Formia is a pleasant industrial centre stretching along the ancient Appian Way either side of Punta di Formia. The town is surrounded by citrus groves and overlooked by hills rising within 3 cables of the coast. The area is rich in Roman archaeology.

2 **Approach and entry**. Formia is approached from the S through Golfo di Gaeta (12.43) and entered between the heads of Molo Ponente (41°15′·2N, 13°36′·9E) and Molo Pescatori, 1 cable NW.

Port Authority. Ufficio Locale Marittimo, Piazzle Vespucci 1–04024 Formia.

Limiting conditions

12.81

1 **Controlling depth**. Porto Nuovo has a least depth of 7·3 m in the entrance.

Deepest and longest berth. Molo Ponente inner arm length 160 m, depth alongside 3 to 6 m. The quay on the N side of the basin length 200 m, depth alongside 4 m.

Local weather. Winds with a S component raise a significant swell.

Arrival information

12.82

1 **Outer anchorage**. Anchor berths for vessels waiting to enter Formia lie 1 mile SE of the the harbour entrance in depths of 13 to 17 m, mud, and are shown on the chart.

Temporary anchorage can also be obtained in depths of about 13 m, mud, closer off the harbour. Mariners should beware of Secca La Pila (41°14′·9N, 13°36′·1E), a rock with a least depth of 1·9 m over it, lying on a shoal with depths of about 3 m over it. The danger is marked close S by a beacon.

Harbour

12.83

1 **General layout**. The port consists of Porto Nuovo, Porticciolo di Caposele, a small craft harbour 5 cables ESE, and two small basins used by fishing vessels, respectively

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close N and 2¼ cables NE of Porto Nuovo. Porticciolo di Caposele and the two small basins are the remains of a Roman port.

12.84

1 **Landmarks**:

Castello Baldoni (Miramare) (41°15′·5N, 13°35′·9E) (12.69).

Chiesa di Santa Teresa (41°15′·3N, 13°36′·4E) (12.69).

Torre di Mola (41°15′·5N, 13°36′·8E) (12.69).

Maranola church (grey tower, two small belfries) (41°17′·1N, 13°37′·7E).

Redentore (a pointed peak, elevation 1252 m) (41°18′·4N, 13°38′·3E).

Directions for entering harbour

(continued from 12.70)

12.85

1 **Porto Nuovo**. The harbour is approached from the SSE, passing E of Secca la Pila (41°14′·9N, 13°36′·1E) (12.82); the chart is sufficient guide. On entering the harbour navigate to remain at least 30 m from the mole heads. At night lights exhibited from the moles can be difficult to distinguish from the lights of the town.

2 **Useful marks**:

Molo Pescatori, also known as North Mole, Head Light (green metal column on pedestal, 5 m in height) (41°15′·2N, 13°36′·8E).

Molo Ponente Head Light (red metal column on pedestal, 7 m in height) (41°15′·2N, 13°36′·9E).

Basins and berths

12.86

1 **Porto Nuovo** is protected from the SW and S by Molo di Ponente and from the NE by Molo Pescatori.

A small, ancient basin lies close N of the main harbour but is only accessible to small craft able to pass beneath the fixed road bridge spanning the entrance; it is used by fishing vessels. Another small basin, 2¼ cables NE of Porto Nuovo, lies below Torre di Mola (12.69); it is also restricted to small craft able to pass beneath the fixed road bridge spanning its entrance and is used by fishing vessels.

Port services

12.87

1 **Repairs**. Minor repairs to small craft only.

Other facilities. There is a hospital in Formia.

Supplies: fuel; water; provisions.

Small craft

12.88

1 **Porto Nuovo**. A marina provides 500 small craft berths, in depths of 0·7 to 5·8 m, in the NW corner of the basin. Vessels up to 25 m in length are accepted

Porticciolo di Caposele. The ancient basin provides 130 berths in depths of 1·2 to 1·8 m. Vessels up to 12 m in length are accepted.

2 **Leading lights**. The alignment (323°) of lights exhibited from the heads of the harbour breakwaters lead from Rada di Gaeta towards Porticciolo di Caposele passing SW of Secca La Pila (41°14′·9N, 13°36′·1E) (12.82):

Front light (red mast) on W Mole Head (41°14′·9N, 13°36′·0E).

Rear light (green mast) on Inner Breakwater Head (41°15′·0N, 13°35′·9E).

Anchorages, harbours and piers

Conca piers

12.89

1 Conca (41°14′·3N, 13°34′·3E) is a hamlet 1 mile N of Punta Mulino. A prominent red building stands amongst the houses. Two piers abreast the hamlet are used to load stone from local quarries. Foul ground extends 2 cables offshore between the piers and the submarine pipeline shown on the chart.

Scauri anchorage

12.90

1 Scauri (41°14′·9N, 13°42′·2E). Small vessels may obtain temporary anchorage in depths of about 10 m, sand and mud, good holding ground, E of Torre Scauri (41°14′·9N, 13°42′·1E) (12.69).

Fiume Garigliano anchorage

12.91

1 Fiume Garigliano (41°13′·3N, 13°45′·7E). Temporary anchorage can be obtained in depths of about 15 m, mud, 1½ miles SSW of the river mouth. Depths off the river mouth are very unreliable and the anchorage should be approached with caution. Mariners should also be prepared to weigh anchor at the first sign of onshore winds. In winter ENE winds can be violent.

Mondragone anchorage

12.92

1 Mondragone (41°06′·7N, 13°53′·0E). Anchorage can be obtained in depths of about 10 m, good holding ground, W of the town avoiding the prohibited area (12.66) to the N.

Chart 908

Torre Gaveta piers

12.93

1 **General information**. Torre Gaveta (40°48′·8N, 14°03′·0E) (12.70) is also a district named after the ruined structure; the area can be recognised by a yellow six-storey building close SE of the ruin.

Two piers extend 190 m and 95 m from the coast close S of Torre Gaveta. The longest has depths of about 3 m at its head but is in poor repair. The shorter pier is ruined and disused. A dangerous wreck lies close SSW of the piers.

2 It is dangerous to remain alongside the usable pier with winds from the S.

Monte di Procida pier

12.94

1 **General information.** A pier, used for the export of volcanic sand from local quarries, extends 180 m W from the shore on the S side of a promontory close SW of Monte di Procida (40°47′·8N, 14°03′·0E). The pier is 3·5 m wide and constructed of metal piles with a wooden deck, height 2·5m. There are depths of about 4 m at its head.

Isola di Ventotene and Isola di San Stefano

Charts 1911, 1908, Italian Chart 9 (see 1.13)

General information

12.95

1 **Topography**. Isola di Ventotene (40°47′·6N, 13°25′·5E) and Isola di San Stefano (40°47′·5N, 13°27′·2E) (12.100) form the SE group of Isole Pontine (12.6) which are the remains of an ancient volcanic crater. The islands are steep-to with the 100 m depth contour lying generally within 1½ miles of the islands, however close inshore the coasts are encumbered with numerous dangers.

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Isola di Ventotene

12.96

1 **General information**. The island slopes gradually from its highest point, Monte dell' Arco (elevation 139 m) (40°47′·2N, 13°24′·8E), standing close to its SW extremity, to Punta d'Eolo its NE extremity. The coasts of the island are rocky and generally landing is difficult.

2 **North-west coast**. Punta d'Eolo (elevation 17 m) (40°48′·2N, 13°25′·8E) is the N extremity of the island. A rocky bank, with depths of less then 5 m over it, extending up to 2½ cables offshore, fronts the coast to a position 3¾ cables SW of the headland. Le Sconciglie, a danger comprising submerged and above water rocks, lies on the NW edge of the bank between 2½ and 3¾ cables WSW of Punta d'Eolo.

3 Cala Parata Grande, a cove entered between headlands 3½ and 5½ cables SSW of Punta d'Eolo, has rocky shores and a beach at its head. A rocky bank extending up to 1 cable from the shore, with depths of less than 3·7 m over it, fronts the N shore. A path leads from the cove to Ventotene (12.99).

Punta dell'Arco (40°47′·2N, 13°24′·5E), the S point of the island, is the low flat extremity of a rocky promontory with steep, rounded sides. Shoals with depths of about 3 m over them lie, respectively, 1¾ cables N and ¾ cable W of the point.

4 **South-east coast**. Cala Battaglia, 7½ cables NE of Punta dell'Arco, is a small cove where landing can be made in good conditions. Between Cala Battaglia and Scoglio La Nave, a dark bare rock (11 m in height) lying ½ cable offshore, 6 cables NE, the coast is fronted by a bank with depths of less than 9 m over it.

12.97

Prohibited areas. Navigation within 50 m of rocky sections of the coast is prohibited because of the danger of landslip. Along some sections of the coast the prohibited area extends 250 m offshore; these areas are marked by local authority signs.

12.98

1 **Nature reserve**. The Isole di Ventotene and Santo Stefano Protected Marine Nature Area wholly encloses the island. The area is divided into three zones within which the following regulations apply:

Zone A.

Navigation and stopping within the area are prohibited, except for authorised vessels.

Fishing by any method and the carriage of fishing equipment by vessels authorised to enter the area are prohibited.

Damage or change to the environment and or living species, the introduction of alien species and interference with scientific research are prohibited.

Swimming including with breathing apparatus, unless authorised for scientific purposes, is prohibited.

The limits of the zone are marked by special light-buoys and light-beacons, all exhibit yellow lights.

2 **Zone B**

With the exception of authorised vessels navigation, approach and stopping, by power driven vessels is prohibited within 500 m of the shore.

Any activity that can alter, damage or disturb the environment and living species, including the introduction of alien species, with the exception of fish if previously authorised, is prohibited.

Swimming with breathing apparatus, unless authorised, is prohibited.

Interference with scientific research is prohibited.

3 **Zone C**

Professional fishing, unless authorised, is prohibited.

Activities which can alter, damage or interfere with the natural environment or interfere with scientific research are prohibited.

4 The SW coast of Isola di Ventotene is enclosed by Zone B between a line extending approximately 1¾ miles NW from Punta d'Eolo (40°48′·2N, 13°25′·8E) and a line extending 2½ cables SE, from a position on the coast, 8 cables ENE of Punta dell'Arco (40°47′·2N, 13°24′·5E).

The NE coast is enclosed by Zone C between the above positions. Mariners must obtain full details of the extent of these zones and the regulations from local authorities.

Ventotene

12.99

1 **General information**. Ventotene (40°47′·8N, 13°26′·0E) stands on sloping ground close to the E extremity of the island. A yellow, rectangular castle stands above the S end of village, Porto Nicola Light (40°47′·8N, 13°26′·1E) (12.69) stands close E, and a large three-storey building, with long rows of windows, stands at the N end. The harbour has two basins, Porto Vecchio, also known as Porto Nicola, excavated from the S side of Punta del Pertuso by the Romans, and Porto Nuovo which lies N of it. The harbour handles regular ferry services to the mainland and provides small craft facilities.

2 **Prohibited anchorage**. Anchorage and fishing are prohibited in an area 2 cables S of a line joining Porto Nicola Lighthouse with the N extremity of Isola di San Stefano (40°47′·5N, 13°27′·2E) which contains submarine cables. Anchoring is prohibited in the vicinity of a submarine pipeline extending NE from Punta del Pertuso.

3 **Porto Nuovo** lies within Cala Rossano which has rock fringed shores. The harbour is protected from the E by Molo di Sopraflutto which extends N from Punta del Pertuso for 170 m then curves gently NNE for a further 200 m. Short rubble faced spurs extend from the N end of the straight section and also from the N side of Punta Pietre Tagliate which lies opposite; the spurs are to reduce the effect of swell. A short rubble breakwater extends 35 m from the coast towards the head of Molo di Sopraflutto forming the harbour entrance which faces NE, is 85 m wide and has depths of about 9 m. Lights are exhibited from the heads of the breakwaters; Molo di Sopraflutto (red pedestal, 5 m in height), Inner breakwater (green mast, 5 m in height).

4 **Local weather**. During the winter the prevailing wind is NE which can blow violently for 3 to 5 days and sends a heavy swell into the harbour making it difficult. Under these conditions it may be necessary to seek shelter within Cala Parata Grande (12.95) or proceed to Gaeta (12.71).

The prevailing wind during the summer is NW. Good visibility is an indication of SW winds.

5 **Regulations**. Ferries have right of way at all times; other vessels are prohibited from moving when ferries are approaching or departing their berth. Berths are allocated by the Harbour Master Gaeta.

Berths. The S part of Molo di Sopraflutto provides berths in depths of 4 to 5 m. The quay extending W from the root of the mole is used by ferries to berth stern-to.

6 **Small craft**. Porto Vecchio is protected from the E by Punta del Pertuso. The outer entrance faces E, is 30 m wide and has depths of 3 to 6 m. Il Puzzillo, a basin 40 m long lies opposite the outer entrance and has depths of about 2 m. The entrance to Porto Vecchio faces S close N of the outer entrance and Il Puzzillo and is obstructed by a rock

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with a depth of 1·8 m over it. In strong E winds the sea breaks over Punta del Pertuso making the harbour uncomfortable. Vessels up to 12 m in length and maximum draught 1·2 m are accepted; the harbour provides 40 berths. Anchorage can be obtained in the entrance to Il Puzzillo in good conditions. Limited small craft facilities; fuel, water and provisions available in small quantities.

Isola di San Stefano

12.100

1 **General information**. Isola di San Stefano (40°47′·5N, 13°27′·2E) lies 8½ cables E of Isola di Ventotene. The islet is rounded and steep with rocky, steep-to coasts. The slopes of the island are cultivated and on its summit stands the prominent yellow, round building of the former prison.

To the W of the islet two shoals with depths of 10 m and 7·5 m over them lie, respectively 264° 2 cables and 276° 1 cable from the prison building.

Nature reserve. Isola di Sant Stefano lies within the Isole di Ventotene and Santo Stefano Protected Marine Nature Area. Much of the N coast of the island is enclosed by Zone B; the remainder by Zone A, see 12.98.

2 **Landing places**. Landing must be authorised and can be affected at three places depending on weather conditions. Marinella, on the NW point of the island, has a quay, steps lead from it. On the NE side lies No. 4 landing place which is connected by steps to the prison gateway after which it is named. Spasaro landing steps are located on the S side of the island close W of a cove with high rocky sides.

Small craft

Chart 906 plan of Golfo di Gaeta

Scauri

12.101

1 **General information**. Scauri (41°15′·1N, 13°42′·0E) is a small craft haven at the head of Insenatura di Scauri, a bay lying between Punta Scauri (41°14′·9N, 13°42′·1E) (12.69) and Monte Argento 2 miles ESE. The harbour is protected from the S by a breakwater built on Scogliera del Faraglioni, a rocky ridge which extends ¼ cable E of the breakwater head. A second breakwater, also built on a rocky ridge known as La Carena, extends S from the shore from a position ½ cable NE and exhibits a light (green mast, 3 m in height) from its head; a small basin lined with quays lies on the W side of root. The village occupies the head of this small inlet, within it stands a white belfry and a large red-roofed building with a chimney. The harbour accepts vessels up to 12 m in length.

2 **Berths**. The harbour provides 90 berths in depths of 0·8 to 2·5 m. During the summer pontoons are secured to the S breakwater.

Facilities. Limited small craft facilities.

Foce del Garigliano

12.102

1 **General information**. Fiume Garigliano (41°13′·3N, 13°45′·7E) (12.70) is accessible to small craft of maximum draught 1·8 m. A sand bar encumbers the river mouth and shifts position as a result of gales or the river flooding. Generally there are depths of about 2 m across the bar but this cannot be relied on. Vessels up to 15 m in length are accepted.

2 **Berths**. There are 100 berths in depths of 1·5 to 5·0 m.

Facilities. Limited small craft facilities.

Foce del Volturno

12.103

1 **General information**. Foce del Volturno (41°01′·4N, 13°55′·6E) is a boat haven accessible to vessels up to 8 m in length. The river mouth is wide but subject to silting; depths are unreliable but generally about 1 m. Within the river there are depths of 0·7 to 2·2 m. Modest small craft facilities but some equipment repairs available.

Chart 1911

Darsena San Bartolomeo

12.104

1 **General information**. Darsena San Bartolomeo (40°59′·1N, 13°58′·2E) is the yacht harbour of the Coppola Pinetamare complex. The harbour is protected by two breakwaters; a light (red post) is exhibited from the head of the Outer (NW) breakwater. The entrance faces SW and has depths of 9 m. A short channel, with a depth of 2·4 m, leads from the outer harbour to the marina basin. The harbour accepts vessels up to 12 m in length.

2 **Berths**. The harbour provides 500 berths in depths of 2·2 to 3·1 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Chart 908

Porto di Acquamorta

12.105

1 **General information**. Porto di Acquamorta (40°47′·5N, 14°02′·7E) The harbour is protected from the N and W by an angled breakwater; a second breakwater extends W from the N side of Punta Torre Fumo. The harbour entrance faces SSW between the breakwater heads, has depths of 7·5 m and is 100 m wide.

2 **Berths** are limited at a quay on the inner face of a mole extending 120 m S from the root of the N breakwater; depths alongside are between 2 and 4 m.

Facilities. comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Other names

12.106

1 Antonio, Punta (41°12′·8N, 13°34′·7E).
Cappuccini, Chiesa dei (41°14′·1N, 13°34′·1E)
Covara, Monte (40°52′·0N, 14°06′·8E).
Fico, Torre (41°14′·9N, 13°40′·9E).
Fusaro, Lago di (40°49′·5N, 14°03′·3E).
Giano, Torre (41°14′·9N, 13°40′·9E).
Limatola, Torre (41°09′·2N, 15°50′·5E).
San Pietra, Scogliera di (40°44′·8N, 13°56′·6E).

PASSAGE SOUTH OF ISOLE PONTINE

General information

Charts 1911, 1908

Route

12.107

1 A coastal route leads, from a position SW of Capo d'Anzio (41°27′·0N, 12°37′·6E), 50 miles ESE to a position WSW of Punta di Torre Fumo (40°47′·5N, 14°02′·8E).

Topography

12.108

1 Isole Pontine lie approximately 20 miles off the Lazio region of W Italy. The islands are formed from the remains of the crests of vast volcanic craters.

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Depths

12.109

1 The coastal route lies in deep water free from isolated dangers.

Principal marks

12.110

1 **Landmarks**:

Monte Tramontana (40°56′·7N, 12°51′·5E) (12.10).
Monte Guarniere (40°55′·8N, 12°51′·4E) (12.10).
Monte della Guardia Signal Station (40°53′·0N, 12°57′·4E) (12.10).

Major light:

Punta della Guardia (40°52′·6N, 12°57′·3E) (12.10).

Directions

(continued from 11.77)

12.111

1 From a position 38 miles S of Capo d'Anzio (41°27′·0N, 12°37′·6E) the track leads ESE passing, with positions relative to Punta della Guardia Light (40°52′·6N, 12°57′·3E):

S of Punta di Mezzogiorno (5½ miles NW) (12.26), thence;
S of Secca Zirri (5 miles NW) (12.28), thence:
S of Secca dei Mattoni (2¼ miles NNW) (12.33), thence:
S of Punta della Guardia Light (12.10), thence:
S of Le Formiche (1½ miles ENE) (12.34), thence:
S of Scoglio della Botte (7¼ miles ESE). Although steep-to and free from out-lying dangers the rock is often used as a target for firing exercises. Thence:
S of Monte dell' Arco (21¾ miles ESE) (12.96), thence:
S of Porto Nicola Light (22½ miles ESE) (12.69) thence:
To a position WSW of Punta di Torre Fumo (50 miles ESE).

(Directions continue at 12.124)

PUNTA DI TORRE FUMO TO PUNTA CAMPANELLA

GENERAL INFORMATION

Chart 908

Area covered

12.112

1 This section covers the mainland coast of Italy between Punta di Torre Fumo (40°47′·5N, 14°02′·8E) and Punta Campanella 18½ miles SE including the major port of Napoli. The islands of Isole Flegree (40°46′·0N, 13°58′·0E) and Isola di Capri (40°33′·0N, 14°13′·3E) are also included. The section is arranged as follows:

Punta di Torre Fumo to Capo Miseno (12.117).
Capo Miseno to Punta Campanella (12.143).
Porto di Napoli (12.212).

Topography

12.113

1 Isola Flegree, of which Isola d'Ischia is the outermost and largest island, extend 10 miles SW from Punta di Torre Fumo. The islands are of volcanic origin, have distinctive shapes and are extremely fertile.

Golfo di Napoli can be approached from the NW through Canale d'Ischia (12.125) and Canale di Procida (12.134) which lead between the islands.

Depths

12.114

1 The mainland coast and islands are steep-to; close inshore there are numerous dangers within the 30 m depth contour which lies, generally, a few cables off the coast.

Routes

12.115

1 A coastal route leads, from a position W of Punta di Torre Fumo (40°47′·5N, 14°02′·8E), 32 miles SE to a position SW of Punta Campanella (40°34′·3N, 14°19′·6E). A coastal route leads from Bocca Grande (40°38′N, 14°04′E) through Golfo di Napoli to the outer end of the approach channels to Porto di Napoli (40°48′·2N, 14°17′·8E).

2 Inshore routes lead between Isole Flegree, through Canale d'Ischia (44°44′·4N, 13°58′·5E) and Canale di Procida (40°47′·0N, 14°02′·0E) and from Golfo di Napoli to the ports lying within it.

Currents

12.116

1 Currents within Golfo di Napoli are mainly influenced by the wind. With settled winds between SE and SW Corrente di Ponente (W current) develops, entering through Bocca Piccola (40°34′N, 14°18′E) and flowing along the coast of the gulf to leave through Canale di Procida (40°47′N, 14°02′E). With offshore winds this effect is reversed and Corrente di Levante develops, in both cases the maximum rate attained is 2 kn.

PUNTA DI TORRE FUMO TO CAP MISENO

General information

Chart 908

Routes

12.117

1 The coastal route leads SE, from a position W of Punta di Torre Fumo (40°47′·5N, 14°02′·8E), 16 miles SE to a position SW of Cap Miseno (40°46′·8N, 14°05′·4E).

Inshore routes lead through Canale d'Ischia (44°44′·4N, 13°58′·5E) and Canale di Procida (40°47′·0N, 14°02′·0E).

Topography

12.118

1 Isola d'Ischia, although volcanic in origin, has few traces of lava on the surface and is almost entirely covered with vegetation. The island is higher than the mainland coast immediately NE; the summit of the island is formed

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by two sharp peaks standing close together; Monte Epomeo, also known as Monte di San Nicola, (40°43′·9N, 13°53′·7E) is the tallest, and Monte Trippodi, the sharper peak, lies 1¼ miles ESE. A sanctuary, Santurio or Eremtigaggio di San Nicola stands near the summit. The island has an important fishing industry, produces an abundance of fruit and is renowned for its wine. It is also a popular tourist resort, visited for its hot springs.

2 To the S of Punta de Soccorso (40°44′·3N, 13°51′·4E) the W coast of this island consists of rocky and much eroded cliffs which give way to Spiaggia di Citara, a white sandy beach extending to the foot of Punta Imperatore, 1½ miles S.

3 The S coast is generally rugged but clear of dangers; the stratified volcanic rock from which it is formed is a distinctive feature. The land is entirely given over to vineyards which extend up to the steepest spurs of the high ground. The E coast between Punta Molina (40°44′·6N, 13°57′·3E) and Castello d'Ischia is backed by the town of Ischia. The remainder of this coast, which extends 2 miles SSW to Punta San Pancrazio, is steep and inaccessible. The S part is steep-to and may be closely approached. Within the coast the land is fertile and covered with vineyards to the edge of the cliffs.

4 The N coast of Isola d'Ischia extends 4¼ miles ESE from Punta Cornacchia (40°45′·7N, 13°52′·3E) to Punta Molina. The coast is rocky, although some coves have sandy beaches, and divided by a series of high rugged headlands. Porto d'Ischia, 3½ miles ESE of Punta Cornacchia, is formed by the crater of a volcano. Several isolated dangers lie within 5 cables of the coast.

Caution. Mariners should note the W coast of Isola d'Ischia is encumbered by numerous dangers lying up to 7 cables offshore and must be approached with caution.

12.119

1 Isola di Vivara is covered with vegetation and surmounted by an old tower. The island is connected to Isola di Procida by a footbridge carrying a water pipe which obstructs the channel between the NE extremity of Isola di Vivara and Punta Ciraccello, the W extremity of Punta del Perricchio.

Isola di Procida is also very fertile and covered with vineyards, amongst which houses are scattered. The coast mainly consists of yellow volcanic rock and is indented by four bays which are the remains of volcanic craters. The island is much lower than its larger neighbour; its greatest elevation is at its NE end where a castle and a grey dome stand.

2 Capo Miseno (40°46′·8N, 14°05′·4E) is the S extremity of a mainland promontory consisting of a large, yellow rocky mass connected to the mainland by a low, sandy isthmus forming the W side of Golfo di Pozzuoli (40°48′·0N, 14°07′·5E). The promontory is rugged and bare on the seaward side but the landward side is cultivated.

Restricted area

12.120

1 A mine counter-measures practice area lies W of Isola d'Ischia. Mariners are advised not to anchor, fish or conduct any form of submarine or seabed activity within the area, shown on the chart, because of the danger from obstructions and unexploded ordnance.

Prohibited anchorages

12.121

1 Anchoring is prohibited within 5 cables of all submarine cables.

Natural conditions

12.122

1 **Current** in the vicinity of Isole Flegree is negligible; prevailing winds have the greatest influence.

Local weather. White clouds over the W peak of Monte Epomeo (12.118) indicate winds from S and SW. If Monte Circello (12.6) or the islands of San Stefano or Ventotene (12.99) can be seen clearly at dawn winds from WSW to WNW are likely. A small white cloud forming over the coast between Gaeta and Rocca di Mondragone during fair weather indicates a squall from NNE to N. If the coast between Torre Gaveta and Monte di Procida (40°47′·9N, 14°03′·0E) appears clear at dawn, then becomes overcast and dark, winds from SW to SW are expected.

Principal marks

12.123

1 **Landmarks**:

Guardiola di Zale radio mast (red and white bands, red obstruction light) (40°44′·9N, 13°52′·7E).

Soccorso Torrione (large, round) (40°44′·3N, 13°51′·5E).

Soccorso church (white, no belfry) (14°44′·0N, 13°51′·6E).

Monte Epomeo (40°43′·9N, 13°53′·7E) (12.118).

Punta Imperatore Signal Station (disused) (40°42′·7N, 13°51′·3E).

2 **Major lights**:

Punta Imperatore (white tower on two-storey dwelling, 13 m in height) (40°42′·7N, 13°51′·2E).

Capo Miseno (white tower and two-storey building, 12 m in height) (40°46′·8N, 14°05′·4E).

Directions

(continued from 12.70 and 12.111)

12.124

1 From a position 18 miles W of Punta di Torre Fumo (40°47′·5N, 14°02′·8E) the track leads SE passing, with positions relative to Punta Imperatore Light (40°42′·7N, 13°51′·2E):

SW of the restricted area (centred 5 miles NE) (12.120), thence:

SW of Punta Caruso (2¾ miles N) the NW extremity of Isola d'Ischia. Guardiola di Zale (12.123) rises close inland. Thence:

2 SW of La Sciavica church (2½ miles N), thence:

SW of Forio (1½ miles N) (12.139). Several detached rocks, shown on the chart, lie up to 5 cables off the coast S of Punta del Soccorso. Thence:

SW of Pietro Nera (2¾ cables N), a detached above water rock, thence:

SW of Punta Imperatore. A disused signal station stands on the summit of this imposing headland. A light (12.123) is exhibited from the W slope. Thence:

3 SW of Scoglio La Nave (2½ cables S), a moderately high, dark rock, thence:

SW of Chianare di Spadera (Scogli Chianara) (7 cables SE), a group of low rocks difficult to distinguish even close to. Thence:

SW of Punta del Charito (1½ miles SE), which has the appearance of an outstretched paw and is surmounted by a conspicuous white house. A shoal with a depth of 4·4 m over it lies 1 cable SSE of the headland. Thence:

4 SW of Punta Sant' Angelo (2¼ miles SE). The headland is the S extremity of Promontorio di Sant' Angelo, a grey, rocky peninsular connected

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to the island by a low sandy isthmus. A white pillar stands on the point and a ruined tower surmounts the peninsula. The fishing village and harbour of Sant' Angelo (12.141) lies on the NE side of the peninsula. Thence:

5 SW of Punta San Pancrazio (4¾ miles) ESE, the headland is steep-to, inaccessible from the shore and surmounted by a white beacon. Thence:

SW of Punta Solchiaro (ENE 7¾ miles), the S extremity of Isola di Procida. A beacon (black and white) stands 2¾ cables WNW of the point, thence:

To a position SW of Capo Miseno (11½ miles ENE), from which a light is exhibited (12.123).

(Directions continue at 12.150)

Canale d'Ischia

General information

12.125

1 **Route**. An inshore route leads 7 miles SE, from a position approximately 3½ miles W of Punta di Torre Fumo (40°47′·5N, 14°02′·8E), through Canale d'Ischia, which lies between Isola d'Ischia (40°43′N, 13°54′E) and Isola di Vivara, 1¾ miles NE.

2 **Prohibited areas**. An area 5 cables N of Marina di Casamicciola (40°45′·0N, 13°54′·5E) is used by seaplanes. The area, shown on the chart, is marked by light-buoys and buoys (special). Entry to the area is prohibited.

Entry to an area extending 50 m to seaward of the cliffs in the vicinity of Punta dell Scrofa (40°45′·1N, 13°55′·4E) is prohibited because of the danger of landslip.

Principal marks

12.126

1 **Landmarks**:

Guardiola di Zale radio mast (40°44′·9N, 13°52′·7E) (12.123).

Monte Epomeo (40°43′·9N, 13°53′·7E) (12.123).

Punta La Scrofa, known locally as Perrone, a steep rocky point on which stands a cemetery surrounded by a light coloured wall (40°45′·1N, 13°55′·4E).

2 Monte Tabor, overlooking Punta La Scrofa, is surmounted by a statue of San Antonio, flood-lit at night (44°44′·9N, 13°55′·2E).

Castello d'Ischia, stands on a rounded rock, 91 m in height, connected to Isola d'Ischia by a causeway with an arched bridge. A church and the ruins of a cathedral stand close to the castle (40°44′·0N, 13°58′·0E).

3 **Major light**:

Castello d'Ischia (grey metal framework tower on castle, 3 m in height) (40°44′·0N, 13°58′·0E).

Directions for passage south

12.127

1 From a position 3½ miles W of Punta di Torre Fumo, Castello d'Ischia Light (40°44′·0N, 13°58′·0E) (12.126) bearing 180° leads into the channel passing, with positions relative to the light:

ENE of Punta Cornacchia (4½ miles WNW), a brown, low, rocky point, which is the N extremity of Promontorio Guardiola di Zale, a bold headland bounded by cliffs. Thence:

2 ENE of Punta di Zale (4½ miles WNW), the headland lies 1 cable SE of Punta Cornacchia and is surmounted by a villa having the appearance of a large, square, red tower with white cornices. Thence:

ENE of Seno di San Montano (4½ miles WNW), the bay lies 2 cables SE of Punta Cornacchia, has rocky, inaccessible sides and a sandy beach at its head, thence:

3 ENE of Torre di Vico (4 miles WNW). The squat, square tower stands in a cemetery, enclosed by a white wall, over looking Punta Vico, the NE extremity of Promontorio di Vico, which generally has rocky precipitous sides and a rounded cultivated upper part. Thence:

4 ENE of Lacco Ameno (3¾ miles WNW). The village contains several large buildings and is fronted by a complex of breakwaters and a pier (12.129). Pietro del Lacco, also known as Pietra Grande, is a green mushroom shaped rock, 10 m in height lying ¾ cable offshore. Secca Piana Minore, a shoal with a depth of 0·8 m over it, and Secca Piana Maggiore, a shoal with a least depth of 2·5 m over it, lie respectively 1 and 1½ cables NNW of Pietra Grande. Thence:

5 ENE of a prohibited area (3¼ miles WNW) (12.125), thence:

E of Marina di Cassamicciola (3 miles WNW) (12.130), thence:

W of Punta Pioppeto (3¼ miles N), the N extremity of Isola di Procida. A light (white column on square stone base, 3 m in height) is exhibited from the headland. Thence:

6 W of Punta della Serra (2½ miles NE). The headland marks the N end of Insentura di Ciraccio. Thence:

W of a shoal (1¾ miles NNE), with a depth of 8·5 m over it. The shoal is the N end of Formiche di Vivara. Thence:

E of Porto d'Ischia (1½ miles NW) (12.131), thence:

E of Punta Molina (8 cables NNW). The headland is easily identified at the foot of an ancient lava stream. Thence:

W of Formiche di Vivara Light-beacon (8½ cables NE) (W cardinal, 6 m in height). The light-beacon marks the SW side of a rocky shoal with depths of 4 m over it. Thence:

7 From a position between Punta Molina and Formiche di Vivara Light-beacon the track then leads SE. The alignment (094°) of Punta Mezzodi (1½ miles ENE) with Punta Solchiaro (2¼ miles ENE) (12.124) open just S of it is a useful guide to the alteration. The track passes:

NE of Castello d'Ischia, thence:

SW of Punta Mezzodi (1½ miles ENE), the S extremity of Isola di Vivara, thence:

NE of Punta del Lume (8½ cables S). The headland has some dark bare patches above a stratum of red rock below which is the entrance to a grotto. Thence:

8 NE of La Catena (1½ miles SE), a rock with a least depth of 22 m over it, a shoal with a depth of 24 m over it lies 3½ cables NW of it. Thence:

NE of Banco d'Ischia (2 miles SSE). The bank has a least depth of 25·5 m over it. Thence:

S of Golfo di Genito (1¾ miles NE), thence:

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S of Punta della Palombara (2 miles ENE), the S extremity of Promontorio di Palombara. Torre Margherita (square, ruined) stands on the summit of the promontory. Thence:

S of Porticciolo della Chiaiolella (2 miles ENE) (12.132), thence:

To a position S of Punta Solchiaro (2¼ miles ENE).

Directions for passage north

12.128

1 From a position 1¾ miles E of Punta San Pancrazio (40°42′·1N, 13°57′·3E) (12.124) the track leads NNW to pass 3 cables E of Castello d'Ischia (40°44′·0N, 13°58′·0E) (12.126). When E of Porto d'Ischia Molo Soproflutto Light (40°44′·9N, 13°56′·6E) (12.131) the track may be adjusted as required.

Anchorages and harbours

12.129

1 **Lacco Ameno** (40°45′·2N, 13°53′·4E) has a small vessel berth and is a small craft and fishing haven fronting the town of Marina di Lacco Ameno. The haven is created by a complex of breakwaters, both connected to and detached from the coast, and incorporating a pier which extends ½ cable NNE from the shore. Close to its head the pier intersects with a rubble breakwater. To the E of the pier a mole and two detached breakwaters create two basins.

2 Pietro del Lacco (12.127), from which the village takes its name, lies ¾ cable offshore from the village, E of the pier. Pietra Piccola, low and dark, lies W of Pietro del Lacco. Il Belvedere, a high rock, distinctively coloured bright yellow and pink, stands on the beach SSE of Pietra Grande.

Berths. The only berth on the pier is at the head; it has an alongside depth of 6 m and is reserved for commercial vessels.

3 **Anchorage** can be obtained in depths of about 25 m, good holding ground, 1¾ cables NNE of Lacco Ameno, the anchorage, known locally as Treglia, is shown on the chart. Small craft can anchor closer inshore in depths of about 3 m.

Small craft. The haven fronts the town and provides 70 small craft berths in depths of 1·2 to 3·0 m. Small craft up to 15 m in length are accepted.

Facilities. Limited small craft facilities. There is a hospital in the town.

12.130

1 **Marina di Casamicciola** (40°45′·0N, 13°54′·5E) is a small ferry port, has a commercial berth and is a small craft harbour, fronting the spa town of Casamicciola Terme which extends up the lower N slopes of Monte Epomeo. The town is connected to Lacco Ameno by a tree lined front standing above a retaining wall. Monte Tabor surmounted by the statue of San Antonio (12.126) stands above the E part of the town. Gran Sentinella, surmounted by two red buildings within an enclosure, stands above the W part of the town.

2 The harbour is protected from the NW by Molo di Sopraflutto which extends 1¼ cables NNE from the coast; a light (green mast) is exhibited from the mole head. An inner mole, Molo di Sottoflutto, extends 1 cable NNW from the shore towards the outer mole; a light (red mast) is exhibited from the head of Molo di Sottoflutto. The harbour entrance lies between the head of Molo di Sottoflutto and the outer mole, faces ENE, is 100 m wide and has depths of 5 to 6 m; there is a least depth of 4·8 m in the middle of the entrance. Vessels up to 50 m in length and maximum draught 5 m are accepted.

3 Secca del Santuario, a shoal with a least depth of 2·4 m over it, lies 5 cables WNW of Molo di Sopraflutto Light. A weed covered shoal, with a least depth of 4 m over it, lies 6 cables WNW of the light; both are shown on the chart. Mariners should also note the prohibited area (12.125) 5 cables NW of the harbour entrance.

The harbour is exposed to the *Grecale* (NE wind).

4 **Berths**. Molo di Sottoflutto provides berths for commercial vessels on a section of quay between 100 m NE of the root and the first elbow. The section has depths of 5 m and includes a short pier used by hydrofoils.

Small craft. The harbour provides 211 small craft berths in depths of 0·5 to 5·0 m at the quays lining Molo di Sottoflutto, the S side of the harbour and on allocated sections of Molo di Sopraflutto. There are comprehensive small craft facilities including repairs.

Chart 916 plan of Ischia

Porto d'Ischia

12.131

1 **General information**. Porto d'Ischia (40°44′·6N, 13°56′·4E). Ischia is the principal town of the island comprising Ischia Porto and Ischia Ponte. The latter is connected by bridge to a picturesque island with a castle, Castello d'Ischia (12.126). The two districts are now joined, the area consisting of pinewood within which stand numerous houses. Porto d'Ischia is the main port of the island, handles general cargo, fish, wine, passenger ferries and has small craft facilities.

2 The harbour is an old volcanic crater. The entrance, created by excavation, is 37 m wide, has a least depth of 4·4 m and lies on the N side of the basin. Molo di Soproflutto, slightly curved, extends 1¼ cables NNE protecting the entrance from the W and NW; a sectored light (red tower, 11 m in height) (R127°–197°, W197°–127°) is exhibited from its head. A detached breakwater lies ½ cable N of Molo di Sopraflutto Head and is covered by the red sector of Molo di Soproflutto Head Light. A short rubble breakwater extends from Punta San Pietra, 1 cable NE of the entrance.

3 The harbour is approached from Canale d'Ischia, 3 cables NNE; the approach channel has a least depth of 5·3 m. A villa with a cupola standing on Punta San Pietro, the municipal thermal baths in the SE corner of the harbour, Villa Reale, red coloured standing in fine gardens ¾ cable S of and overlooking the harbour and Chiesa di S.M. di Porto are all prominent. The entrance is marked by lights; W side (green tower 3 m in height), E side (red tower, 3 m in height). The E entrance light is only visible (196°–217°); the sector clears the shoals on both sides of the channel SSW of Molo di Soproflutto Head.

The harbour accepts vessels up to 70 m in length and maximum draught 4 m. Winds from SW, WSW and N all make the entrance difficult. With strong S winds caution is necessary during the ebb stream as this generates a moderately strong current in the entrance.

4 **Regulations**. The entrance to the harbour lies within a circle radius 500 m centred on Molo di Soproflutto Light (40°44′·9N, 13°56′·5E). Vessels about to transit the entrance area must sound one long blast. Vessels departing the harbour have right of way; only one vessel at a time can manoeuvre within the harbour. Vessels berthed on the E side of the harbour have precedence over those at W berths when establishing a sequence for departure. Passenger ferries have precedence over all other vessels entering the

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harbour. Vessels on passage must remain clear of the entrance area. There is a speed limit of 3 kn within the harbour.

5 **Directions**. Tondo, a small, low, dark circular quay at the head of a pier facing the entrance bearing 219° and seen midway between the light structures marking the entrance, leads into the basin. Although low and dark Tondo can generally be distinguished before passing Molo di Soproflutto. The track leads SSW passing, with positions relative to Molo di Sopraflutto Light (40°44′·9N, 13°56′·5E):

6 WNW of the N end of Secca Serpara (2 cables ENE), a shoal, with depths of 2·2 to 4·9 m over it extending NNE from Punta San Pietro. Thence:
ESE of the detached breakwater (1 cable N), thence:
ESE of Molo di Sopraflutto Head, thence:
WNW of Punta San Pietro (1 cable SSE) to the entrance of the harbour basin. Within the entrance a sand bank has developed off the E mole and a track closer to the W mole is recommended.

7 **Prohibited anchorage**. The approaches to Porto d'Ischia lie within an area containing submarine cables; anchoring and fishing are prohibited.

Berths. The harbour is almost entirely lined with quays and two jetties extend from the S and SW sides of the basin; there are alongside depths of 0·8 to 3·2 m. The SE corner of the harbour is used by hydrofoils.

Repairs. Limited. There is a slipway of 300 tons capacity. Divers available.

Other facilities. There is a hospital in the town.

Supplies: fuel; water; provisions.

8 **Small craft**. The harbour provides 200 berths in depths of 2·8 to 3·2 m at pontoons extending from part of the E side of the basin. There are comprehensive small craft facilities including repairs.

Chart 908

Small craft

12.132

1 **Porticciolo della Chiaiolella** (40°45′·0N, 14°00′·4E) is a small craft and fishing harbour at the head of an inlet lying between Punta della Palombara and Capo Chiaiozza, 1 cable E. The harbour is protected by moles extending from each side of the cove. The entrance faces W, is 70 m wide, has depths of 3·0 to 5·7 m and is marked by lights exhibited from the head of each mole. The harbour basin is quayed; two T-shaped piers extend from the NW and N sides of the basin. Vessels up to 18 m in length are accepted.

Prohibited anchorage. Anchoring and fishing are prohibited within an area containing submarine cables 1 cable wide extending 5 cables SW from the coast close ESE of the harbour entrance. A white hut marks the cable landing.

Berths. The harbour provides 230 berths in depths of 1 to 5 m.

2 **Facilities**. Modest small craft facilities.

Castello d'Ischia anchorages

12.133

1 **La Marinella** (40°43′·8N, 13°57′·7E). With local knowledge anchorage for small craft can be obtained, in depths of 8 to 9 m, ½ cable SW of Castello d'Ischia (40°44′·0N, 13°58′·0E) (12.126). The anchorage lies N of Scogli di Sant' Anna, a group of above water rocks, extending ¾ cable from the shore 2½ cables S of the causeway connecting the islet to Isola d'Ischia. A prohibited anchorage area containing submarine cables lies close S of the anchorage. The anchorage provides good shelter in strong N winds.

2 **North of the causeway**. With local knowledge anchorage for small craft can be obtained in depths of 4 m N of the causeway linking Castello d'Ischia with Isola d'Ischia.

Canale di Procida

Chart 908

General information

12.134

1 **Route**. An inshore route leads, from a position 2 miles WSW of Punta di Torre Fumo (40°47′·5N, 14°02′·8E), N of Isola di Procida then SE between the island and the mainland coast. The channel has a least width of 1½ miles between Punta dell Lingua, the NE extremity of Isola di Procida, and Punta di Torre Fumo. However the channel is encumbered by extensive banks fronting each shore and the fairway, within which depths greater than 9 m can be expected, is reduced to a width of only 2½ cables.

2 The N shore of the channel between Punta di Torre Fumo and Capo Miseno is high for the first mile then abruptly descends remaining low and sandy as far as the root of the Capo Miseno promontory

3 **Prohibited anchorages**. Submarine cables land close W of Punta dell Lingua and in the vicinity of Secca Lo Schiavone, a rocky spit extending 2 cables S of the coast, 7½ cables WSW of Punta di Torre Fumo; anchoring and fishing are prohibited within the areas, shown on the chart, enclosing them.

Principal marks

12.135

1 **Landmarks**:
Capo Miseno (40°46′·8N, 14°05′·4E) (12.118).
Bacoli belfry, the square, white belfry with grey cupola is prominent amongst trees (40°48′·0N, 14°04′·9E).
Castello di Baia (40°48′·7N, 14°04′·8E) (12.152).

2 **Major light**:
Capo Miseno (as above) (12.123).

Directions for passage east

12.136

1 **Leading marks**:
Secca del Torrione Light-beacon (buoyant, S cardinal) (40°46′·6N, 14°02′·6E).
Capo Miseno Light (40°46′·8N, 14°05′·4E) (12.123).
The alignment (088°) of these marks leads N of Isola di Procida passing, with positions from Secca del Torrione Light-beacon:
N of Punta della Serra (2 miles WSW) (12.127), thence:
N of a shoal (1¾ miles WSW) with a depth of 4·9 m over it, thence:
N of Capo Bove (1½ miles WSW), the precipitous NW extremity of Isola di Procida. Thence:
N of Punta Pioppeto (1¼ miles WSW) (12.127), thence:
N of Porto di Procida (8 cables SW) (12.138), thence:
To a position close S of Secca del Torrione Light-beacon which marks the S side of Secca del Torrione a shoal with a least depth of 4·5 m over it. The track now leads SE passing:
NE of Punta della Lingua (7 cables SSW), the high rugged headland is fronted by dangers lying up to 1 cable from it. Thence:

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SW of Capo Miseno Light (2 miles E) (12.123), thence:

To a position S of Banco di Miseno (2½ miles ESE). The bank has a least depth of 25 m over it; an area containing unexploded ordnance lies close E.

Directions for passage west

12.137

1 From a position ESE of Secca del Torrione Light-beacon (40°46′·6N, 14°02′·6E) (12.136) the track leads close S of the beacon onto the alignment (088°), astern of Secca del Torrione Light-beacon with Capo Miseno Light, see 12.136.

Chart 916 plan of Procida

Porto di Procida

12.138

1 **General information** Porto di Procida (40°46′·0N, 14°01′·7E) is a small ferry port and yacht harbour formed by three breakwaters extending generally N from the coast. Molo di Ponente protects the W side of the harbour, is partly quayed and exhibits a light from its head (green metal column on pedestal, 7 m in height). Molo di Sottoflutto forms the E side of the main basin and exhibits a light (red column on pedestal, 7 m in height) from its head. The harbour entrance faces ENE between the mole heads, is 1 cable wide and has a least depth of 6·4 m. Secca di Marsiglia, a tongue extending 3½ cables N of the entrance, has a least depth of 6 m over it.

2 A marina is under construction E of the main basin; the S part of Molo di Sottoflutto, a breakwater extending ENE from midway along it and Molo di Levante form the harbour.

Chiesa di San Maria della Pieta, pale yellow and surmounted by a grey dome, stands overlooking the harbour close to the root of Molo di Sottoflutto. The harbour accepts vessels up to 40 m in length and maximum draught 3 m. Strong NE winds raise a considerable sea within the harbour which prevents vessels berthing. Shelter can be found in Cala di Corricella (12.172) on the S coast of the island.

3 **Prohibited anchorage**. Submarine power cables land close W of the root of Molo di Ponente, anchoring and fishing within the area enclosing them is prohibited.

Regulations. Ferries have right of way. All vessels must clear the entrance area as soon as possible; the entrance area lies between a line extending 030°, 500 m from the head of Molo di Ponente and a line extending 090°, 500 m from the head of Molo di Levante. there is a speed limit of 6 kn within the harbour.

4 **Berths**. The S side of the main basin is quayed; the quay at the root of Molo di Ponente is used by ferries. There are alongside depths of 1·2 to 4·0 m.

Repairs. Minor repairs only. There are two patent slip ways, the largest has a capacity of 300 tons.

Other facilities. There is a hospital at Procida.

Supplies: fuel; water; provisions.

Small craft. There are 50 berths for vessels up to 6 m in length.

Anchorages and harbours

Chart 908

Forio

12.139

1 **General information**. Forio (40°44′·4N, 13°51′·6E) is a small ferry port and yacht harbour fronting the town. Torrione, a large round tower, stands amongst the houses. The harbour is protected from the W by Molo di Sopraflutto and from the N by Molo di Sottoflutto. Lights are exhibited from the head of of both breakwaters; Molo di Sopraflutto (green pedestal, 6 m in height), Molo di Sottoflutto (red pedestal, 4 m in height). The entrance faces N, is 175 m wide and has depths of 8·2 m to 13·6 m. The harbour accepts vessels up to 20 m in length.

2 Pietra Impisa, two small black rocks lie close together 4 cables NE of Punta del Soccors, the largest and most W of the two is 3 m in height. Le Camarate, two rocks awash, and Scogli Lorio, a group of above water rocks, lie respectively 2½ cables N and 1½ cables SW of the headland. A shoal, with a depth of 1·5 m over it, lies 2 cables W of Scogli Lorio.

3 **Anchorage** can be obtained in depths of 13 m 1¾ cables NNE of the harbour entrance on the alignment of Punta Caruso (40°45′·5N, 13°51′·8E) with the head of Molo di Sporaflutto.

Berths. An L-shaped pier, lying between the breakwaters, extends NW and has depths of about 4 m at its head; the pier is used by hydrofoil ferries and yachts. There are 40 small craft berths in depths of 2 to 6 m.

4 **Facilities**. Good small craft facilities including repairs.

Supplies: fuel; water; provisions.

Punta del Chiarito anchorage

12.140

1 Punta del Chiarito (40°41′·9N, 13°53′·2E). Anchorage can be obtained in depths of about 15 m, sand, 3 cables SE of the headland. Mariners should note the shoal, with a depth of 4·4 m over it, 1 cable SSE of the headland. Rubble breakwaters have been constructed within the bay to protect the coast from erosion.

Sant' Angelo

12.141

1 **General information**. Sant' Angelo (40°41′·8N, 13°53′·7E) is a small harbour used by local ferries, small commercial vessels, fishing vessels and yachts. The harbour is protected by two unmarked rubble breakwaters; the inner breakwater extends 80 m SSW from a small headland immediately SE of the village, the outer breakwater extends 180 m NNE from the coast 1 cable S of the village. The entrance lies between the breakwater heads, faces NNE, is 100 m wide and has depths of 10 m. Vessels up to 50 m in length can be accepted. Entering or leaving harbour becomes dangerous in strong SE (*Scirocco*) or E (*Levante*) winds which generate a heavy swell.

2 **Anchorage** can be obtained in depths of about 14 m, sand and mud, 3 cables ENE of the harbour. The head of the bay consists of sandy beach behind which two deep valleys ascend.

3 **Berths**. An angled quay extends 100 m W from the root of the outer breakwater and has depths alongside of 2 to 10 m. A concrete pier in the N part of the harbour has an alongside depth of 2 m. Small craft moorings are laid in the W part of the main basin. Berths are controlled by the Harbour Master and areas have been designated for different vessel types. The S quay is used by ferries, commercial vessels and, by arrangement, yachts greater than 6 m in length. The small basin in the N of the harbour between the concrete pier and inner breakwater is reserved for fishing vessels. The harbour provides 100 small craft berths in depths of 2·0 to 3·5 m.

4 **Facilities**. Good small craft facilities including repairs. There is a patent slip close W of the main quay.

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Other names

12.142

1 Maronti, Punta (40°41′·9N, 13°55′·2E).

CAP MISENO TO PUNTA CAMPANELLA

General information

Chart 908

Routes

12.143

1 A coastal route leads 16 miles SE from a position SW of Cap Miseno (40°46′·8N, 14°05′·4E), S of Bocca Grande, the mouth of Golfo di Napoli, to a position SW of Punta Campanella (40°34′·3N, 14°19′·6E). A coastal route leads from Bocca Grande (40°38′·0N, 14°04′·0E) 17 miles NE, through Golfo di Napoli, to Rada di Napoli (40°48′·0N, 14°18′·0E).

An inshore route leads through Bocca Piccola (40°34′·0N, 14°18′·0E), the channel between Isola di Capri and Punta Campanella. The channel is wide, deep and free from dangers and not described in detail. A prohibited area, shown on the chart lies 1¾ miles NW of Punta Campanella.

Topography

12.144

1 Golfo di Napoli lies between Punta di Torre Fumo (40°47′·5N, 14°02′·8E) and Punta Campanella (40°34′·3N, 14°19′·6E). Bocca Grande, the main approach to the gulf, lies between Isola d'Ischia, 5 miles SW of Punta di Torre Fumo, and Isola di Capri, 3 miles WSW of Punta Campanella. The shores of the gulf are indented by three large bays; Golfo di Pozzuoli and Rada di Napoli on the N side and Rada di Castellammare di Stabia on the SE side; Monte Vesuvio (40°49′·5N, 14°25′·8E) dominates the head of Rada di Napoli and has two peaks; Monte Vesuvio, the cone of the active volcano, and Monte Somma, 8 cables N, separated by a deep semi-circular valley. An observatory and a hermitage stand on the NW slope; the station of a funicular railway stands higher up, 1 mile ESE. Around the base of the mountain lie several villages or small towns, the land is cultivated and in places wooded.

2 The N side of Golfo di Napoli is backed by hills with the distinctive shape of extinct volcanic craters. Peninsola Sorrentina forms the SE side of the gulf, is more elevated and a ridge of mountains extends along its length.

Isola di Capri is a mountainous, fertile island which lies 2¾ miles SW of Punta Capanella. The main industries of the island are fishing, agriculture and tourism; large amounts of fruit, oil and wine are produced. The town of Capri (40°33′·0N, 14°14′·8E) is the main centre of population and lies on a saddle between Monte Tiberio and Monte Solario.

Depths

12.145

1 The coastal route S of Golfo di Napoli lies in deep water, free from isolated dangers. The coast of Golfo di Napoli is steep-to, generally the 30 m depth contour lies within 1 mile of the shore. On the NW side of the gulf banks, with a least depth of 25 m over them, lie SE of Isole Flegree. Golfo di Napoli provides a deep water approach to Porto di Napoli at the head of the gulf.

Traffic concentration

12.146

1 In addition to the major port of Napoli the bays of Golfo di Napoli contain the ports of Baia, Pozzuoli, Bagnoli, Portici, Torre del Greco, Torre Annunziata and Castellammare di Stabia. A high concentration of shipping should be anticipated.

Punta Campanella Marine Nature Reserve

12.147

1 A marine nature reserve has been established around Punta Campanella (40°34′·3N, 14°19′·6E) (12.150) and the SW part of Peninsola Sorrentina. The extent of the reserve is shown on the chart. The area is divided into three types of restricted zone;

Zone A. Unauthorised navigation, stopping, fishing and swimming, including diving, are prohibited.

Zone B. Navigation by power driven vessels, anchoring, diving and fishing are prohibited.

Zone C. Anchoring and fishing are prohibited.

2 The zones apply to the following areas within this section:

Zone	*Approximate area*
A	Encloses Scoglio Vervece (40°37′·2N, 14°19′·5E).
B	S of Punta Baccoli (40°35′·1N, 14°19′·5E) to Punta Campanella.
C	Between Capo di Sorrento (40°38′·1N, 14°21′·1E) and S of Punta Baccoli (40°35′·1N, 14°19′·5E).

3 Mariners must obtain full details of the area and its regulations from local authorities.

Measured distances

12.148

1 **Isola di Procida**. Between Punta Solchiaro (40°44′·4N, 14°01′·0E) and Punta di Pizzaco (40°45′·1N, 14°01′·5E) there is a measured distance:

South-west Limit marks. Punta Solchiaro beacon (black and white pillar) in line, bearing 311°, with Torre Margherita 5 cables NW.

North-East Limit marks. Punta di Pizzaco beacon (black and white pillar) in line, bearing 308°, with the dome of Villa Lavinia close NW.

Distance: 1583·6 m.

Running track: the alignment (044°) of Capo Miseno Lighthouse (40°46′·8N, 14°05′·4E) (12.123) with Convento dei Camaldoli (40°51′·6N, 14°11′·5E) (10¾ miles NE).

2 **Golfo di Napoli SE shore** Two measured distances are established:

Sorrento and Castellammare di Stabia. Between Capo di Massa (40°37′·7N, 14°20′·4E) and a position N of Capo d'Orlando (40°40′·9N, 14°26′·4E) there is a measured distance in three sections:

South-west Limit marks. The alignment (137½°) of Villa Azzano (vertical black stripe on upper part) (40°37′·5N, 14°20′·8E) with a building (vertical black stripe on wall) on the summit of Monte Corbo (40°36′·9N, 14°21′·5E).

3 South-west Middle marks. The alignment (137½°) of a mast (on a turret of Villa Crawford which stands close ENE of Punta San Francesco) (40°38′·3N, 14°23′·6E) with the NW corner of a house (arched window in upper storey) (40°37′·1N, 14°25′·0E).

North-east Middle marks. The alignment (135½°) of Chiesetta San Marie delle Grazie (40°39′·4N, 14°24′·5E) with a beacon (black vertical stripe on

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white mark) (40°38′·9N, 14°25′·0E) close to the summit of Monte Sant' Angelo.

4 North-east Limit marks. The alignment (135½°) of Chiesa di Santa Maria di Pozzano belfry (40°41′·4N, 14°27′·6E) with a beacon (black vertical stripe on white mark) standing on the NW slope of Monte Faito (12.149).

Distances: SW section 4014·4 m; Middle section 2166·1 m; NE section 5903·5 m.

Running track: the line of bearing 045½° on a beacon (disused light, 2 cables NW of Torre Annunziata, Molo di Ponente Head) (40°44′·9N, 14°26′·8E) in line with a black stripe painted on buildings 5 cables and 2 miles inland.

5 **Castellammare di Stabia**. Between Punta San Francesco (40°38′·3N, 14°23′·6E) and a position NE of Capo d'Orlando (40°41′·0N, 14°26′·6E) there is a measured distance in two sections:

South-west Limit marks. The alignment (137½°) of a mast (on a turret of Villa Crawford which stands close ENE of Punta San Francesco) (40°38′·3N, 14°23′·6E) with the NW corner of a house (arched window in upper storey) (40°37′·1N, 14°25′·0E).

6 Middle marks. The alignment (135½°) of Chiesa di Santa Maria di Pozzano belfry (40°41′·4N, 14°27′·6E) with a beacon (black vertical stripe on white mark) standing on the NW slope of Monte Faito (12.149).

North-east Limit marks. The alignment (135½°) of Chiesa di Santa Maria di Pozzano belfry (40°41′·4N, 14°27′·6E) with a beacon (black vertical stripe on white mark) standing on the NW slope of Monte Faito (12.149).

7 Distances: SW section 2267·8 m; NE section 5904·3 m.

Running tracks: the alignment (045½°) of a black stripe on Cantieri Metallugici (a factory) (40°43′·8N, 14°28′·3E) and a belfry (surmounted by a cross) 1¾ miles inland. The line of bearing 225½° of Scoglio Vervece Light (40°37′·2N, 14°19′·5E) (12.151). Mariners should note Banco Santa Croce, a shoal with a least depth of 9·8 m over lies 4½ cables WSW of Capo d'Orlando. The shoal is shown on the chart.

Principal marks

12.149

1 **Landmarks**:

Monte Epomeo (40°43′·9N, 13°53′·7E) (12.118).

Monte Solaro (40°32′·8N, 14°13′·5E), surmounted by a ruined fort.

Monte Capello (40°33′·1N, 14°13′·6E), surmounted by a large cross.

Monte Tiberio (40°33′·4N, 14°15′·5E). Chiesa di Santa Maria del Soccorso, with a bronze statue on a square pedestal, stands on its summit.

Il Deserto (cross on summit) (40°36′·7N, 14°22′·0E).

2 Monte di Vico Alvanco (pointed summit, surmounted by a cross) (40°37′·5N, 14°26′·1E).

Monte Sant' Angelo (surmounted by a building clearly visible from W) (40°38′·9N, 14°25′·1E).

Monte Sant' Angelo a Tre Pizzi (three peaks, one shaped like a cupola) (40°38′·9N, 14°30′·4E).

Convento di San Francesco (elevation 280 m) (40°40′·2N, 14°26′·3E). The convent stands isolated amongst trees, has a light coloured cupola and red belfry surmounted by a cross which is illuminated at night.

3 Monte Faito (40°40′·2N, 14°29′·3E).

Chiesa di Santa Maria di Pozzano belfry (eight-sided) (40°41′·4N, 14°27′·6E).

Castellammare di Stabia Main Lighthouse (white tower on white three-storey building, 16 m in height) (40°41′·3N, 14°28′·2E).

Scoglio di Revigliano (Rovigliano) (surmounted by ruined castle with large square tower) (40°43′·7N, 14°27′·8E).

Silos (40°45′·0N, 14°27′·0E).

4 Chiesa di Carmine (high, grey cupola) (40°45′·3N, 14°26′·9E).

Torre Scassata (partly ruined) (40°45′·2N, 14°24′·9E). The tower stands on a high plateau of volcanic rock.

Concezione church (square belfry with cross) (40°45′·6N, 14°24′·2E).

Torre Bassano (light-coloured on a square base) (40°46′·3N, 14°23′·0E). The tower stands on a rocky point, a large, conspicuous building stands close to it.

5 Camaldoli della Torre (a green hill, surmounted by a convent) (40°46′·9N, 14°24′·3E).

Chimney (40°47′·2N, 14°21′·6E), a large mill and silo, both red, stand close to it.

Monte Vesuvio (40°49′·4N, 14°25′·8E) (12.144).

Palazzo Reale (40°48′·7N, 14°20′·6E).

Castel Sant' Elmo (dark, massive) (40°50′·7N, 14°14′·4E), stands on the summit of a hill.

Museo di San Martino (white building) (40°50′·6N, 14°14′·5E), stands slightly below Castel Sant' Elmo.

6 Castel dell' Ovo (40°49′·7N, 14°14′·9E).

Capo di Posillipo (40°48′·1N, 14°12′·5E). The headland rises steeply from the sea, is covered with thick vegetation amongst which stand numerous villas, and is surmounted by a war memorial. The Egyptian styled building, grey coloured with cupola, stands in an enclosure.

Convento dei Camaldoli (40°51′·5N, 14°11′·6E), a white building standing among trees.

7 **Major lights**:

Castello d'Ischia (40°44′·0N, 13°58′·0E) (12.126).

Capo Miseno (40°46′·8N, 14°05′·4E) (12.123).

Molo San Vincenzo Head (red round tower, 24 m in height) (40°50′·0N, 14°16′·5E).

Castellammare di Stabia Main Light, as above (40°41′·3N, 14°28′·2E).

Punta Carena Light (eight-sided tower on two-storey dwelling) (40°32′·2N, 14°11′·9E).

Directions for the coastal routes

(continued from 12.124)

Capo Miseno to Punta Campanella

12.150

1 From a position SW of Capo Miseno (40°46′·8N, 14°05′·4E) the track leads SE passing, with positions relative to Punta Carena Light (40°32′·2N, 14°11′·9E):

SW of Monte Vesuvio (20 miles NNE) (12.149), thence:

SW of Punta Carena, the low SW extremity of Isola di Capri is overlooked by Torre della Guardia, a round prominent tower, 4 cables NE. A light (12.149) is exhibited from 1 cable E of the point. Thence:

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2 To a position SW of Punta Campanella (6 miles ENE). The headland is the SW extremity of a promontory which descends gradually from Monte San Costanzo, 9 cables NW. A light coloured hermitage, with dome and staff, and a radio mast stand on the summit. A light (white framework tower, black bands, 18 m in height) is exhibited from the headland. Torre di Minerva, a large, square tower, stands close N of the light.

(Directions continue 13.16)

Bocca Grande to Rada di Napoli

12.151

1 From a position 10 miles SSE of Punta Sant' Angelo (40°41′·6N, 13°53′·6) (12.124) the track leads NE passing, with positions relative to Capo Miseno Light (40°46′·8N, 14°05′·4E) (12.123):

S of Sant' Angelo harbour (10¼ miles SW) (12.141), thence:

SE of Capo Grosso (9 miles SW), the yellow rocky headland is overlooked by Monte Barano and the village of Barano d'Ischia shows up against the green ridge behind Capo Grosso. A square grey belfry with a clock stands in the village. Thence:

2 SE of Punta San Pancrazio (7½ miles SW) (12.124), thence:

NW of Punta Carena (15¼ miles SSE) (12.150), thence:

SE of Banco d'Ischia (6¾ miles SW) (12.127), thence:

NW of Monte Solaro (15¼ miles SSE) (12.149), thence:

3 SE of Punta del Lume (6¾ miles SW) (12.127), thence:

SE of Castello d'Ischia Light (6¼ miles WSW) (12.126), thence:

SE of La Catena (5½ miles SW) (12.127).

(Directions for Canale d'Ischia passage N continue at 12.128)

Thence:

SE of Isola di Vivara (5 miles WSW) (12.118), thence:

SE of Porticciolo della Chiaiolella (4¼ miles WSW) (12.132), thence:

4 SE of Punta Solchiaro (4 miles SW), a measured distance (12.148) beacon stands NW of the headland. Seno del Carbogno lies NE of Punta Solchiaro; the bay is steep-to and free from dangers but too deep for anchorage. Thence:

NW of Monte Tiberio (15½ miles SSE) (12.149), thence:

SE of Punta di Pizzaco (3¼ miles WSW), a beacon and dome stand NW of the point. The marks are the NE limit of a measured distance (12.148). Thence:

5 SE of a rocky spit (3 miles WSW) with a least depth of 3·7 m over it. The spit separates Cala di Sant' Antonio, NE of Punta Pizzaco, from Cala di Corricella, SW of Punta dei Monaci. Anchorage (12.171) can be obtained within Cala di Sant' Antonio. Thence:

SE of Cala di Corricella (3 miles WSW). A church and houses stand on the E shore. A breakwater, parallel to the coast, protects houses on the N shore and provides shelter for boats. Anchorage (12.172) can be obtained within the bay. Thence:

6 SE of Punta dei Monaci (2¾ miles WSW), a bare, rocky headland surmounted by a convent with high arched walls; a prison stands N of the convent. Thence:

SE of Punta della Lingua (2½ miles WSW) (12.136).

(Directions for Canale di Procida passage west continue at 12.137)

Thence:

SE of Secca del Torrione (2 miles W) (12.136), thence:

SE of Banco di Miseno (1½ miles S) (12.136). thence:

7 NW of Punta Campanella (16½ miles SE) (12.150), thence:

SE of Capo Miseno (12.118). Shellfish beds lie close E of the promontory; a light-buoy (special) marks the SE corner of the area which is shown on Chart 914. Thence:

NW of Scoglio Vervece (14½ miles SE), a large rock, from which a light is exhibited (black beacon with isolated danger topmark, red bands).

(Directions for Golfo di Pozzuoli continue at 12.153)

Thence:

8 SE of Monte Nuovo (3½ miles N) (12.152), thence:

NW of Capo di Sorrento (14¾ miles SE), a rocky headland surmounted by the ruins of a temple. A ruined tower stands 1 cable SW of it. Thence:

SE of Isolotto di Nisida (3½ miles ENE) (12.167). The island is an ancient crater with rocky and inaccessible sides. A prison, light coloured, round, stands on the NW part of the islet. Thence:

WNW of Monte Faito (19¼ miles ESE) (12.149), a measured distance beacon (12.148) stands on the NW slope. Thence:

9 WNW of Castellammare di Stabia Main Light (18¼ miles ESE) (12.149)

SE of Secca della Cavallara Light-beacon (buoyant, S cardinal) (4½ miles E). The light-beacon marks Secca della Cavallara, the S part of Secca della Gaiola, a shoal bank extending 3¾ cables from Punta Gaiola. The bank is divided by a narrow passage with depths of 5 to 10 m. Above water rocks form the N part of the shoal; the S part is awash in places. Thence;

10 W of Torre Bassano (13½ miles E) (12.149), thence:

W of Torre del Greco (12½ miles E) (12.177). Thence:

To a position E of Capo di Posillipo (5½ miles ENE). (12.149). Scogli Pietra Salata, a group of low, dark rocks lie 1¼ cables offshore close S of the foot of the headland. A rough breakwater, lying parallel to the coast and inshore of the rocks, provides shelter for small craft.

(Directions continue for Rada di Napoli at 12.233)

Golfo di Pozzuoli

Charts 914, 916 plan of Baia and Pozzuoli

General information

12.152

1 **Description**. Golfo di Pozzuoli lies between Capo Miseno (40°46′·8N, 14°05′·4E) and Punta della Gaiola, 4½ miles ENE. The shores are partly rocky and partly sandy beach. The N part of the bay is fronted by a bank extending up to 3½ cables offshore. Monte Nuovo (40°50′·1N, 14°05′·5E), an old volcanic crater covered with vegetation, stands close to the head of the bay; Monte

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Barbaro, 1 mile NE, is the highest summit overlooking Golfo di Pozzuoli.

2 **Shellfish beds**. Areas of shell fish beds lie E of Capo Miseno (40°46′·8N, 14°05′·4E) and N of Punta di Pennata (40°47′·5N, 14°05′·5E); they are shown on the chart. The areas contain many obstructions dangerous to navigation.

Marine farms. An area centred on (40°48′·0N, 14°07′·1E) contains a marine farm. The area is marked by a light-buoy (special) and is shown on the chart.

3 A rectangular area centred on (40°49′·0N, 14°05′·6E) contains a marine farm. The area is marked by light-buoys and buoys (special) and shown on the chart.

Navigation, stopping, anchoring, and fishing within these areas are prohibited. All vessels must remain at least 2½ cables clear of the farms, there is a speed limit of 10 kn in their vicinity.

4 **Depths**. Charted depths within Golfo di Pozzouli are unreliable following seismic activity in 1986. Caution must be exercised when navigating N of 40°47′N.

Prohibited areas. Entry to an area containing obstructions close E of Punta Pennata (40°47′·5N, 14°05′·5E), shown on the chart, is prohibited. Entry to an area containing unexploded ordnance NE of the point and adjacent to an area of shellfish beds is prohibited.

5 **Landmarks**:

Castello di Baia (40°48′·7N, 14°04′·8E). The large, grey castle stands on the summit of steep slope.

6 **Major light**:

Capo Miseno (40°46′·8N, 14°05′·4E) (12.123).

Directions

(continued from 12.151)

12.153

1 From a position E of Capo Miseno (40°46′·8N, 14°05′·4E) the track leads NW passing, with positions relative to Capo Miseno Light (40°46′·8N, 14°05′·4E) (12.123):

E of Punta Terone (5 cables N) (12.154).

(Directions for Porto di Miseno continue at 12.154)

Thence:

E of Punta del Poggio (1 mile N), an area of shellfish beds (12.152) and an adjacent prohibited area (12.152) lie E of the headland. Thence:

2 W of Isolotto di Nisida (3¾ miles ENE) (12.151), thence:

E of Bacoli church (1¼ miles NNW) (12.135). Thence:

WSW of a light-buoy (special) marking a marine farm (1¾ miles NE) (12.152). Thence:

E of Punta Le Cento Camerelle (1¼ miles NNW). The headland is steep and rocky; the submerged remains of a Roman house lie 1 cable NW and a dangerous wreck lies 1½ cables N of Punta Le Cento Camerelle. Thence:

3 E of Punta di Cannito (1½ miles NNW), the headland is surmounted by a house built on a terrace supported by a wall with large arches. Thence:

E Pontile Lubrano (1¾ miles NNW), thence:

W of Porto di Bagnoli (4 miles ENE) (12.163), thence:

SW of Porto di Pozzuoli (3¼ miles NNE) (12.156), thence:

To a position E of Fortino Tenaglia (2 miles NNW) (12.155).

Charts 914, 916 plan of Miseno

Porto di Miseno

12.154

1 **General information**. Porto di Miseno (40°47′·4N, 14°05′·2E) lies on the N side of Capo Miseno fronting the town of Miseno. The head of the harbour is separated from Lago Miseno by a low narrow strip of land; a canal, spanned by a bridge, connects the harbour and lagoon. During the period of the Roman Empire Porto Miseno and Lago Miseno were not divided and formed one of its principal naval ports.

2 The harbour is entered between Punta Terone (40°47′·2N, 14°05′·3E), a dark, rocky point extending NE from the Miseno promontory and Punta di Pennata, 2¼ cables NNE. A rubble breakwater extends 70 m NE from Punta Terone; a light-beacon (occasional) (truncated, conical, stone), 1 cable N of the point, marks the extremity of the remains of a Roman breakwater; a shoal spit extends ¼ cable NE of the beacon.

3 Punta di Pennata is the rocky S extremity of a long, narrow isthmus which, due to erosion, now has the appearance of an island. Shoal spits extending from Punta di Pennata are the remains of Roman harbour works; buoys mark their SW extremities. A boat channel lies between the N extremity of Punta Pennata and Punta del Poggio, 7 cables N. Punta Scarparella, 3½ cables NNW of the harbour entrance, is surmounted by a white pillar. The point marks an abrupt change from the high, rocky coasts of the outer harbour to low sandy shores W of it.

4 **Regulations**. Anchoring and fishing are prohibited in the outer harbour between the entrance and a line joining Punta Scarparella with the ruins of Villa di Lucullo, 2½ cables NNE; power driven vessels are prohibited from stopping or fishing W of the line. Movement within the inner part of the harbour can only be conducted during the day.

5 **Directions**. The alignment (296°) of the following marks leads through the entrance to a position N of Punta Scarparella;

Front beacon (pillar, white and black bands) (40°47′·5N, 14°04′·7E). The beacon stands on the terrace of a two-storey villa.

Rear beacon (cottage wall, black and white squares) (1700 m from front beacon).

The leading marks can be difficult to distinguish. If proceeding W of Punta Scarparella mariners should be guided by the buoys (lateral) moored N of the point.

6 **Berths**. Two mooring buoys are laid ENE of Punta Scarparella in depths of 6 to 10 m. A concrete pier 1 cable W of Punta Terone has an alongside depth of less than 2 m.

Small craft. The inner basin, W of Punta Scarparella, is only usable by small craft. The T-shaped pier, 1½ cables WSW of Punta Scarparella, has a depth of about 2 m alongside its head; several small mooring buoys lie off the head.

Chart 916 plan of Baia and Pozzuoli

Porto di Baia

12.155

1 **General information**. Porto di Baia (40°49′·2N, 14°04′·8E) fronts the industrial town of Baia, important for the extraction of volcanic minerals and stone, which lies on the NW shore of Golfo di Pozzuoli. The port is entered between Fortino Tenaglia (40°48′·7N, 14°05′·0E) a grey bastion, from which a light is exhibited (red tower, 8 m in height), and Punta dell Epitaffio, 6½ cables NNW. Castello

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di Baia (12.152) stands above Fortino Tengalia on the summit of a steep slope. A pillar, painted with black and white squares, stands on the N bastion of Castello di Baia. An arched bridge joins Fortino Tengalia to the shore however debris from local quarries dumped in the vicinity has resulted in the arches silting considerably.

2 Tempio di Venere stands 5½ cables WNW of Fortino Tenaglia; the ruined octagonal temple has eight windows and its upper part is covered in vegetation. A large, prominent yellow building stands close S of it.

Dangers. An area of obstructions, dangerous to navigation, lies NW of Fortino Tenaglia; the area is shown on the chart. Secca Le Fumose, also known as Secca Fumosa, a rocky shoal with a depth of 2·2 m over it, and Secca Caruso, rocks awash, lie respectively 7½ cables NNE and 1 mile NE of Fortino Tenaglia.

3 **Maximum draught accepted**. To reduce hydrodynamic damage to marine archaeology the maximum draught accepted is 4 m.

Local weather. The port is exposed to NE and SE winds. In winter a strong ESE wind makes the harbour dangerous.

4 **Baia Underwater Park**. The park is enclosed by a line extending NE from Porto di Baia East Mole Head (40°49′·0N, 14°04′·6E) to a position S of Lido di Augusto East Mole Head (40°49′·8N, 14°05′·9E) then N to the mole head; the area is shown on the chart. Within the park unauthorised navigation is prohibited and other activities are restricted.

5 Details of the restrictions and the areas affected must be obtained from local authorities.

Prohibited anchorage. Anchorage is prohibited within 200 m of the mooring buoys laid 4 cables NNE and 7½ cables NE of Fortino Tenaglia.

Berths. Molo Sud has an alongside depth of 4·8 m. Pontile Coppola and Pontile Lubrano (12.152) are used for bulk loading volcanic minerals.

Repairs. Minor repairs can be undertaken.

Supplies: fuel; water; provisions.

Porto di Pozzuoli

General information

12.156

1 **Position and function**. Porto di Pozzuoli (40°49′·6N, 14°07′·0E) lies on the N side of a small promontory on the E shore of Golfo di Pozzuoli. The port handles general cargo, wood pulp and wood products, passengers and is an important fishing port.

Topography. The coast W of Pozzuoli is low, fronted by rocks and shoals, and should be given a wide berth. The town stands on a promontory backed by fertile country and the area contains numerous important Roman ruins.

2 **Approach and entry**. Porto di Pozzuoli is approached from the S through Golfo di Pozzuoli.

Port Authority. Consorzio Autonomo del Porto. Piazzale Pisacane 80133 Napoli NA, Italy.

Limiting conditions

12.157

1 **Deepest and longest berth**. Molo Caligoliano, length 353 m, alongside depth 4 to 9 m.

Maximum size of vessel handled. Maximum draught 6·5 m.

Local weather and sea state. The *Libeccio* and the *Scirocco* (SW and SE winds) send a swell into the harbour. In general a S wind will cause higher than predicted tides which sometimes flood over the quays. In these conditions vessels may have to leave harbour. Strong W or WSW winds send a significant swell into the harbour making the berths untenable.

A low water level is an indication of good weather and the approach of thunderstorms from land.

Arrival information

12.158

1 **Port operations**. The port operates Mon-Fri 0800–1700 local time.

Notice of ETA, 24 and 12 hours in advance.

Outer anchorages. Anchorage can be obtained in depths of about 26 m, mud, good holding ground, SW of the harbour and S of a line joining Fortino Tenaglia (12.155) and the head of Molo Caligoliano. In strong S winds it is dangerous to anchor on or N of the line.

2 Anchorage is prohibited in the vicinity of an outfall pipeline extending SW from the coast close SSE of Molo Caligoliano root.

Pilotage and tugs. Pilotage is compulsory for all vessels of 500 grt or greater. Tugs can be provided from Napoli.

Regulations. There is a speed limit of 4 kn within the harbour.

Harbour

12.159

1 **General layout**. The harbour is protected from the S by Molo Caligoliano which exhibits a light (white and green tower, stone base, 10 m in height). The basins and berths of the harbour lie close N of the mole. Pontile Pirelli extends S from the shore 8½ cables NW of Molo Caligoliano.

Landmarks:

Cathedral (square belfry, grey dome) (40°49′·2N, 14°07′·2E).

Chiesa della Madonna delle Grazie (yellow dome surmounted by a spire) (40°49′·3N, 14°07′·1E).

Tempio di Serapide (Roman ruin with three columns standing) (40°49′·5N, 14°07′·2E).

Basins and berths

12.160

1 Molo Caligoliano provides the main commercial berths.

Banchina Emporio W and N and Banchina Villa are ferry and Ro-Ro berths.

Nuovo Darsena Pescatori lies between Pennello Frangiflutti and Pontile Ansaldo; the latter is no longer in service as a berth and has been modified to provide shelter to the new fishing vessel basin.

Pontile Pirelli extends S from the shore on the NW side of the harbour; a light (yellow mast, 6 m in height) is exhibited from the head of the pier. Mooring buoys laid off the pier head form part of the berth. There are depths of 9 m at the head of the pier; berthing is dangerous in S winds.

Port services

12.161

1 **Facilites**. There is a hospital in the town.

Supplies: fuel; water; provisions.

Small craft

12.162

1 **General information**. Porto di Pozzuoli provides 100 small craft berths mainly at pontoons in depths of 1 to 8 m within Marina di Maglietta, S of Banchina Sudcantieri. There are also berths in Darsena Pescatori at the root of Molo Caligoliano. Good small craft facilities including repairs.

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Porto di Bagnoli

Chart 916 plan of Bagnoli

General information

12.163

1 **Position and function**. Porto di Bagnoli (40°48′·4N, 14°09′·7E) lies close S of Bagnoli on the E side of Golfo di Pozzuoli. The harbour is sheltered from the S by Isolotto di Nisida. The port handles bulk ore, minerals, scrap iron, processed chemicals, steel ingots, iron and coal.

Topography. The coast between Pozzuoli and Bagnoli is almost uninhabited and immediately SE of Pozzuoli is rocky but eventually gives way to sandy beach backed by well cultivated plain. Isolotto di Nisida, formed from a volcanic crater, provides a remarkable feature close SE of the port.

2 **Approach and entry**. Porto di Bagnoli is approached from the S through Golfo di Pozzuoli and entered N of Isolotto di Nisida (40°47′·9N, 14°09′·8E).

Port Authority. Capitanerie di Porto di Napoli, 10 via Coroglio, Napoli NA.

Limiting conditions

12.164

1 **Deepest and longest berth**. Pontile Italsider Nord, length 474 m, alongside depths 5·0 to 14·9 m.

Maximum size of vessel handled. Maximum draught accepted 12·5 m.

Local weather and sea state. Berthing is dangerous at any of the piers in strong SE to WNW winds because of the swell generated.

Arrival information

12.165

1 **Port operations**: 24 hours a day.

Outer anchorages. Anchorage can be obtained off the port in depths of about 30 m, sand, good holding ground. Smaller vessels can obtain anchorage in depths of 14 to 18 m, sand, SSW of Pontile Italsider Sud Head (40°48′·3N, 14°10′·0E). The anchorages are shown on Chart 914.

Strong SE, SW and W winds make the roadstead dangerous, shelter should be found elsewhere.

2 **Pilotage and tugs**. Pilotage is compulsory for all vessels of 500 grt or greater and available 24 hours. The pilot boards 1¼ miles W of Isolotto di Nisida (40°47′·9N, 14°09′·8E). See the relevant *Admiralty List of Radio Signals* for details.

Tugs are available from Napoli; approximately 2 hours notice required.

Harbour

12.166

1 **General layout**. The port consists of four private piers, marked by lights, extending SE from the industrial area in the S part of Bagnoli.

The pier lying between Italsider Nord and Sud is of framework construction and supports sea water intakes, it is not a berth. Entry of an area radius 100 m, centred on the pier head, is prohibited.

Pontile Federconsorzi lies S of Pontile Italsider Sud and is equipped with an overhead cableway for handling grain.

2 **Landmark**:

Isolotto di Nisida (40°47′·9N, 14°09′·8E) (12.167).

Isolotto di Nisida

General information

12.167

1 Isolotto di Nisida (40°47′·9N, 14°09′·8E) is an ancient volcanic crater with rocky and inaccessible sides lying close S of Porto di Bagnoli (12.163). The SW side of the crater has collapsed forming an entrance to Porto Paone. A prison consisting of a light coloured round building stands on the NW part of the islet.

2 **Caution.** The SW coast of the island is dangerous due to landslips and irregularities of the seabed, the area should be given a wide berth.

Molo Cappellini extends 2½ cables ENE from the NE part of the islet to join a breakwater extending from the mainland. Molo Dandolo extends ¾ cable NNW from the NW side of the islet and a short jetty extends ENE from it. A light (green mast, 5 m in height) is exhibited from the jetty head.

Anchorage

12.168

1 Anchorage can be obtained in depths of about 13 m, 1½ cables NE of the head of Molo Dandolo.

Small craft harbour

12.169

1 A small craft harbour with depths of 2·0 to 7·9 m lies between Molo Dandolo and Molo Cappellini. The basin is lined with quays and in the summer pontoons are secured to Molo Capellini to provide additional berths. The harbour can accommodate up to 400 small craft. A moderate sea is raised in the harbour by NW and SW winds.

A boat haven lies at the W end of the S side of Molo Capellini; a rock breakwater extends E from the island protecting the S side.

Porto Paone

12.170

1 The round basin with a high rocky shore lies on the SW side of the islet. A rock divides the entrance which shoals rapidly to about 5 m at the entrance and less within it. Entry is prohibited.

Anchorages and harbours

Chart 908

Cala di Sant' Antonio

12.171

1 Cala di Sant'Antonio (40°45′·4N, 14°01′·4E). Anchorage can be obtained in depths of about 10 m, sand, N of Punta di Pizzaco. The measured distance beacon bearing 180° is a useful guide to the anchorage.

Cala di Corricella

12.172

1 Cala di Corricella (40°45′·7N, 14°01′·9E). Anchorage can be obtained in depths of 5 to 10 m within the bay which is often used, during strong N winds, by vessels unable to enter Porto di Procida (12.138). A mooring buoy for small craft lies ¾ cable NW of Punta dei Monaci (40°45′·6N, 14°02′·0E).

Marina di Alimura anchorage

12.173

1 Marina di Alimura (40°39′·1N, 14°24′·4E) backs the beach 2½ cables SSE of Punta Gradelle. With good local knowledge anchorage can be obtained in depths 9 to 15 m off the village.

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Marina Piccola di Sorrento

12.174

1 **General information** Marina Piccola di Sorrento (40°37′·8N, 14°22′·6E) is a small ferry and yacht harbour fronting the resort town of Sorrento. The harbour is protected from the NW by an outer mole extending NE. A light (green metal column on round pedestal, 5 m in height) is exhibited from the head. Work to extend the mole has been suspended (2003) and a light-buoy (starboard hand) is moored 150 m E of the head. A short inner mole extends from the shore SE of the outer mole head. Navigation between the light-buoy and the inner mole is prohibited. The entrance faces ENE and has depths of 20 m.

2 **Anchorage** can be obtained in depths of 40 m, good holding ground, W of the Outer Mole. Mariners should note the area, shown on the chart, containing outfall pipelines W and E of the harbour

Directions. Strong NE winds make the harbour entrance difficult or dangerous. Strong winds between S and NW send in a heavy swell making the berths uncomfortable, possibly untenable.

3 **Berths**. Much of the harbour basin is lined with quays. Vessels of 3 to 7 m draught and up to 40 m length can berth on the outer mole. there are 250 small craft berths for vessels of 0·2 to 2·0 m draught.

Facilities. there is a hospital at Sorrento. Limited small craft facilities but includes small repairs.

Supplies: water, limited amounts; provisions, limited amounts.

Marina di Cassano anchorage

12.175

1 Marina di Cassano (40°38′·4N, 14°24′·1E). With local knowledge anchorage for small vessels can be obtained in depths of about 15 m, 1 cable N of the Outer Mole. Sorrento Breakwater Head Light (12.174) bearing 242°, just open NW of Punta San Francesco, is a useful guide to the anchorage.

2 **Development**. Construction of new harbour breakwaters is underway (2004); navigation, anchoring, swimming and fishing are prohibited within an area enclosing the works close S of the anchorage.

Chart 916, plan of Approaches to Castellammare di Stabia and Torre Annunziate

Vico Equenese

12.176

1 Vico Equenese (40°40′·1N, 14°25′·7E). With local knowledge anchorage for small vessels can be obtained in depths of 5 to 10 m, 1½ cables NE of Scoglio Santa Margherita. Larger vessels can obtain temporary anchorage in depths of 12 to 15 m, sand moderate holding ground, 2¼ cables NNE of the rock. The town of Vico Equenese has several belfries. A pink castle with a wall supported by two rows of arches fronts the town.

Torre del Greco

Chart 914, 916, plan of Torre del Greco

General information

12.177

1 **Position and function**. Torre del Greco (40°47′·0N, 14°21′·7E) is a small port on the E side of Rada di Napoli primarily handling cereals and flour. The port provides seasonal facilities for small craft.

2 **Topography**. The coast NW the port is backed by near continuous residential development standing amongst vegetation. Scoglio di Scalo, an above water rock surrounded by smaller rocks, lies close inshore 6 cables NW of the harbour entrance. To the SE of the port the coast is rocky. A marine farm lies 5 cables W of the harbour marked by light-buoys and buoys (special) and is shown on Chart 914. Areas of foul ground, shown is on the chart, lie close W of the outer mole and within the harbour basin, close inside the entrance.

Approach and entry. The port is approached from the SW through Rada di Napoli and entered E of Outer Mole Head.

Port Authority. Ufficio Locale Marittimo, Torre del Greco.

Limiting conditions

12.178

1 **Controlling depth.** The entrance has a least depth of 6·4 m.

Deepest and longest berth. Quay on the E side of the harbour, length 110 m, alongside depth 4·1 m. However the harbour is subject to silting and mariners should confirm available depth with the Harbour Master.

Maximum size of vessel handled. Maximum draught 4·9 m.

2 **Local weather and sea state**. The entrance becomes dangerous in strong SE, SSE and SSW winds. In the summer NE winds prevail before midday. During the afternoon light offshore breezes develop. In autumn and winter winds with a S component are most frequent. Gales from this direction are accompanied by a high sea state, although heavy weather is generally short lived.

Arrival information

12.179

1 **Port operations**. Mon-Fri 0700–1900 local time.

Port radio. There is a port radio station, see the relevant *Admiralty List of Radio Signals* for details.

Notice of ETA. 24 and 12 hours in advance.

Pilotage available by request.

Tugs available from Napoli.

Harbour

12.180

1 **General layout**. The harbour is protected from the W by a slightly curved Outer Mole which extends SSE, parallel to the coast; a light is exhibited from its head. A short breakwater extending NE from the head of the mole forms the W side of the harbour entrance. A short breakwater extends WSW from the shore forming the E side of the entrance; a light is exhibited from its head (green mast, 6 m in height). The inner face of the mole is quayed but depths are irregular. A quay extending N from the short breakwater on the E side of the harbour provides the main commercial berth; the inner end of the breakwater is also quayed but depths are irregular here too. Several small shipyards occupy the N shore of the basin. Three mooring buoys are laid in the middle of the basin.

2 **Development**. Work to lengthen and improve the outer and inner moles began in 2001.

Landmarks:

A mill chimney (40°47′·2N, 14°21′·6E) (12.149).

Torre Bassano (40°46′·4N, 14°23′·0E) (12.149).

Directions

12.181

1 Entry is only permitted during daylight and is straightforward in good conditions. The spur breakwater extending NE from the head of the Outer Mole constricts the entrance and mariners should navigate to remain at least 70 m from the Outer Mole Head Light (12.180). The

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chart is sufficient guide to enter the harbour. In strong SE winds entry or departure is dangerous and will not be permitted.

Berths

12.182

1 A vessel of moderate size can anchor close within the entrance and secure stern-first to the mooring buoys within the basin. The holding ground in the outer harbour is sand, generally good. However the seabed of the inner harbour is a thinner layer of sand over volcanic rock and generally poor holding ground. Mariners wanting to berth as described above must give sufficient notice to the Harbour Master to enable small craft to be cleared from the area.

Port services

12.183

1 **Repairs**. Small repairs can be undertaken. There are several small shipyards at the head of the harbour capable of repairs to small craft. The largest slipway has a capacity of 500 tons.

Other facilities. There is a hospital in the town.

Supplies: fuel by lighter from Napoli; water; provisions.

Small craft

12.184

1 **General information**. During the summer pontoons extending into the main basin are secured to the inner face of the Outer Mole.

Berths. The harbour provides up to 500 small craft berths in depths of 3 to 8 m. Vessels up to 15 m in length are accepted.

Facilities. Good small craft facilities including repair.

Torre Annunziata

Chart 916, plan of Torre Annunziata

General information

12.185

1 **Position and function**. Torre Annunziata (40°45′N, 14°27′E) is an important commercial and industrial centre. The main industries within the town are the manufacture of foodstuffs and pharmaceutical products. The port is used primarily for unloading cereals.

2 **Topography**. Torre Annunziata lies in the N part of Rada di Castellammare di Stabia. The bay extends from Torre Scassata (40°45′·2N, 14°24′·9E) (12.149) to Capo d' Orlando 4½ miles SSE. Much of the shore of this part of the coast is rocky, behind it stand the towns of Torre Annunziata and Castellammare di Stabia. The ruins of Pompeii, destroyed by Monte Vesuvio in AD 79, lie 1½ miles E of the harbour.

3 **Approach and entry.** Torre Annunziata is approached from the S through Rada di Castellammare di Stabia and entered NE of Molo Ponente Head.

Port Authority. Commondante del Porto, Ufficio Locale Marittimo, 1–80058 Torre Annunziata.

Limiting conditions

12.186

1 **Controlling depth**. The entrance has depths 7·1 to 10·0 m; a shoal depth of 4·9 m, shown on the chart, lies off the knuckle of Molo Ponente.

Deepest and longest berth. Molo di Levante length 240 m, alongside depth 5·9 to 8·9 m.

2 **Maximum size of vessel handled**.

Berth	*Maximum draught accepted*
Approach channel and main basin	10·0 m
Molo di Levante	9·0 m
Calata Crocelle	6·8 m
Molo di Ponente	4·8 m
Darsena Pescatori	2·1 m

3 **Local weather and sea state**. With a strong SSE or SW wind Molo di Levante is subject to a heavy swell. In SW gales waves may break over Molo di Ponente. With a strong NW wind berthing or unberthing becomes dangerous. The harbour waters are sometimes noticeably disturbed about two hours before the onset of strong SE winds.

Arrival information

12.187

1 **Port operations**. Mon-Fri 0700–1900.

Port radio. There is a port radio station see the relevant *Admiralty List of radio Signals* for details.

Notice of ETA. 24 and 12 hours in advance.

Outer anchorages. Anchor berths are available W of the harbour. Area Alfa is reserved for vessels carrying cereals, Area Bravo for non-dangerous mixed cargo and Area Charlie for flammable or combustible liquids, noxious liquid substances or dangerous products:

Area	*Berth*	*Position relative to Molo di Ponente Light*
Alfa	FA1	016° 9 cables
	FA2	038° 1 mile
Bravo	FB1	065° 9½ cables
	FB2	084° 1 mile
	FB3	089° 8 cables
Charlie	FC1	021° 4½ cables
	FC2	049° 7 cables
	FC3	076° 5 cables

Pilotage and tugs. Pilotage is compulsory for all vessels of 500 grt or greater. The pilot boards 1 mile S of the Outer Mole Head. Tugs available from Napoli.

2 **Traffic regulations**. Entry, departure, and movements within the harbour are only permitted during the day. Generally any movement must have commenced thirty minutes before sunset; exceptions to this regulation are made for vessels routinely operating from the port, vessels of 80 m length or less and any vessel proceeding for reasons of navigational safety or safety of life at sea.

3 Entry and departure from the port must be through lanes established E of the anchorage areas and shown on the chart.

Prohibited area. A prohibited area, containing shellfish beds, lies close E of the outer mole. The area is marked by light-buoys and shown on the chart.

Harbour

12.188

1 **General layout**. The harbour is protected from the W by Molo di Ponente which exhibits a light from its head (red metal column on pedestal, 6 m in height). Molo di Levante extends SW from the NE side of the harbour. The harbour entrance lies between the head of Molo di Levante and a section of Molo di Ponente, 3 cables from its head.

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The harbour basin is faced with quays. Darsena Pescatori occupies the N corner of the main basin. A dolphin berth lies on the outer arm of Molo di Ponente.

2 **Current**. A NW or W current sets along this part of the coast and normally has a maximum rate of 1½ kn. A strong E wind will increase the rate appreciably. Sea breezes set up an E current which causes the coastal current to set towards Castellammare di Stabia at a rate of about 1 kn. Strong W or SW winds will increase the rate.

3 **Local weather**. Cloud forming over Gragano, close E of Castellammare di Stabia, and cloud covering the summit of Monte Faito (40°40′·2N, 14°29′·3E) indicate a strong *Scirocco* (SE wind) is imminent. Cloud forming over Isola d'Ischia (40°43′N, 13°54′E) indicate the wind will veer WNW. The *Maestrale* (NW wind) generally blows at night; dropping by morning.

4 **Landmarks**:

Chiesa del Carmine (grey cupola) (40°45′·3N, 14°26′·9E).

Chiesa della Annunziata (small grey dome) (40°45′·2N, 14°27′·0E).

Silos (40°45′·0N, 14°27′·0E).

Directions

12.189

1 The chart is sufficient guide to approach and enter the port. A bank, with depths of less than 5 m over, it extends S from the head of Molo di Levante. A buoyant light-beacon (starboard-hand, radar reflector) marks the SW extremity of the bank.

Berthing at Molo di Levante is best achieved by using an anchor and, because of the poor holding ground, plenty of cable. If berthing stern-to the quay two anchors well apart should be used; the stern should be secured at least 20 m clear of the quay.

Berths

12.190

1 **Anchor berths**. Larger vessels can discharge at anchor in the roads, lighters are available from Napoli, see 12.187 Outer anchorages.

Alongside berths:

Molo di Ponente dolphin berth is used for tankers, the berth is connected by pipeline to facilities on the NE side of the harbour.

Molo di Levante handles coal and cereals.

Calata Crocelle is used for general cargo and cereals.

Port services

12.191

1 **Repairs**. Small repairs can be undertaken.

Other facilities. There is a large hospital in the town.

Supplies: fuel by lighter from Napoli; water; provisions.

Small craft

12.192

1 **General information.** Pontoons extending from Molo Ponente, N of the elbow, into the main basin provide a number of small craft berths. The harbour has a total of 300 small craft berths in depths of 2·5 m to 5·0 m. Access is limited to vessels up to 10 m in length.

Castellammare di Stabia

Chart 916 plan of Approaches to Castellammare di Stabia and Torre Annunziata and plan of Castellammare

General information

12.193

1 **Position and function**. Castellammare di Stabia (40°41′·8N, 14°28′·6E) is an important commercial and industrial centre. The principal industries are food processing, wood products and engineering, including ship building and repair. The port handles cereals, timber, iron, coal, foodstuffs, wine, fruit and cement.

2 **Topography**. The port lies at the end of a sandy beach extending S from Torre Annunziata (40°45′N, 14°27′E), backed by a wide and fertile plain scattered with farmhouses. A succession of factories extend N from the port along the coast. To the S of the town the land is elevated and Monte Faito overlooks the port.

3 **Approach and entry.** Castellammare di Stabia is approached from the NW through Rada di Castellammare and entered E of Molo Foraneo Head.

Port Authority. Capitanerie di Porto, Piaz Incrociatore San Giorgio N4, Castellammare di Stabia, NA.

Limiting conditions

12.194

1 **Controlling depth**. The entrance has depths of 7·0 to 14·1 m and the greatest depths are found in the W part of the harbour. The port is subject to silting.

Deepest and longest berth. Molo Foraneo; length 130 depth alongside 15·8 m. Banchina Allistimento; length 340 m depth alongside 6·8 to 10·0 m.

2 **Abnormal levels**. A period of S winds will raise the water level within the port by up to 0·4 m; a period of N winds will reduce the water level by about the same amount.

Maximum size of vessel handled. Length 150 m, maximum draught accepted is 8·2 m.

Local weather and sea state. Strong W and SW winds cause a heavy sea and swell. With SE winds strong squalls descend from the mountains and are dangerous for vessels berthed on Molo Foraneo and Banchina Allestimento.

3 Monte Vesuvio showing clearly indicates E winds; if the summit is cloud covered winds from the S should be expected. When the Sorrentine coast appears very clear towards sunset SE winds are imminent. Low stratus cloud over Capri indicates SSW winds.

Arrival information

12.195

1 **Port operations**. Mon-Fri 0700–1900 local time.

Port radio. There is a port radio station, see the relevant *Admiralty List of Radio Signals* for details.

Outer anchorages. The roadstead is enclosed by an arc radius 2 miles centred on Molo Foraneo Head. Within it are two anchorage areas; Alfa, reserved for vessels entering harbour, and Bravo for vessels leaving harbour. The following anchor berths are established within the areas:

Area/berth	*Position relative to Molo Foraneo Light*	*Maximum overall length (m) accepted*
Alfa/FA1	280° 1 mile	150–180
Alfa/FA2	268° 5 cables	100–150
Alfa/FA3	261° 9 cables	150–180
Bravo/FB1	335° ½ cable	180–220

Pilotage. The Compulsory Pilotage Area is enclosed by the circumference of a circle radius 1 mile centred on Molo

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Foraneo Head Light (40°41′·9N, 14°28′·4E). Pilotage is compulsory for all vessels of 500 grt or greater. The pilot boards 2 miles NW of Molo Foraneo Head Light. See the relevant *Admiralty List of Radio Signals* for details of procedure.

Tugs can be provided from Napoli.

2 **Traffic regulations**. All vessels arriving in the roadstead must report to the Harbour Master using VHF Ch 16.

Vessels of less than 500 grt are to approach and leave the port using the local traffic lane which lies between Molo Foraneo and anchorage area Alfa.

Harbour

12.196

1 **General layout**. The harbour is protected from the W by Molo Foraneo which extends 2½ cables NNE from the coast at the W end of the town. A light (green metal column, 5 m in height) is exhibited from the head of the mole. Molo di Sottoflutto extends NW from the coast, SE of the head of Molo Foraneo, forming the NE side of the entrance; a light is exhibited from the head of Molo Sottoflutto (red mast, 6 m in height). The basin is lined with quays and three piers or jetties extend into it from the shores.

2 **Shellfish beds**. An area of shellfish beds lies 5 cables SW of Molo Foraneo Head; the area is shown on the chart and marked by light-buoys (special).

Current. Weak currents are induced by prevailing winds.

Landmarks:

Monte Faito (40°40′·2N, 14°29′·3E) (12.149).

Monte Sant' Angelo a Tre Pizzi (40°38′·9N, 14°30′·4E) (12.149).

Monte Pendolo (40°41′·1N, 14°30′·7E).

Castello di Revigliano (40°43′·7N, 14°27′·8E) (12.149).

3 Castello Angioino (40°41′·3N, 14°28′·5E).

Chiesa di Santa Maria di Pozzano (belfry) (40°41′·4N, 14°27′·6E) (12.149).

4 **Major light**:

Castellammare Main Light (40°41′·3N, 14°28′·2E) (12.149).

Directions

12.197

1 The charts is sufficient guide to approach and enter the port.

Berths

12.198

1 **Molo Foraneo**. The outer part is used for vessels laid up and repair work involving naked flames. The remainder of the quay is used for fitting out.

Banchina Allestimento and Pontile Allestimento. Used for fitting out and repairs, and cargo for the shipyard.

Banchina Novanta. General cargo for the shipyard.

Banchina 2000. General cargo.

Banchina Fontana. Fishing vessels and small craft.

2 **Banchina Magazzini.** Fishing vessels and small craft, vessels laid up.

Pontile Silos. Currently (2003) unusable except in emergency.

Banchina Marinella. General cargo, passenger and vehicle ferries.

Molo di Sottoflutto. Small craft and fishing vessels.

Port services

12.199

Repairs. Major repairs can be undertaken.

Other facilities. There is a hospital in the town.

Supplies: fuel; water; provisions.

Small craft

12.200

1 **General information**. A marina occupies the area between Molo di Sottofluto and Molo Quartuccio, 1¼ cables NE. The harbour accepts vessels up to 30 m in length and provides 400 berths in depths 1·5 to 9·0 m. Comprehensive small craft facilities.

Isola di Capri

Chart 908

General information

12.201

1 **Description**. Isola di Capri (40°33′·0N, 14°13′·3E) is rocky, 3 miles long and lies 2¾ miles WSW of Punta Campanella. Bocca Piccola, separating the island from the mainland, is deep and free from dangers.

West coast. The whole of the W coast from Punta dell' Arcera (Punta di Vetereto), the NW extremity of the island, to Punta Carena (12.150), 1½ miles S, is rugged, and precipitous. Inland the ground is cultivated with vines and olives despite the steep slopes. A light is exhibited from Punta Carena (12.149). The ruins of an old battery stand 2¼ cables S of Punta dell' Arcera. Cala del Rio lies between Punta Cappocchia, 3½ cables S of Punta dell' Arcera, and Punta di Campetiello, surmounted by the ruins of an old battery 3½ cables further S. Punta di Pino, also surmounted by a ruined battery, lies 11 cables S of Punta dell' Arcera. Cala del Limmo lies close S of Punta di Pino.

2 **South and east coasts**. From Punta Carena to Punta Ventroso, 1¼ miles E, the coast is high, steep and rocky. An isolated rock, known locally as Marcellino, lies close off Punta Ventrosa. Grotta Verde and Grotta Rossa are two interconnecting coastal caves, named from the colour of the rock in which they are formed, which lie close W of Punta Ventrosa. A third, but separate cave completes the group; all can be entered by boat.

3 Sirena di Mulo, 6 cables NE of Punta Ventosa, is a distinctive narrow rocky point fronting Marina Piccola, a beach resort. There are numerous white villas on the green slopes in this area. A small natural arch stands on the W side of Sirena di Mulo. To the E of Marina Piccola the ground rises steeply and a villa, converted from a ruined castle, stands ENE of the village. La Certosa is a large and prominent building 2 cables further E. Punta di Tragara, the SE extremity of the island, is a high conical headland; Porticciolo di Tragara, is a rocky, inaccessible cove on the N side of the headland. I Faraglioni, two high conical islets lying close together, are separated from the point by a deep channel, 1 cable wide. The S islet is the higher and larger and resembles Punta di Tragara. The N islet, when seen from the E, presents a large natural arch.

4 A disused signal station stands 3 cables N of Punta di Tragara. The coast NNE to Capo Tiberio is high, irregular and bare, having a wild appearance. Scoglio Monacone, 1½ cables ENE of Punta di Tragara, is dark and rounded. Punta de Monaco is the E extremity of the island. A light (white metal column on pedestal, 5 m in height) is exhibited from Scoglio La Longa di Mezzogiorno, a small rock lying close off Capo Tiberio.

5 **North coast**. From Punta dell' Arcera to Marina Grande, 1½ miles E, the coast decreases in elevation becoming less

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steep and rocky. The W part is steep-to but the E section becomes fringed by rocks and rocky shoals extend a short distance offshore. Torre Damecuta, 1¼ cables ESE of Punta dell' Arcera, is round and crenellated. The famous Grotta Azzurra lies 3¼ cables E of Punta dell' Arcera; the large cavern can be entered by boat. The coastal caves continue E for 7 cables and at the end of this part of the coast are the ruins of Roman baths. The ruins of Roman buildings continue a further 5 cables E to Marina Grande. The only remarkable feature of the coast between Marina Grande and Capo Tiberio is Grotta del Bove Marina, another sea cave 6 cables E of Marina Grande.

Marina Grande
12.202

1 **General information**. Marina Grande (40°33′·5N, 14°14′·6E) lies at the head of a small harbour and is the port of Capri. From offshore Marina Grande appears to be separated from Capri by a green valley of woods and vineyards which is crossed by a funicular railway. Forte San Michele, 3½ cables E of the harbour, does not show well as its low, dark walls are the same colour as the hill on which it stands. Villa Torricelli, close W of the harbour, is a white building with a tower resembling a belfry, it stands above an hotel with a large flat roof supported by pillars.

2 Three submarine cables are landed in the harbour and a fourth 1¾ cables W of it. A submarine water pipeline from the mainland is landed close to the root of Molo di Sottoflutto; anchoring and fishing are prohibited in the area enclosing the cables and pipeline.

3 The harbour is protected from the NW by Molo Principale which extends generally NE from the shore abreast the town. A light (green metal column on pedestal, 5 m in height) is exhibited from the mole head. A conspicuous monument stands close SW of the light. Molo di Sporaflutto protects the NE side of the harbour, extending generally W towards the other mole. A light (red metal pillar on base, 5 m in height) is exhibited from the mole head. The harbour entrance faces NE and has depths of 13·6 to 15·0 m.

4 **Anchorage** can be obtained in depths of about 20 m to the W of Molo Principale. The seabed N of the harbour shelves quickly making anchorage there difficult.

Berths. The W side of the harbour is reserved for commercial vessels. The inner face of Molo Principale provides berths with alongside depths of 3 m to 10 m.

Facilities. There is a hospital in Capri.

Supplies: fuel in small quantities; water, limited amounts: provisions, limited amounts.

5 **Small craft**. The E side of the harbour provides 450 small craft berths in depths of 2 to 8 m. Vessels up to 50 m in length are accepted. Good small craft facilities.

Anchorage
12.203

1 **Sirena di Mulo**. With local knowledge anchorage can be obtained in depths of about 10 m, weed, SW of Sirena di Mulo (40°32′·7N, 14°14′·0E). The anchorage is often used by vessels unable to berth at Marina Grande.

Small craft

Marina della Lobra
12.204

1 **General information**. Marina della Lobra (40°36′·6N, 14°20′·0E) is a small craft harbour, protected by a rubble breakwater, which extends 1 cable NE from the N side of Capo Corbo; Torre San Lorenzo (square, red and white) stands on the headland. The entrance faces NE, it is narrow and becomes dangerous in W or SW winds. Rocks dislodged from the breakwater further encumber the entrance; mariners should navigate through the centre of the channel. Within the harbour a pier extends NW from the shore and a quay extends SW from the root of the breakwater.

2 **Berths**. The harbour provides 200 berths in depths of 2·0 to 2·5 m and accepts vessels up to 14 m in length.

Facilities Good small craft facilities including repairs.

Marina di Puolo
12.205

1 **General information**. Marina di Puolo (40°37′·7N, 14°20′·7E) is a boat haven protected on the NW side by a breakwater extending NE from the coast. There are depths of 0·5 to 3·0 m within the breakwater.

Marina Grande
12.206

1 **General information**. Marina Grande (40°37′·7N, 14°22′·0E) is a fishing haven to the W of Sorrento. The harbour is protected from the NW by a breakwater extending ENE from the shore; a T-shaped mole protects the E side. The S shore is partly quayed and partly beach. The basin has depths of less than 2·9 m

Marina di Cassano
12.207

1 **General information**. Marina di Cassano (40°38′·4N, 14°24′·1E) is the boat harbour for Piano di Sorrento, the surrounding group of villages. The harbour consists of an outer mole extending N from the coast which curves NE towards the head; a light is exhibited from it. To the E a small rubble breakwater extends from the coast and further E are three rubble breakwaters used for protection of the shore.

2 **Berths**. The outer mole is quayed for 200 m but the inner 50 m section is silted and unusable. Generally there are depths of 2·5 m alongside. There is also a steel pier, used to berth hydrofoil ferries, with an alongside depth of 5 m. The harbour accepts vessels up to 30 m in length.

3 **Facilities**. Comprehensive small craft facilities including repairs.

Development. Construction of new breakwaters was underway (2004); a restricted area encloses the works, navigation, anchoring, swimming and fishing are prohibited within it

Marina di Meta
12.208

1 **General information**. Marina di Meta (40°38′·9N, 14°24′·4E) is a boat haven at the N end of the village which lies 5 cables SSE of Punta Gradelle (40°39′·4N, 14°24′·3E). This part of the coast is subject to landslip and it is prohibited to navigate within 150 m of the shore between Punta Gradelle and the beach at Alimuri (40°39′·1N, 14°24′·5E). A mole, which exhibits a light from its N end, provides shelter from the W. However it is almost completely silted up and currently (2002) unusable.

Marina di Equa
12.209

1 **General information**. Marina di Equa (40°39′·7N, 14°25′·1E) is a small craft haven, fronting the village, which stands close W of the mouth of Rio d'Arco and can be identified by a square tower attached to a red building. The basin is protected by moles extending N and NW from

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the shore; lights are exhibited from the heads. The entrance faces N and has depths of 3·6 to 8·0 m. There are depths of 0·5 to 4·0 m in the basin which is faced with quays on the S side. There is a speed limit of 3 kn within the harbour.

Marina di Vico Equenese

12.210

1 **General information**. Marina di Vico Equenese (40°40′·0N, 14°25′·7E) is sandy cove, on the NE side of Vico Equenese, with a few houses at its head. A rubble breakwater extends NE from the W side of the cove affording some protection from the NW; its head should be given a berth of 50 m. A stone pier projects 20 m from the head of the cove. The entrance faces NE and has depths of 5 m. The basin has depths of about 2 m. There is a speed limit of 3 kn within the harbour.

Other names

12.211

1 Annunziata, Castello dell' (40°36′·3N, 14°20′·2E).
Averno, Lago (40°50′·4N, 14°04′·6E).
Bambinella (40°50′·0N, 14°05′·8E).
Baccoli, Punta Cala di (40°35′·3N, 14°19′·3E).
Cavallo, Punta del (40°47′·7N, 14°10′·9E).
Gaiola, Isoletta la (40°47′·6N, 14°11′·3E).
Lucrino, Lago (40°49′·8N, 14°04′·8E).
Marciano (40°35′·8N, 14°19′·8E).
Marciano, Insenatura di (40°35′·8N, 14°19′·7E).
Massa Lubrense (40°36′·7N, 14°20′·7E).
Mitigliano, Cala di (40°35′·2N, 14°19′·6E).
Pila della Cala, Scogli (40°35′·2N, 14°19′·5E).
San Lorenzo, Punta (40°35′·9N, 14°19′·6E).
Santa Maria del Lauro, Chiesa di (40°38′·7N, 14°25′·1E).
Sbrussa, Punta (40°33′·7N, 14°13′·0E).
Scutolo, Punta (40°39′·7N, 14°24′·6E).
Tiberia, Palazzo di (40°33′·6N, 14°15′·8E).
Unghia Marina, Scoglio (40°32′·8N, 14°14′·7E).

PORTO DI NAPOLI

General information

Charts 914, 915

Position

12.212

1 Porto di Napoli (40°51′N, 14°16′E) lies at the head of Golfo di Napoli, on Italy's Tyrrhenian Sea coast, fronting the city of Napoli (Naples).

Function

12.213

1 Napoli is Italy's third largest city and capital of the Campagnia region. It is an important centre of industry commerce and tourism. Porto di Napoli is Italy's second port and one of the major industrial ports of the Mediterranean handling bulk oil and raw materials, foodstuffs, manufactured goods, cars, chemicals, paper, textiles, fruit and vegetables, oil products, containers and passengers. The port also has a naval dockyard and an important shipbuilding and repair industry.

Topography

12.214

1 The city is the largest conurbation in S Italy and stands at the edge of a fertile plain extending to the foot of Monte Vesuvio. Ranges of volcanic mountains stand inland to the N of the city. To the E and SE high volcanic peaks stand close to the coast. The gulf is steep-to providing a deep water approach to the port.

To the E of the port the industrial area is conspicuous by day or night containing numerous chimneys and flares from a refinery.

Approach and entry

12.215

1 The port is approached from Rada di Napoli, which lies N of 40°48′N at the head of Golfo di Napoli, through the approach lanes Canale di Ponente (W channel) (40°48′·4N, 14°17′·4E) and Canale di Levante (E Channel) (40°48′·4N, 14°18′·3E) which lead respectively to Bocca Principale and Bocca di Levante.

Traffic

12.216

1 In 2002 the port was used by 665 ships with a total of 41 207 461 dwt about 14 700 000 tonnes of cargo, 430 079 teu and 8 000 000 passengers were handled.

Port Authority

12.217

1 Consorzio Autonomo del Porto, Piazzale Pisacane 80133 Napoli, NA Italy. The Port Authority also has responsibility for Baia, Pozzuoli, Bagnoli, Portici, Torre del Greco, Torre Annuziata and Castellammare.

Limiting conditions

Controlling depth

12.218

1 Canale di Ponente has a least depth of 34 m. Canale di Levante has a least depth of 15·4 m. Some silting in the port and its approaches occurs and Canale di Levante is most affected. Although a dredged depth of 15 m is maintained within the E channel mariners are advised to confirm available depths with the Harbour Master.

Deepest and longest berth

12.219

1 **Tanker**: Molo Progresso, length 320 m, draught 13·2 m.
Other: Pontile Bausan East, length 270 m, draught 11·0 m.

Abnormal water levels

12.220

1 Variations to water level in the port are created by the wind; a strong S wind can increase the level by 0·3 m, a strong N wind reduce it by 0·3 m. A change to water level unaccompanied by an influencing wind provides an indication that strong N or S winds are imminent. See also 12.222 Currents.

Maximum size of vessel handled

12.221

1 The port has handled tankers with a draught of 13·7 m.

Local weather and sea state

12.222

1 **Winds**. The prevailing wind is SW (*Libeccio*); when strong a heavy swell can be sent into the port. Between December and January winds with a N component are frequent. Generally a S wind brings rain and if strong will generate a sea that reflects off the outer mole making the entrance difficult or dangerous. A S wind is often accompanied by fog or reduced visibility; visibility of about 1 mile is common. See also Fog below.

2 **Currents**. Winds quickly induce currents within Porto di Napoli. A period of SE of SW winds will cause the

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Corrente di Ponente (W current) to develop, see 12.116. Similarly offshore winds induce Corrente di Levante (E current). Both achieve a maximum rate of 2 kn. The W current will also raise the water level within the port and and the E current reduce it.

Within the E part of the port a slight W current is present at all times and should be considered when manoeuvring.

3 **Fog**. During the summer fog often develops during the early morning and visibility may be reduced to 50 m or less.

Local weather. If the coast of Peninsola Sorrentina (12.144) is clear SE winds are imminent. Low stratus cloud over Isola di Capri, known locally as Secce or Seppie di Capri indicates winds from SW to SSE. Cloud over Monte Vesuvio indicates S wind with rain is imminent.

Arrival information

Port operations

12.223

1 The port operates 24 hours a day.

Port radio

12.224

1 There is a port radio station see the relevant *Admiralty List of Radio Signals*.

Notice of ETA

12.225

1 Notice of ETA should be sent 48 and 12 hours in advance.

Outer anchorages

12.226

1 **Prohibited anchorage areas**. Anchoring and fishing are prohibited in an area containing submarine cables extending from Porticciolo di Posillipo (40°49′·4N, 14°13′·1E). Anchoring and dredging are prohibited within areas containing outfall pipelines extending from the coast: close SW of Porticciolo Sannazzaro and at the head of Rada di Mergellina (40°49′·9N, 14°13′·9E), close SE of San Giovanni a Teduccio (40°49′·7N, 14°18′·8), and off Portici (40°48′·3N, 14°20′·4E). All are shown on the charts.

Anchoring within Avamporto di Levante is prohibited.

2 **Anchorage areas** have been established within Rada di Napoli, the areas are shown on the charts.

Berth	*Remarks*
X1 to X4	Nuclear powered naval vessels only.
A1 to A4	All vessels not carrying dangerous cargo.
B1 to B4	Any vessel carrying dangerous cargo including noxious or dangerous substances in gas or liquefied form. Anchorage in B3 or B4 by vessels carrying dangerous cargo is prohibited when a nuclear powered vessel occupies X4.
C2 to C4	Tankers including those which have recently discharged inflammable liquids or gasses or other noxious substances.
D1	All vessels not carrying dangerous cargo.
D2	Tankers laden with or having recently discharged any inflammable liquids and gasses or other noxious liquid substances.
E	Small craft and yachts.

3 N.B. If no anchorage available in Areas A or C vessels will be directed to use Areas D1 and D2.

Pilotage and tugs

12.227

1 **Pilotage** is compulsory for all vessels of 500 grt or greater and available 24 hours a day. The pilot embarks/disembarks:

Canale di Ponente, 1 mile S of Bocca Principale.

Canale di Levante, 1 mile S of Bocca di Levante.

See the relevant *Admiralty List of Radio Signals* for details of procedure.

Tugs are available and obligatory for:

Merchant vessels exceeding 1 500 grt berthing or unberthing at Molo Angioino.

Merchant vessels exceeding 5 000 grt berthing or unberthing at Calata del Piliero.

Tankers exceeding 5 000 grt berthing or unberthing at the terminals in the E part of the port except for unladen and de-gassed vessels.

Local knowledge

12.228

1 Entry should not be attempted, by vessels not obliged to take a pilot, without local knowledge.

Traffic regulations

12.229

1 **Traffic Separation Scheme**. A TSS has been established between the S part of the roadstead and Bocca Principale. A traffic separation line extends approximately 1½ miles SSE from the entrance; vessels entering harbour must remain E of it. The scheme is shown on the charts.

A channel between the S part of the roadstead and Bocca Levante has been established for vessels entering or leaving Porto di Napoli by the E entrance. The N part of the channel is marked by buoyant light-beacons (lateral); the channel is shown on the charts.

2 The majority of vessels must enter or leave the port through the W channel and entrance. However vessels of less than 12 m draught proceeding to the E part of the port are permitted to use either entrance. Vessels of draught greater than 12 m must enter the port through Bocca di Levante.

3 All vessels loaded with or that have recently carried inflammable or combustible liquids, gas or liquefied gas, noxious or dangerous substances or products in liquid form, proceeding to Darseni Petroli, must enter or leave the port through the E channel and entrance. Container vessels greater than 200 m in length or draught greater than 10 m proceeding to Molo Bausan are permitted to use the E entrance.

Vessels leaving harbour have right of way.

There is a speed limit of 3 kn throughout the harbour.

Harbour

General layout

12.230

1 The harbour is protected from the S by Molo San Vincenzo, which extends ESE from the W shore of Rada di Napoli, and a detached breakwater, Diga Foranea Duca d' Aosta, which continues further ESE towards the E shore. Diga Duca degli Abruzzi, extends SE from the head of Molo San Vincenzo, protecting the S part of Bocca Principale. Antemurale Thaon de Revel extends SSW, from the NW end of Diga Foranea Duca, forming the N side of the entrance.

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The shore N of the breakwaters is lined with quays and basins fronting the city of Napoli. The port is divided into four main areas. Close within W entrance lies Admiral Francesco Caracciolo Avamporto. The basins in the W part of the port form Porto Vecchio and similarly the E basins form Porto Nuovo. Avamporto di Levante connects Nuovo Porto with the E entrance.

Development

12.231

1 There is a comprehensive programme of development work throughout the port. Current (2003) projects are mainly associated with improvements to container, general cargo and Ro-Ro facilities.

Principal marks

12.232

1 **Landmarks**:

Convento dei Camaldoli (40°51′·5N, 14°11′·6E) (12.149).

Castel Sant' Elmo (40°50′·7N, 14°14′·4E) (12.149).

Museo di San Martino (40°50′·6N, 14°14′·5E) (12.149).

Castel dell'Ovo (40°49′·7N, 14°14′·9E) (12.149).

Jolly Hotel (high rise building, light blue coloured) (40°50′·6N, 14°15′·2E). Two other high-rise buildings stand adjacent to the hotel.

Chiesa di San Giovanni a Teduccio spire (white pyramidal) (40°50′·0N, 14°18′·6E).

Observatory (dome) (40°51′·9N, 14°15′·4E).

Fonderia di Pietrarsa (an old foundry) (40°49′·4N, 14°19′·2E).

Palazzo Reale (large, faded pink with small clock tower) (40°48′·7N, 14°20′·6E).

Chiesa Santa Maria di Pugliano belfry (red, square, surmounted by cross) (40°48′·8N, 14°21′·2E). The cross is floodlit at night.

Camaldoli della Torre (40°46′·9N, 14°24′·4E) (12.149).

2 **Major light**:

Molo San Vincenzo Head (red round tower, 24 m in height) (40°49′·9N, 14°16′·3E).

Directions for entering harbour

(continued from 12.151)

Approaches

12.233

1 Porto di Napoli has two entrances:

Bocca Principale (40°50′·0N, 14°16′·6E).

Bocca di Levante (40°49′·8N, 14°18′·0E).

Both are approached through designated channels, shown on the chart, which are part of the traffic management scheme for the port leading through Rada di Napoli.

Entrance channels

12.234

1 **Bocca Principale**. From the S boundary of Rada di Napoli (40°48′·0N) the track leads N to the S end of the inbound lane of the TSS (40°48′·5N, 14°17′·3E). The track then leads NNW passing, with positions relative to Diga Duca degli Abruzzi Head (40°49′·8N, 14°16′·6E):

E of Capo di Posillipo (3½ miles WSW) (12.149), thence:

E of Porticciolo Manzi (3½ miles WSW) (12.247), thence:

E of Capo di Posillipo memorial (3½ miles WSW) (12.149), thence:

ESE of Palazzo di Donn' Anna (3 miles WSW). The 17th-century building stands on a small headland and appears to project into the sea. Thence:

2 ESE of Porticciolo Posillipo (2½ miles WSW) (12.248), thence:

ESE of Porticciolo di Sannazzaro (2½ miles W) (12.249), thence:

ESE of Via Caricciolo (2 miles W), a seafront esplanade at the head of Rada di Mergellina. Thence:

E of Castel dell'Ovo (1¼ miles W) (12.232), standing at the E end of Via Frencesco Caricciolo. Santa Lucia small craft harbour (12.250) lies on the E side of the castle. Thence:

3 To a position E of Duca degli Abruzzi Head. The track then leads ENE through Bocca di Ponente passing:

NNE of Duca degli Abruzzi Head Light (grey tower), thence;

S of Antemurale Thaon de Revel Head (2 cables N), from which a light is exhibited (green round tower, 12 m in height), thence:

N of Duca degli Abruzzi Elbow Light (½ cable NW) (platform on white column and pedestal, 13 m in height). Thence:

NE of Molo San Vincenzo Spur Light (2½ cables NW) (red metal framework tower, white bands).

4 **Bocca di Levante**. From the S boundary of Rada di Napoli (40°48′·0N) the track leads N to the S end of the E entrance channel (48°48′·4N, 14°18′·3E). The track continues N passing, with positions relative to Diga Foranea Duca d' Aosta E Head (40°49′·6N, 14°18′·0N):

W of a buoy (special) (2¼ miles SE) marking the seaward end of a submarine outfall, thence:

W of Porto di Portici (2 miles ESE) (12.241). Villa Bruno (12.244) stands close E of the harbour entrance. Thence:

5 W of Palazzo Reale (2 miles ESE) (12.232), thence:

W of a light-buoy (special) (7½ cables SSE), marking the seaward end of an outfall pipeline, thence:

To a position between the S buoyant light-beacons (lateral) (3½ cables SE and 2 cables SSE) marking the dredged channel leading to Bocca di Levante. The track then leads NNE passing:

WNW of Diga Foranea Duca d' Aosta E Head, from which a light is exhibited (red column on pedestal, 5 m in height).

6 The track then leads NW passing:

SSW of Darsena Progresso E Mole (3½ cables NNW), a light is exhibited from its SE corner (green pillar on pedestal, 5 m in height).

Port areas and berths

Port areas

12.235

1 The basins and berths of the port are grouped as follows:

Porto Vecchio: Bacino Angioino, Bacino del Piliero, Darsena Bacini and Darsena Armando Diaz.

Porto Nuovo: Darsena Vittorio Venito, Darsena Granili, Darsena Pollena, Darsena Pollena, Darsena Petroli and Nuova Darsena di Levante.

Anchorages and moorings

12.236

There are no anchorages within the port although anchors can be used to assist with berthing or unberthing manoeuvres, the seabed throughout the port is mud, good

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holding ground; there are numerous mooring buoys, the chart provides sufficient guidance.

Alongside berths

12.237

1 **Molo San Vincenzo**. The Quays on the N side of the mole are reserved for Italian naval vessels.

Bacino Angioino. The W side of the basin provides local passenger ferry terminals and has a Ro-Ro berth. Molo Angioino is the main cruise liner berth. Darsena Ferdinando Acton provides berths for small craft and naval boats.

Bacino del Piliero. The W side of the basin provides general cargo, and Ro-Ro berths. The N part is used for vessels laid up and harbour services craft. Two large floating docks lie in the SE corner.

Darsena Bacini provides access to drydocks and fitting out quays.

2 **Darsena Armando Diaz**. The W side of the basin forms part of the shipyard, the E part handles general cargo and cereals and is also used to berth vessels to be scrapped.

Darsena Vittorio Veneto handles general cargo and Ro-Ro traffic.

Darsena Granili handles bulk minerals and phosphates.

Molo Bausan is a container vessel terminal.

Darsena Pollena provides Ro-Ro and container berths. The SE side handles oil and bitumen.

Darsena Petroli handles crude oil, petroleum products and fuel oil. Molo Progresso handles large tankers.

Port services

Repairs

12.238

1 All types of repairs can be undertaken. The port is equipped with several dry docks, largest; length 335·4 m breadth 40 m, depth on sill 10·3 m.

Other facilities

2 There are the usual facilities of a major port and important city including; compass adjustment, deratting, hospitals and salvage services.

Supplies

12.239

1 Fuel, water and provisions available.

Communications

12.240

1 The nearest airport is Capodichino on the NE side of the city.

Porto di Portici

General information

12.241

1 **Position and function**. Porto di Portici (40°48′·7N, 14°20′·0E) lies close SW of the town which lies in the largely industrial area on the E side of Rada di Napoli. The port is primarily a fishing harbour which accepts small general cargo vessels capable of conducting own loading or discharge and has limited facilities for small craft.

2 **Approach and entry**. The harbour is approached from the the NW through Rada di Napoli and entered between The heads of the outer mole and a short breakwater extending from the shore.

Limiting conditions

12.242

1 **Controlling depth**. The entrance has a least depth of 5·6 m. The harbour is subject to silting and mariners should confirm available depth with local authorities.

Deepest and longest berth. SW quay, length 100 m, depth alongside 5 m.

2 **Local weather and sea state**. The harbour entrance becomes difficult or dangerous in strong SW or WSW winds.

Arrival information

12.243

1 **Port operations**. The port operates Mon-Fri 0700–1900 local time.

Port Radio. See the relevant *Admiralty List of Radio Signals*.

Outer anchorage. Temporary anchorage can be obtained in depths of about 15 m, sand, in the roads off the harbour with the mole head bearing 045°, 1½ cables distant.

Pilotage is compulsory for vessels of 400 grt or greater.

Harbour

12.244

1 **General information**. The harbour is protected from the W by an angled mole; lights are exhibited from its head (green mast, 6 m in height) and NE extremity (white metal framework tower, 14 m in height). A small rubble breakwater forms the NE side of the harbour entrance. The inner face of the mole and S part of the basin are lined with quays.

2 **Landmark**:

Villa Bruno (light-coloured, three storey building) (40°48′·7N, 14°20′·2E). Flights of steps on two semi-circular ramps descending to the sea.

Directions

12.245

1 The chart is sufficient guide to approach and enter the harbour. The mole head should be given a berth of 25 m. In addition to the danger of being set onto the shoals close N of the entrance. Strong SW winds also cause silting at the entrance and within the harbour. The seabed within the harbour is stiff mud over volcanic rock, poor holding ground. Mooring to the quays is not possible. A mooring buoy has been laid in the middle of the basin to assist unberthing.

Port services

12.246

1 **Repairs**. Minor repairs undertaken.

Other facilities. There is a hospital in the town. Oily water disposal; small amounts only.

Supplies: fuel from Napoli; water; provisions.

Small craft. The harbours accepts small craft up to 12 m in length and provides 20 berths.

Small craft

Porticciolo Manzi

12.247

1 **General information**. Porticciolo Manzi (40°48′·3N, 14°12′·4E) is a boat haven on the N side of Capo Posillipo. The harbour is protected from the E by a rubble breakwater; heavy seas can break over it.

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Porticciolo Posillipo

12.248

1 **General information**. Porticciolo Posillipo (40°49′·4N, 14°13′·1E) is a private marina protected from the S by a curved mole. The entrance faces E and has a depth of 2·6 m.

Berths. The harbour provides berths for vessels up to 13 m in length in depths of about 2·5 m.

Facilities. Limited small craft facilities.

Porticciolo di Sannazzaro

12.249

1 **General information**. Porticciolo di Sannazzaro (40°49′·7N, 14°13′·4E) is a private small craft harbour and marina protected from the SE by a breakwater, which exhibits a light (red metal column on pedestal, 5 m in height), and from the NE by a mole which also exhibits a light (green metal column on pedestal, 5 m in height). The entrance faces ENE, is 1 cable wide and has depths of 6·2 to 11·0 m. Vessels up to 30 m in length are accepted.

2 **Berths**. The harbour provides berths in depths of 1 to 10 m at quays on the inner faces of the moles and pontoons extending from the W shore of the harbour.

Facilities. Good small craft facilities including repairs.

Porticciolo di Santa Lucia

12.250

1 **General information**. Porticciolo di Santa Lucia (40°49′·8N, 14°15′·0E) is a small craft harbour, within Rada di Santa Lucia, which lies between Castel dell' Ovo (12.149) and Diga Duca Degli Abruzzi 1¼ miles ENE. The harbour is protected from the W by Castel dell' Ovo and the mole connecting it to the shore; the E side is protected by a breakwater. The harbour entrance lies between the head of the breakwater, from which a light is exhibited (red metal column on base, 5 m in height) and the shore close NW, also marked by a light (green metal column on base, 5 m in height). The entrance faces ENE, is 50 m wide and has depths of 10 m. The harbour accepts vessels up to 26 m in length.

2 Mariners should beware of an area of mussel beds close N of the entrance which contains numerous obstructions and extends up to 1 cable from the shore. The light on the N side of the entrance bearing more than 255° clears the obstruction.

Berths. The harbour provides 200 berths at quays and pontoons in depths of 2 to 8 m. A S wind raises a sea in the harbour.

Facilities. Limited small craft facilities.

Porticciolo di Molosiglio

12.251

1 **General information**. Porticciolo di Molosiglio (40°50′·1N, 14°15′·3E) is a yacht harbour protected from the SE by a mole and from the N by the root of Molo San Vincenzo, a short mole extends SE from the shore to form the N side of the entrance. The entrance is marked by lights; N side (green metal column on pedestal, 6 m in height) S side (red metal column on base, 6 m in height), faces ENE, is ½ cable wide and has depths of 5 to 10 m. Vessels up to 14 m in length are accepted.

2 **Berths**. The harbour provides 150 berths in depths of 2 to 4 m. In strong S winds an uncomfortable sea develops in the harbour.

Facilities. Limited small craft facilities.

Other names

12.252

1 Inglese, Punta dell' (40°45′·2N, 14°24′·6E).
Madonna Bruna, Punta della (40°45′·8N, 14°23′·6E).
Mortelle, Le (40°45′·5N, 14°24′·0E).

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NOTES

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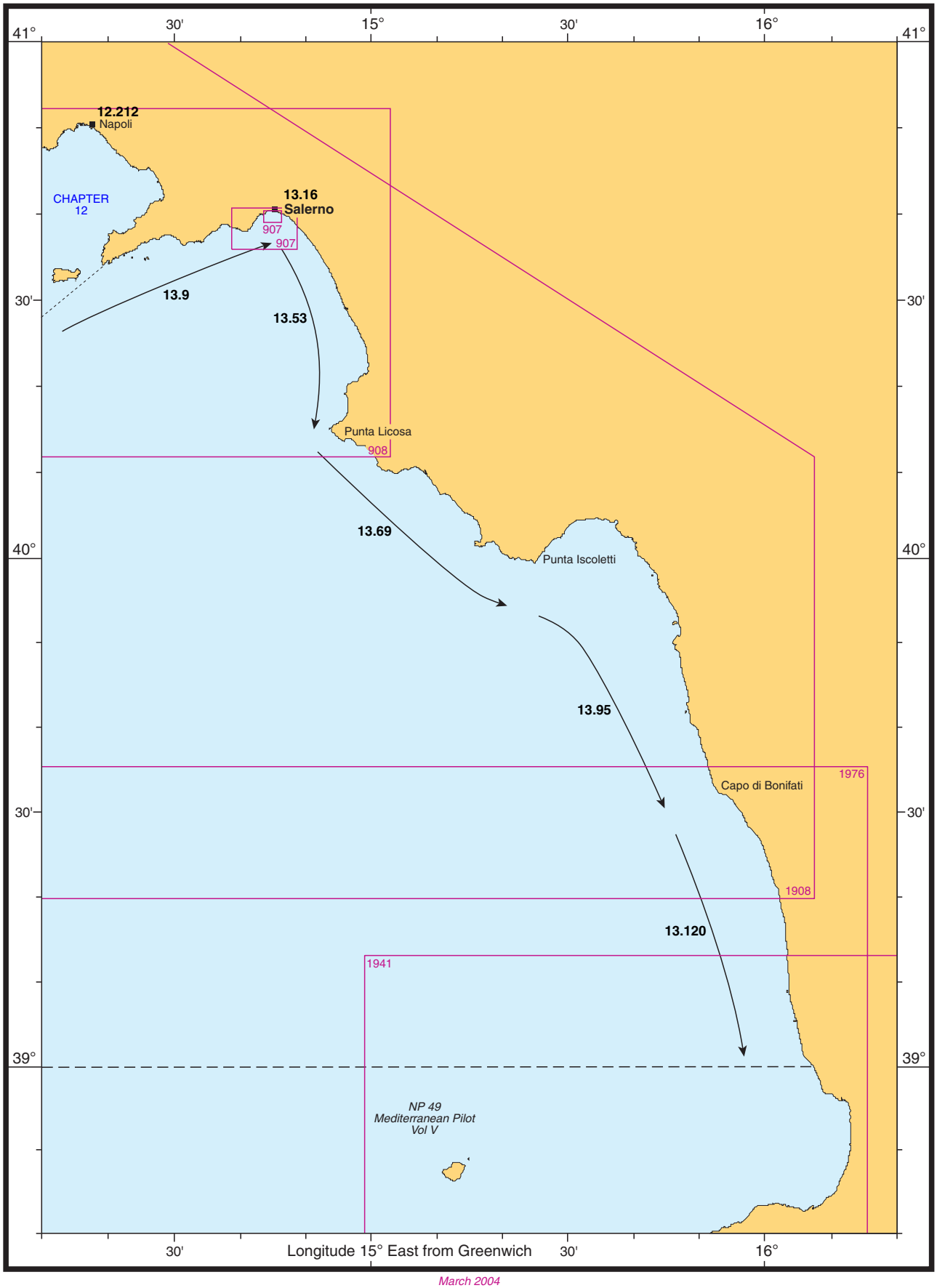
Chapter 13 - West coast of Italy



March 2004

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CHAPTER 13

WEST COAST OF ITALY – PUNTA CAMPANELLA TO LATITUDE 39° NORTH

GENERAL INFORMATION

Chart 165

Scope of the chapter

13.1

1 This chapter describes the W coast of Italy between Punta Campanella (40°34′N, 14°19′E) and Latitude 39° North, the S limit of this volume, 125 miles SE. The sections are arranged as follows:

Punta Campanella to Punta Iscoletti (13.5).
Punta Iscoletti to Latitude 39°N (13.93).

Through routes

13.2

1 Ocean routes between Genova and Stretto di Messina and between the Bonifacio Strait (6.175) and Stretto Messina lie between 60 and 80 miles offshore and are not described.

The ocean route between Napoli and Stretto di Messina steadily opens from the mainland coast, from a position SW of Punta Campanella, and lies approximately 30 miles offshore. The route is not described.

Topography

13.3

1 The generally high and rocky coast created by volcanic activity extends SE in two wide gulfs, Golfo di Salerno (40°26′N, 14°39′E) and Golfo di Policastro (39°57′N, 15°35′E) separated by a broad promontory. To the S of Golfo di Policastro the coast leads SSE towards the N approaches to Stretto di Messina.

Depths

13.4

1 Generally the coast is steep-to although a coastal shelf with depths of less than 200 m extends up to 16 miles offshore on the E side of Golfo di Salerno and off the coast of the promontory separating it from Golfo di Policastro. Within Golfo di Policastro and along the coast S of it the 200 m depth contour lies within 5 miles of the shore.

2 To seaward of the 200 m depth contour the seabed shelves steeply to the ocean floor however mariners should note the following seamounts:

Position	*Charted depth*
39°56′·4N, 14°47′·0E	68 m
39°29′·6N, 14°49′·0E	68 m
39°31′·5N, 15°32′·6E	60 m

PUNTA CAMPANELLA TO PUNTA ISCOLETTI

GENERAL INFORMATION

Chart 1908

Area covered

13.5

1 This section covers the mainland coast of Italy between Punta Campanella (40°34′·3N, 14°19′·6E) and Punta Iscoletti 60 miles SE. The section is arranged as follows:

Punta Campanella to Torre Angellara (13.9).
Salerno and approaches (13.28).
Torre Angellara to Punta Licosa (13.53).
Punta Licosa to Punta Iscoletti (13.69).

Topography

13.6

1 Golfo di Salerno lies between Punta Campanella (40°34′·3N, 14°19′·6E) and Punta Licosa (40°15′·2N, 14°54′·3E) 33 miles SE. Punta Licosa marks the NW end of the head of a broad promontory extending 28 miles SE to Punta Iscoletti. Generally the coast is mountainous, steep and rocky.

Submarine cables and pipelines

13.7

1 There are numerous submarine cables landed along this coast and shown on the charts. Anchoring and fishing within 5 cables of them is prohibited.

Numerous outfall pipelines extend from the coast between Punta Germano (40°37′·1N, 14°27′·8E) and Punta Iscoletti (39°59′·5N, 15°25′·2E) many of which are not shown on the charts; the seaward ends of some are marked by buoys (special). Anchoring and fishing in the vicinity of submarine pipelines is prohibited.

Wind

13.8

1 Strong winds with a S component and particularly SW winds raise a heavy sea within Golfo di Salerno, sometimes causing severe damage to the coast.

Violent and unexpected squalls can descend the large, mountainous valleys along this coast; Fiume Irno (40°40′·3N, 14°46′·4E) and Fiume Sele (40°29′·1N, 14°56′·3E) are particularly susceptible to this.

PUNTA CAMPANELLA TO TORRE ANGELLARA

General information

Chart 908

Route

13.9

1 A coastal route leads, from a position SW of Punta Campanella (40°34′·3N, 14°19′·6E), 25 miles ENE to a position SSW of Torre Angellara (40°39′·2N, 14°48′·6E).

Topography

13.10

1 The N side of Golfo di Salerno is backed by mountains which rise quickly to elevations of approximately 1000 m. The shore is rocky, steep and largely inaccessible. A chain of islets and dangers extend 3 miles E from the NW shore of the gulf, close NE of Punta Campanella.

Rada di Salerno lies at the head of the gulf and contains the harbours of Porto di Salerno.

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Depths

13.11

1 The coast between Punta Campanella and Capo d'Orso (40°38′N, 14°41′E) is steep-to. However between Punta Campanella and Capo Scottile, 9½ miles ENE, the 100 m depth contour lies up to 2¼ miles from the shore and within it the dangers and islets associated with Li Galli (40°35′N, 14°26′E). To the NE of Capo Scottile Golfo di Salerno shoals gradually towards Rada di Salerno, which has depths of less than 30 m.

Prohibited areas

13.12

1 Navigation and fishing are prohibited within 100 m of the islets of Li Galli (40°35′N, 14°26′E) because of the danger of landslip.

Punta Campanella Marine Nature Reserve

13.13

1 A marine nature reserve encloses Punta Campanella (40°34′·3N, 14°19′·6E) (12.150), part of the SE coast of Peninsola Sorrentina and the islets lying off it. The extent of the reserve is shown on the chart. The area is divided into three types of restricted zone, see 12.147. The zones apply to the following approximate areas within this section:

Zone	*Approximate area*
A	Encloses Scoglio Vetara (40°35′·1N, 14°23′·9E) and part of the channel E of the islet.
B	1. Between Punta Campanella and a position on the coast 4 cables N of Punta di Montalto (40°34′·4N, 14°20′·8E). 2. Between a position on the coast 1½ cables NNE of Punta San Antonio (40°35′·1N, 14°21′·9E) and a position on the coast 2 cables NNE of Scoglio Isca (40°35′·3N, 14°22′·6E). 3. Between a position on the coast 2½ cables NE of Scoglio Isca (40°35′·3N, 14°22′·6E) and Capo Scannato (40°36′·9N, 14°26′·4E).
C	1. Between a position on the coast 4 cables N of Punta di Montalto (40°34′·4N, 14°20′·8E) and a position on the coast 1½ cables NE of Punta San Antonio (40°35′·1N, 14°21′·9E). 2. Between Capo Scannato (40°36′·9N, 14°26′·4E) and a position on the coast close NE of Punta Germano (40°37′·1N, 14°27′·8E).

2 Within the area channels lead from the reserve boundary to the mainland coast NE of Scoglio Isca (40°35′·3N, 14°22′·6E), between the coastal reserve boundary and the restricted area enclosing Scoglio Vetara (40°35′·1N, 14°23′·9E) (13.17), between Scoglio Vetara and Li Galli (13.18) and through the shoals W of Li Galli Light (40°35′·0N, 14°26′·1N) (13.19). Mariners must obtain full details of the areas and the restrictions from local authorities.

Natural conditions

13.14

1 **Winds**. During the autumn and winter S or SE winds prevail. Generally they are associated with unsettled weather and last for several days; a *Libeccio* (S wind) often develops from them. In the summer land and sea breezes develop predictably, during the afternoon the *Maestrale* (NW wind) is common.

2 **Currents**. During the summer a weak W current develops; during the winter the flow is E. In the vicinity of Minori and Maiori (40°39′N, 14°38′E) an increase in strength usually occurs before strong S winds.

Local weather. When Capo d'Orso (40°38′·0N, 14°40′·9E) is hidden by cloud or mist an E wind is imminent. When Punta Licosa (40°15′·2N, 14°54′·3E) is clearly visible the *Scirocco* (SE wind) should be expected. When Monte dell' Avvocata (40°39′·3N, 14°40′·4E) is cloud covered strong S or SW winds are likely. If the Amalfi coast is bright and clear winds from N or NE should be expected.

Principal marks

13.15

1 **Landmarks**:

Monte San Constanzo (40°35′·2N, 14°20′·6E) (12.150).

Chiesa della Madonna della Neve (40°36′·0N, 14°21′·9E). The church stands close to several buildings.

Il Deserto (40°36′·7N, 14°22′·0E) (12.149).

Monte di Vico Alvano (a cross stands on the summit) (40°37′·5N, 14°26′·1E).

2 Monte Sant' Angelo a Tre Pizzi (40°38′·9N, 14°30′·4E) (12.149).

Amalfi Cathedral (green dome) (40°38′·2N, 14°36′·2E).

Torre dello Zirro (round, partly ruined) (40°38′·2N, 14°36′·4E), part of a ruined castle. The tower stands on a ridge with the remains of a wall close E of it.

Convento dei Camaldoli dell' Avvocata (grey, belfry has mullioned opening) (40°39′·2N, 14°40′·2E).

3 Monte San Liberatore (40°40′·8N, 14°43′·8E). The peak has the appearance of a bird's beak when viewed from the SE. A conspicuous cross (iron, concrete base, 18 m in height) stands close to the summit; the cross is illuminated occasionally. The white building of a convent stands below and E of the summit.

Carmine Nuovo, a Carmelite convent (square belfry, surmounted by a cross) (40°41′·0N, 14°46′·1E).

4 **Offshore mark**:

Isolotto Gallo Lungo Light (white, square framework tower, 12 m in height) (40°35′·0N, 14°26′·1E).

Major light:

Capo d'Orso (white tower, red band on two storey dwelling, 5 m in height) (40°38′·0N, 14°40′·9E).

Directions

(continued from 12.150)

Coastal route

13.16

1 From a position approximately 5 miles S of Punta Campanella (40°34′·3N, 14°19′·6E) the track leads ENE passing, with positions relative to Capo d'Orso Light (40°38′·0N, 14°40′·9E):

S of Seno di Ieranto (16¼ miles WSW) a deep inlet close E of Punta Campanella within which anchorage for small vessels can be obtained (13.20). Thence:

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2 S of Scoglio Penna (16 miles WSW). The small, high rock lies close SSE of the E headland of Seno di Ieranto. The rock is the same light colour as the cliffs behind it. Thence:

S of Punta Montalto (15¾ miles WSW). The headland is steep, rocky and has twin peaks at its extremity. Torre di Montalto (square, partly ruined) stands 1½ cables N of the headland but is only partly visible from S. Thence:

3 S of Torre di Nerano (square, grey) (15¼ miles WSW). The tower stands on a rocky hill close W of Marina di Nerano, a small fishing village, standing close behind a small beach. To the E of the village are dense olive groves. The village of Nerano stands 3 cables NW of the tower on the vegetation covered E slopes of Monte San Costanzo. Thence:

SSE of Punta Sant' Antonio (15 miles WSW), the SW extremity of a high rocky promontory. Thence:

4 SSE of Scoglio Scruopolo (14½ miles WSW). A rounded rock with steep sides covered with sparse vegetation. Thence:

SSE of Scoglio Isca (14¼ miles WSW). The large, high rock has a rounded ridge and is covered with vegetation. Although high and substantial the rock is difficult to distinguish. A grey building stands on the NE point; the lower part of the building is darker in colour. Thence:

5 SSE of Torre Forca (13¾ miles WSW). The substantial, grey, square, crenellated and partly ruined building stands on a bare, steep slope. A small, steep-sided cove close W of the tower has a beach at its head used to haul out local fishing vessels. The village of Sant' Agata sui due Golfi stands on the crest of a ridge 1 mile NNW of the tower and is prominent. Thence:

6 SSE of Scoglio Vetara, also known as Scoglio Vivara, (13¼ miles WSW). The rock is rounded and moderately high. Thence:

SSE of Punta Sant' Elia (12½ miles WSW). The headland is surmounted by a white, two-storey house and ancient fortifications. The coast E of the point is pierced by numerous caves. Thence:

SSE of a shoal with a depth of 5 m over it (12½ miles WSW), thence:

7 SSE of a shoal with a depth of 5 m over it (12 miles WSW), thence:

SSE of Li Galli (11¾ miles WSW), a group of three rocky islets. Gallo Lungo, the most E and largest, is covered with low bushes and exhibits a light (13.15). A grey tower also stands on the island but is not visible from all directions. Castelluccia and La Rotunda lie respectively W and SW of Gallo Lungo; their summits are covered with vegetation. Thence:

8 SSE of Capo Scannato (11¼ miles W). The district surrounding the headland is known as Lo Scaricatore. The road between Sorrento and Positano, cut into the lower slopes of Monte Vico Alvano, is prominent Thence:

SSE of Torre Clavel (dark, square) (9¼ miles W), thence:

SSE of Positano church (red roof, green majolica dome) (9 miles W), this church stands close to the shore. A second conspicuous church (light coloured with belfry) stands within the town. Thence:

9 SSW of Vettica Maggiore church (7¼ miles WSW). The dome is black and white majolica with vertical yellow stripes. A yellow coloured belfry with pyramidal dome stands close to the church within the village, which stands on the S slopes of Monte Tre Calli. Thence:

SSE of Capo Sottile (high, steep) (7¼ miles WSW). Scoglio dell' Isca, a truncated conical rock, 10 m in height, lies close S of the headland. Thence:

10 SSE of Priaiano (7 miles WSW), the town is built on terraces and contains a square belfry. Thence:

SSE of Capo Conca (5¼ miles WSW). A tower (square, ruined) stands on the headland. A church with a slender, yellow belfry and spire stands 2 cables NNE of the tower; the church is only visible from the SW. A conspicuous yellow building (large windows, tall central section) stands on a summit NW of of the headland. Thence:

11 SSE of Conca del Marina (5 miles WSW). A prominent yellow church stands within the village; the belfry has a square base and octagonal top surmounted by a dome. A rubble breakwater, 1·5 m in height, fronts the village 35 m offshore. Mariners should note that tunny nets are periodically laid in this area. Thence:

SSE of a square tower (4¾ miles WSW) standing on a rocky point, thence:

12 SSE of Amalfi (3¾ miles W) (13.23), thence:

SSE of Punta dello Scarpariello (3 miles WNW), surmounted by a tower, thence:

SSE of Minori (2½ miles WNW). The village extends from Marina di Minori on the coast to the summit of Monte Mandrino. A dark church (three-tiered belfry with window) stands on the summit amongst trees. Depths off the Minori and Maiori, 7½ cables E, are affected by deposits from the rivers discharging into sea in the vicinity, particularly when flooded; reduced depths have been reported. Thence:

13 SSE of Torre Mezzacapo (square, massive) (2½ miles WNW). The tower stands on a rocky point; an hotel (yellow, three-storeys, three round towers) stands close N of it. Thence:

SSE of Maiori (2 miles NW). The village lies in a natural amphitheatre at the mouth of Valle dei Tramonti. A small craft harbour (13.25) fronts the town. Thence:

14 SSE of Punta Salicerchio (1¾ miles NW), a tower stands on the W side of the headland, thence:

SSE of Torre Badia (7 cables NW). The light-coloured tower stands on a high cliff. A shoal, with a least depth of 3·9 m over it, lies 1 cable SW of Torre Badia. Thence:

SSE of Capo d'Orso, the squat promontory is dominated by Monte Piano (3¼ cables NNE).

(Directions for Salerno continue at 13.47)

Thence:

15 SSE of Monte San Liberatore (3½ miles NE) (13.15), thence:

S of Salerno (4 miles NE). Thence:

S of Carmine Nuovo (5 miles NE) (13.15), thence:

To a position SSW of Torre Angellara (massive, square, surmounted by small house) (6 miles

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WNW). The tower can sometimes be difficult to distinguish against the backdrop of buildings along this part of the coast; a large red mansion, in slight disrepair, close N of it is a useful guide to identification.

(Directions continue at 13.61)

Side channels

Between Scoglio Isca and Scoglio Vetara

13.17

1 With good local knowledge small vessels can pass between the Punta Campanella Marine Reserve (13.13) Zone B area, enclosing the coast in the vicinity of Scoglio Isca (40°35′·3N, 14°22′·6E), and the Zone A area enclosing Scoglio Vetara (40°35′·1N, 14°23′·9E).

Between Soglio Vetara and Li Galli

13.18

1 With local knowledge and permission from the Punta Campanella Marine Reserve vessels may pass between Scoglio Vetara and the W extremity of the shoals extending 7 cables W from Li Galli. Mariners are advised to pass approximately 2 cables E of Scoglio Vetara to clear the dangers W of Li Galli.

Small craft channel

13.19

1 With good local knowledge small craft can pass W of Li Galli between the shoals with a least depth of 5 m over them respectively 4 cables WSW and 8 cables W of Li Galli Light (40°35′·0N, 14°26′·1N). The channel has a least depth of 25·5 m.

Anchorages and harbours

Seno di Ieranto

13.20

1 Seno di Ieranto (40°34′·4N, 14°20′·0E). The inlet is entered between Punta Campanella and a headland 6 cables E. The shores are rocky and steep and depths within the inlet are considerable; a gravel beach occupies the head of Seno di Ieranto. With local knowledge small vessels can obtain anchorage at the head of the inlet.

Marina di Nerano

13.21

1 Marina di Nerano (40°35′·0N, 14°21′·3E). With good local knowledge small vessels can obtain temporary anchorage off the village; the seabed is rocky.

Positano

13.22

1 **General information**. Positano (40°37′·7N, 14°29′·2N) is a small ferry and yacht harbour which lies at the head of Insenatura di Positano, the mouth of a wide valley lying between Monte Comune (40°37′·9N, 14°27′·6E) and Mont Sant' Angelo a Tre Pizzi (40°38′·9N, 14°30′·4E) (12.149). The berths are completely exposed to the S. Mariners should note the submarine cable and outfall pipelines shown on the chart; there are also pipelines along this part of the coast not shown on the chart. There is a diving school at Positano, dive boats operate throughout the area.

2 The churches within the town and Torre Clavel (13.16) are useful marks when approaching the bay.

Berths. Part of the shore fronting the town is quayed and a steel pier extends from it. The quay, with depths of 0 m to 2·5 m alongside, is used by small local ferries and yachts. The pier accepts vessels of less than 2·2 m draught and is used by small ferries to embark and disembark passengers. Currently (2003) the pier is in poor repair.

Facilities. The usual facilities of a small town. Limited small craft facilities only.

Small craft moorings are laid off Positano between April and October. The harbour can accommodate up to 150 small craft and accepts vessels up to 20 m in length.

Amalfi

13.23

1 **General information**. Amalfi (40°38′N, 14°36′E) is a small ferry and yacht harbour. The town rises quickly NW of the harbour which is overlooked by mountains standing close to the coast. A cemetery, with a long, arched gallery, close S of Torre dello Ziro (13.15), and Hotel Albergo dei Cappuccini, a conspicuous white building 350 m W of the town, are useful marks when identifying and approaching the harbour.

2 The harbour is protected from the SW by Molo Foraneo, extending 230 m ESE from the coast, and from the E by Nuovo Molo which extends 100 m S from the coast. Molo di Levante, originally the E limit of the harbour, lies 100 m W of and parallel to Nuovo Molo and separates the main basin from the much smaller Tourist Dock. Lights are exhibited from the heads of Molo Foraneo (red pillar on pedestal, 5 m in height) and Molo di Levante (green mast, 6 m in height). The harbour accepts vessels up to 40 m in length. There are depths of 10 m in the entrances to both basins. Berthing is dangerous in strong winds with an E component; generally these winds raise a heavy sea making the harbour untenable.

3 **Berths**. Molo Foraneo and Molo di Levante have depths alongside of 2 m, close to the root, increasing to 3 m at the head. The tourist dock quays have depths alongside of 2·5 to 3·0 m. The maximum permitted draught within the Tourist Dock is 2·0 m. Vessels usually moor to the berths because of the sea state within the harbour, the bottom is sand and mud good holding ground.

Repairs to small craft can be undertaken, there is a slipway.

Other facilities. There is a hospital within the town.

Supplies. Small quantities of water and provisions available.

Small craft. There are 300 small craft berths, in depths of 2 to 5 m, at four angled piers extending from the NW side of the harbour.

Atrani anchorage

13.24

1 **General information**. The village of Atrani (40°38′·2N, 14°36′·6E) lies on the NE side of the steep rocky buttress on the E side of Amalfi (13.23) on which stands Torre dello Zirro (13.15). Capo d'Atrani, the extremity of the headland, is a high plateau. The village is built in a deep defile at the mouth of a valley. Within the lower part of the village a viaduct with eight arches crosses the beach, above it the village rises in steep terraces.

2 At the E end of the town Chiesa di Santa Maria Maddalena (red roof, white and brown belfry, three small green majolica domes) is conspicuous. A rubble breakwater, dangerous to navigation, lies close off the shore.

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Anchorage. With local knowledge anchorage can be obtained in depths of about 15 m, clear of the breakwater.

Small craft

Maiori Landing

13.25

1 **General information**. Maiori Landing (40°39′·0N, 14°38′·3E). A small craft harbour protected by two moles is still under construction (2002). Temporary lights are exhibited from the heads of the moles. There are depths of 3 to 4 m in the entrance and 1·5 to 3·5 m in the basin. The seabed within the basin is sand but strewn with rubble.

2 The entrance is difficult in strong SE (*Scirocco*) winds which can also increase the the water level within the harbour sufficiently to make the berths untenable. A persistent *Scirocco* also generates a heavy swell. An anti-clockwise current is generated within the basin by SE winds, the *Scirocco* can also cause strong whirlpools to develop.

Chart 907 plan of Rada di Salerno

Cetera

13.26

1 **General information**. Cetera (40°38′·7N, 14°42′·1E) is a small fishing port and small craft harbour. The village lies in a deep gorge extending NNW from the harbour; Torre Normanna (square, surmounted by a two storey building) stands N of the harbour entrance. The village church, standing amongst the houses, has a green dome and small belfry.

2 The harbour is formed by Molo di Sopraflutto, which protects the harbour from the S, and by Molo di Sottoflutto, also known as Molo di Madonnina. Mariners should note an unmarked rock ridge 70 m in length, with a depth of 0·5 m over it, lies 60 m off the seaward side of Molo di Sopraflutto. Lights are exhibited from the heads of the moles. The entrance faces NE, has a depth of 5 m and becomes dangerous with a strong *Scirocco* (SE wind). An outfall pipeline extends 3¼ cables SSE from the root of Molo Sopraflutto and submarine cables are landed close NE of the harbour entrance; both are shown on the chart.

3 **Berths**. Molo Madonnina and Banchina di Riva, the NW side of the basin, accept fishing vessels with a maximum draught of 3·7 m. There are 15 small craft berths in depths of 4 to 4·5 m at an L-shaped pontoon extending from the SW part of Molo di Sopraflutto.

Facilities. Limited small craft facilities.

Supplies: fuel; water; provisions.

Other names

13.27

1 Paradiso, Torre del (40°39′·0N, 14°37′·1E).
Ravello (40°39′·0N, 14°36′·8E).
Recomone, Torre (40°35′·1N, 14°21′·9E).
Vietri, Marina di (40°40′·0N, 14°43′·4E).

SALERNO AND APPROACHES

General information

Chart 907 Rada di Salerno and plan of Salerno

Position and function

13.28

1 Salerno (40°40′N, 14°45′E) occupies the head of Rada di Salerno which lies between Capo d'Orso (40°38′N, 14°41′E) and Torre Angellara, 6 miles ENE). The port is well placed to service the key industrial areas of S Italy handling dry bulk, containers, timber and timber products, refrigerated and frozen foodstuffs, steel, manufactured goods including cars and vehicles.

Topography

13.29

1 The city of Salerno lies along the shore and on the lower slopes of the hills close N and NW of the port. The buttressing which supports the roads and railway lines in this area is a distinctive feature.

Approach and entry

13.30

1 Salerno is approached from the S, through Golfo di Salerno then Rada di Salerno and entered between the heads of Molo di Ponente (40°40′·0N, 14°44′·8E) and Molo di Levante, 2 cables SSW.

Traffic

13.31

1 In 2002, the port was used by 404 ships with a total of 25 962 558 dwt.

Port Authority

13.32

1 Compamare Porto di Salerno, Camera di Commercio Salerno, Via Roma 29, 1–84100, Salerno SA, Italy.

Limiting conditions

Controlling depth

13.33

1 The entrance has a least depth of 10·7 m. A depth of 10 m is maintained over much of the turning basin but periodic dredging is necessary and depths are variable.

Deepest and longest berths

13.34

1 Banchina Trapezio di Ponente; length 380 m, depth alongside 10 m. Banchina Trapezio di Levante, length 380 m, depth alongside 10 m.

Abnormal levels

13.35

1 Water level within the harbour can be raised significantly, sufficient to inundate the quays, by the approach of strong S or SW winds.

Maximum size of vessel handled

13.36

1 The maximum draught accepted is subject to meteorological and tidal conditions. Under normal conditions the maximum draught accepted is 9·4 m.

Vessels fitted with variable pitch propellers as well as bow thrusters and with a maximum draught of 9·9 m are permitted to berth at Banchina Molo di Sottoflutto, Banchina Trapezio di Ponente and on the S part of Banchina Trapezio di Levante (Berth 15).

Local weather

13.37

1 The *Tramonta* (N wind) occurs frequently during the autumn and descends in violent gusts from the mountains close inland. Winds from the SE are also common during the autumn. During the winter S or SSW winds are usually very strong, can last from three to five days and send a heavy sea into the harbour. Vessels should be secured alongside taking account of these conditions.

2 When Capo d'Orso is obscured by cloud winds from SE and S should be expected. Squalls from the N are usually

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preceded by sheets of cloud forming over the mountains above Agropoli, 22 miles SSE.

Arrival information

Port operations

13.38

1 The port operates 0700–1900 local time.

Port radio

13.39

1 There is a port radio station, see the relevant edition of *Admiralty List of Radio Signals.*

Outer anchorages

13.40

1 With local knowledge small vessels can obtain anchorage in depths of 5 to 7 m in a small cove 1½ cables N of Punta di Fuente (40°39′·4N, 14°42′·8E), a bare rocky headland; it is possible to ride out bad weather by mooring between two anchors, heading E, and securing the stern to the shore.

2 Anchorage should normally be obtained within Rada di Salerno, in depths of 18·9 m to 32·0 m, sand, at the anchor berths shown on the charts:

Berth	*Remarks*
A, B	Vessels of length 150 m or less.
C, D	Vessels greater than 150 m length.

Pilotage and tugs

13.41

1 **Pilotage** is compulsory for all vessels of 500 grt or greater and available during daylight hours only. The pilot boards outside the harbour. See the relevant *Admiralty List of Radio Signals.*

2 **Tugs** are available 24 hours a day.

Traffic regulations

13.42

1 Vessels will be berthed and unberthed using tugs; the use of ship's propulsion within the basins is prohibited.

Within the turning basin vessels greater than 300 tons are to be handled with minimum power.

Passenger vessels have right of way over other vessels.

Prohibited area

13.43

1 Berth 20, at the NW end of Bacino di Ponente, has suffered subsidence consequently berthing on the NW side of the basin is prohibited.

Harbour

General layout

13.44

1 The harbour is formed by two breakwaters. Molo di Ponente, also known as inner mole, extends 5 cables SE from the coast. Molo di Levante, also known as outer mole, extends initially 2½ cables SSE from the coast, then 5 cables SSW from the elbow, then 2½ cables WSW, passing S of Molo di Ponente Head to form the SE side of the harbour.

The harbour consists of three basins; Bacino di Ponente, Bacino di Ponente Mediano, also known as Darsena Ligea and Bacino di Levante, the old port.

Natural conditions

13.45

1 **Winds**. During the spring the prevailing wind is NE. Land and sea breezes develop predictably during the summer. During the autumn N and SE winds predominate, see 13.33 Local weather. In the winter the prevailing winds are SE and ESE and often accompanied by rain, S and SSW can be difficult, see 13.33.

2 **Currents**. The *Libeccio* (SW wind) induces a weak current along the coast which is deflected SE along Molo di Ponente. Within the harbour it sets N along Banchina Manfredi and SE along Molo di Ponente.

A strong current is created at the entrance when raised water levels within the harbour, caused by strong S or SW winds, are rapidly reduced by a change of wind direction; the current is sufficient to make entry dangerous.

Principal marks

13.46

1 **Landmarks:**

Monte San Liberatore (40°40′·8N, 14°43′·8E) (13.15).

Salerno Cathedral belfry (dark with small dome) (40°40′·8N, 14°45′·6E).

Carmine Nuovo (40°41′·0N, 14°46′·1E) (13.15).

Chimney (adjacent to cement works) (40°40′·3N, 14°46′·5E).

Il Torrione (square fortress, on rounded hill) (40°40′·2N, 14°46′·8E).

Directions for entering harbour

(continued from 13.16)

13.47

1 The approach and entry present no particular difficulties in normal conditions, despite the double turn needed to pass through the entrance. Mariners should note the following dangers, with positions relative to Molo di Levante Head Light (green metal pillar on pedestal, 9 m in height) (40°39′·8N, 14°44′·6E):

A buoy marking the seaward end of an outfall pipeline (9 cables WSW).

2 Scogli due Fratelli, a group of above water rocks, (7½ cables WNW).

The entrance faces W and is 1¼ cables wide between 10 m depth contours.

Useful marks

13.48

1 Torre Tummolo (ruined) (40°38′·0N, 14°41′·5E).

Torre Erchie (surmounted by square, light coloured structure) (40°38′·2N, 14°41′·8E).

Punta Fuente (Punta di Fuente) (40°39′·4N, 14°42′·8E). The bare, rocky headland is surmounted by a red and white building; an isolated and imposing white building stands on a sheer, white cliff close to the headland.

2 Punta d'Albori (40°39′·8N, 14°43′·0E). The headland can be identified by a tower (square, surmounted by a single storey, crenellated building with three arches) which stands on a rocky ridge close WNW.

Vietri sul Mare belfry (two domes, larger is of green and yellow majolica) (40°40′·2N, 14°43′·7E).

Torre Crestarella (white, stands on a small promontory) (40°40′·1N, 14°43′·9E).

3 Molo di Ponente Head Light (red lantern on hut, 9 m in height) (40°40′·0N, 14°44′·8E).

Molo Foraneo Elbow Light (white metal pillar on pedestal, 5 m in height) (40°40′·3N, 14°45′·3E).

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Port services

Repairs

13.49

1 **Repairs**. Minor repairs only. Divers are available.

Other facilities

13.50

1 There is a hospital in Salerno. Deratting certification available.

Supplies

13.51

1 Fuel by road or lighter from Napoli. Water connections at all berths. Provisions available.

Small craft

Porticciolo Masuccio Salernitano

13.52

1 **General information**. Porticciolo Masuccio Salernitano (40°40′·3N, 14°46′·0E) is a yacht harbour at the E end of the town of Salerno. The privately operated harbour lies within the limits of Porto di Salerno. During the summer small local passenger ferries operate from it. The harbour is protected from the S by an angled mole and from the WNW by a smaller mole extending SSW from the coast. The entrance lies between the mole heads, is 100 m wide, faces W, has a depth of 5 m and is marked by lights exhibited from the mole heads. Mariners should navigate to remain 30 m off the moles.

2 **Berths**, in depths of 0·7 to 6·0 m, are mainly at pontoons extending from the N and SE sides of the basin.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

TORRE ANGELLARA TO PUNTA LICOSA

General information

Chart 908

Route

13.53

1 A coastal route leads, from a position SSW of Torre Angellara (40°39′·2N, 14°48′·6E), 22 miles S to a position WSW of Punta Licosa (40°15′·2N, 14°54′·3E).

Topography

13.54

1 Much of the E side of Golfo di Salerno is low and a wide coastal plain extends 18 miles SSE of Torre Angellara to the vicinity of Agropoli (40°21′N, 15°00′E). A number of rivers and streams enter the gulf along this coast, deposit carried by them has formed a coastal bank, with depths of less than 30 m over it, which extends up to 2¾ miles offshore.

2 Between Agropoli and Punta Licosa, 7 miles SSW, the coast is high, steep and fringed with rocks. A steep-sided, rocky bank, with depths of less than 30 m over it, extends up to 4 miles WSW of Punta Licosa. Isolotto di Licosa and Secche di Licosa, a shoal with a depth of 6 m over it, lie on the bank.

Depths

13.55

1 The majority of the route lies within deep water and passes W of the shoaler part of the bank extending WSW of Punta Licosa (40°15′·2N, 14°54′·3E).

Hazards

13.56

1 **Shellfish beds**, shown on the chart, lie 6½ miles SSE of Torre Angellara (40°39′·2N, 14°48′·6E). The area is marked by buoys and light-buoys (special).

Exercise area. A military exercise area lies close to the mouth of Fiume Sele (40°29′·0N, 14°56′·3E). Mariners should consult local notices to mariners for details of activation and restrictions.

Prohibited area

13.57

1 Anchoring and fishing are prohibited in an area enclosing an outfall pipeline (13.58) extending from close N of the mouth of Fiume Fuorni (40°38′·1N, 14°49′·8E).

Submarine pipelines

13.58

1 Submarine outfall pipelines extend from the coast in the vicinity of Fiume Fuomi (40°38′·1N, 14°49′·8E) and S of Fiume Sele (40°27′·9N, 14°57′·3E); both are shown on the chart.

Local weather

13.59

When the coastal area of Salerno (40°40′N, 14°45′E) is covered by cloud SW winds should be expected; if the Salerno area is clearly visible N winds are imminent.

Principal marks

13.60

1 **Landmarks:**

Monte Giovi (40°39′·4N, 14°49′·7E). A very large rock stands on its summit.

Ebolitano Hospital (pink, five-storey, surmounted by a small structure) (40°31′·5N, 14°55′·3E).

Monte Soprano (40°25′·9N, 15°05′·9E).

Monte Sottano (40°24′·8N, 15°04′·6E).

Hotel Mec (tall, white, surmounted by red dome) (40°24′·3N, 15°00′·0E).

Monte Tresino (40°19′·7N, 14°57′·4E).

Church of Sant' Antonio (ruined, white) (40°15′·3N, 14°54′·9E).

2 **Offshore mark:**

Fiume Sele Wave Recorder Station (yellow, diagonal cross topmark, 6 m in height) (40°28′·6N, 14°55′·6E).

Major light:

Punta Fortino (tower on square hut, 10 m in height) (40°21′·3N, 14°59′·2E).

Directions

(continued from 13.16)

13.61

1 From a position SSW of Torre Angellara (40°39′·2N, 14°48′·6E), the track leads S passing, with positions relative to Punta Fortino Light (40°21′·3N, 14°59′·2E):

SSW of a partly submerged rubble breakwater (19 miles NNW). The unmarked breakwater is approximately 100 m in length and lies off the Lido dei Carabinieri district, 6 cables SE of Torre Angellara. Thence:

2 SSW of Fiume Fuorni (18 miles NNW). A water tower stands on the N side of the river mouth; an outfall pipeline (13.57 and 13.58) extends 7½ cables SW from its vicinity. Two spheres stand close S of the river mouth. Thence:

SSW of a dangerous wreck (17 miles NNW), thence:

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SSW of Torre Picentina (17¾ miles NNW), the low, ruined tower is partly obscured by vegetation. Thence:

3 W of Fiume Tusciano (14½ miles NNW), thence:

W of a complex of modern buildings (14¼ miles NNW) which includes a church (square belfry, red terrace), two hangars (grey), a conspicuous, large two-storey building (pale green, continuous row of windows on upper storey) with square red tower at mid point. Thence:

W of Lido Spineta (13¾ miles NNW) (light green, five storeys, red roof). Thence:

4 W of an area of shellfish beds (13 miles NNW) (13.56), thence:

W of Ebolitano Hospital (10½ miles NNW) (13.60), thence:

W of Fiume Sele (8 miles NNW), tall trees lining its banks are a useful means of identification. Torre Kernot (small, round) standing on the S bank is obscured by vegetation. A military exercise area (13.56) lies to seaward of the river mouth. A bar with depths of 2 m over it encumbers the river mouth; the river is navigable by boat for some distance inland. Thence:

5 W of Fiume Sele Wave Recorder Station (7¾ miles NNW) (13.60), from which a light is exhibited. Thence:

W of Paestum (4¼ miles NNE) the modern name for the ancient Greek city of Posidonia. Several temples remain standing and are clearly visible from approximately 7 miles offshore. Thence:

6 W of Torre di Paestum (3¾ miles N) (round, surrounded by cottages). A sandy bank, over which breaks form, extends up to ¼ cable off the coast. **Caution**. Depths inshore along this part of the coast are unreliable. Thence:

W of Hotel Mec (3 miles NNE) (13.60), thence:

W of Torre San Marco (1½ miles NE) (round, slender), thence:

W of an unmarked obstruction (1 mile NW) with a least depth of 15 m over it, thence:

7 W of a dangerous wreck (4 cables N), thence:

W of Punta Fortino Light (13.60), close N of Agropoli. The light stands on the W extremity of the promontory. There are numerous caves in the vicinity. Thence:

W of Scoglio Trentova (9 cables SW), the largest of the rocks fringing this part of the coast, thence:

8 W of Punta Tresino (Trentova) (2 miles SW). A ruined tower stands amongst dense vegetation on the W slope of the headland. The tower is difficult to distinguish. Thence:

W of Monte Tresino (2 miles SW) (13.60), thence:

W of Punta del Pagliarolo (3¼ miles SW), a ruined tower stands on the headland but is difficult to distinguish. The coast here is low, sandy and uniform. Thence:

9 W of Santa Maria di Castellabate (4½ miles SSW). The village consists of a long row of houses along the rocky shore. Within the village stands a conspicuous white building which appears to stand on a viaduct (two levels, each with eight arches). Thence:

W of Castellabate (4¾ miles SSW). The town stands on a hill; a castle and other buildings occupy the summit and a square belfry stands amongst houses on the W slope. Thence:

10 W of San Marco di Castellabate (5¾ miles SSW), thence:

W of Punta Licosa (7¼ miles SSW). The hamlet of the same name stands on the low headland, the ruined church of Sant' Antonio (13.60), on the summit of a hill, overlooks them. A conspicuous white building, with a red roof and towers on its seaward corners, stands at the foot of the hill. Thence:

11 W of Isolotto di Licosa (7¼ miles SSW), the low island is of the same yellow rock as the mainland and difficult to distinguish, particularly from the NW. A light (white round tower, 9 m in height) is exhibited from the island. Isolotto di Licosa stands on a rocky bank with depths of less than 10 m over it. The channel separating it from the mainland is encumbered with rocks and shoals with depths of less than 2 m over them. Secche di Licosa, a dangerous shoal of rock and sand with a depth of 6 m over it, lies 1¼ miles W of Isolotto di Licosa. Thence:

12 W of Monte Licosa (La Torricella) (7 miles SSW) a ruined tower stands on its summit. The mountain appears to have two peaks except when viewed from the S. Thence

To a position SW of Punta Licosa.

(Directions continue at 13.75)

Anchorages

Agropoli

13.62

1 **General information**. Agropoli (40°21′·2N, 14°59′·0E). Anchorage can be obtained in depths of about 13 m, sand, good holding ground, 6 cables NNW of Punta Fortino Light (40°21′·3N, 14°59′·2E) (13.60). Mariners should beware of the obstruction with a depth of 15 m over it and a dangerous wreck respectively 7 cables W and 2 cables S of the anchorage.

2 **Local weather**. In winter strong NW winds can persist for up to 3 days raising a heavy sea which renders the anchorage untenable.

Santa Maria di Castellabate

13.63

1 Santa Maria di Castellabate (40°17′·4N, 14°56′·9E). With local knowledge anchorage can be obtained 4½ cables off the village in depths of about 20 m, sand, good holding ground. However the berth quickly becomes untenable in winds with a W component. The anchorage off Castellabate (13.64) offers better holding ground

Castellabate

13.64

1 Castellabate (40°16′·8N, 14°57′·1E). Anchorage can be obtained in depths of about 15 m, sand, good holding ground, 7½ cables WNW of Castellabate belfry. This anchorage has better holding ground than Santa Maria di Castellabate anchorage (13.63).

Small craft

Agropoli

13.65

1 **General information**. Agropoli (40°21′·2N, 14°59′·0E) is a yacht harbour and fishing port fronting the W part of the town. The harbour is is formed from a small cove protected from the W by an angled mole extending N then NE from the coast; an inner breakwater protects the NE

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side of the basin. Lights are exhibited from the heads of the breakwaters. The entrance faces NE, has depths of less than 2 m in the SE part, about 7 m in the NW part and is 150 m in width. The head of the outer mole must be given a berth of at least 25 m. Vessels up to 50 m in length are accepted.

2 Entry and departure are prohibited at night and in poor visibility. Vessels must remain on the starboard side of the entrance channel; vessels proceeding to sea have right of way. There is a speed limit of 3 kn.

The harbour is exposed to N winds and strong SW winds cause waves to break over the mole.

Berths. The harbour provides 1100 small craft berths in depths of 0·4 to 7·0 m, mainly at pontoons.

Facilites. Comprehensive small craft facilities including repairs.

Supplies: fuel; provisions; water.

Santa Maria di Castellabate

13.66

1 **General information**. Santa Maria di Castellabate (40°17′·4N, 14°56′·7E) is a small coastal village. The shore in the vicinity of the village is rocky but this gives way to a sandy beach further S. Behind the beach the land rises gradually to fertile hills.

2 Moletto delle Gatte is a small mole, adjacent to the village church, used by local fishing vessels. The mole has an alongside depth of about 2 m. Berthing and unberthing are prohibited at night and in poor visibility. A light is occasionally exhibited from the mole.

San Marco di Castellabate

13.67

1 **General information**. Porto di San Marco di Castellabate (40°16′·2N, 14°56′·2E) is a small craft harbour fronting the town. The W side of the harbour is protected by a mole extending, in a dog leg, 1½ cables N. A small inner mole protects the NE side. A light (green mast on hut, 4 m in height) is exhibited from the head of the W mole. The entrance faces NE, has a depth of 2·6 m and is 50 m wide. The *Grecale* (NE wind) sends a swell into the harbour.

2 **Berths**. The basin is lined with quays with alongside depths of 0·5 to 3·0 m.

Facilities. Comprehensive small craft facilities including repairs. There are two patent slipways.

Supplies: fuel; water; provisions.

Other names

13.68

1 Picciola (40°35′·8N, 14°53′·7E).
San Francesco, Torre (40°21′·0N, 14°58′·8E).
Torricella, Punta (40°16′·0N, 14°55′·5E).
Tusciano, Torre (40°34′·7N, 14°53′·3E).

PUNTA LICOSA TO PUNTA ISCOLETTI

General information

Charts 908, 1908

Route

13.69

1 A coastal route leads, from a position SW of Punta Licosa (40°15′·2N, 14°54′·3E), 32 miles SE to a position SSW of Punta Iscoletti (39°59′·6N, 15°25′·2E).

Topography

13.70

1 The generally rugged coast extends 12 miles SE from Punta Licosa to Fiume Alento (40°09′·8N, 15°08′·7E) in a series of mainly rock fringed bays. Monte della Stella (40°14′·3N, 15°04′·0E) stands close inland, its lower slopes forming part of the coast. The summit is light coloured contrasting with its dark coloured lower slopes on which stand numerous villages visible from seaward. The valley of Fiume Alento separates Monte della Stella from a chain of peaks extending S from the interior to Punta Iscoletti; Monte Bulgheria (40°04′·3N, 15°25′·9E), the most S, stands 5 miles N of the headland, its lower slopes also forming part of the coast.

2 In the vicinity of Fiume Alento the coast becomes low and sandy continuing SE towards Capo Palinuro (40°01′·7N, 15°16′·6E), a steep rocky promontory. However the coast remains sandy SE of the point for a further 2½ miles until SSW of Monte Sant' Antonio (40°01′·4N, 15°21′·0E) (elevation 507 m), here the coast becomes steep, rocky and continues to Punta Iscoletti indented by coves.

Depths

13.71

1 The coastal route remains to seaward of the 100 m depth contour and is free from isolated dangers. Generally the 100 m depth contour lies within 6 miles of this coast. Close inshore there are numerous dangers within the 30 m depth contour which lies approximately 1½ miles from the coast.

Submarine pipelines

13.72

1 Several submarine pipelines extend from this coast, some are charted and some are marked:

Marina di Pioppi (40°10′·6N, 15°05′·5E) An outfall pipeline extends 3 cables S of the coast, the seaward end marked by a light-buoy, see 13.75.

Marina di Ascea (40°08′·2N, 15°10′·4E) see 13.75.

Local weather

13.73

1 When the summits of Monte della Stella (40°14′·3N, 15°04′·0E) and Monte Bulgheria (40°04′·3N, 15°25′·9E) are cloud covered NW winds are probable; if the cloud forms on the upper slopes, leaving the summits bare, S winds may be expected.

Principal marks

13.74

1 **Landmarks:**

Monte della Stella (40°14′·3N, 15°04′·0E). A white radome and dark church stand on the summit.

Torre Angioina (square) (40°10′·8N, 15°01′·5E).

Torre Marina di Casal Velino (square, surmounted by a building with red roof) (40°10′·8N, 15°07′·2E). The tower stands on a steep slope close to the shore; a group of cottages contained by a wall with white crenellations stand close to the tower.

2 Torre Castelnuovo Cilento (40°13′·1N, 15°10′·9E). The tower overlooks the village which stands, amongst olive trees, on a peak (elevation 297 m).

Torre Velia (round) (40°09′·8N, 15°09′·2E). The tower is part of a ruined fort standing within Castellamare di Bruca, also known as Castellamare di Velia.

Torre di Piano a Mare (white, square, crenellated) (40°06′·2N, 15°13′·9E). An iron bridge stands close SE of the tower.

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3 Capo Palinuro Lighthouse (white five-sided tower on two-storey dwelling, 14 m in height) (4°01′·6N, 15°16′·3E).
Capo Palinuro Signal Station (red and white chequers) (40°01′·5N, 15°16′·9E).
Monte Sant' Antonio chapel (white) (40°01′·3N, 15°21′·0E).
Torre Teano (square, white) (40°00′·8N, 15°22′·5E).
Monte Bulgheria (40°04′·3N, 15°25′·9E).

4 **Major light:**
Capo Palinuro – as above.

Directions
(continued from 13.61)

Chart 908

13.75

1 From a position SW of Punta Licosa (40°15′·2N, 14°54′·3E) the track leads ESE passing, with positions relative to Capo Palinuro Light (40°01′·6N, 15°16′·3E):
SW of Secche di Licosa (22 miles NW) (13.61), thence:
SW of Punta Licosa (21¾ miles NW) (13.61), thence:
SW of a detached rocky shoal (20¼ miles NW) with a least depth of 3 m over it. Thence:

2 SW of Punta dell' Ogliastro (20 miles NW), flat, low with rocky sides, surrounded by rocks and shoals, extending 1 cable offshore. Torre Ogliastro (ruined, square, grey) partly obscured by vegetation stands on the headland. Thence:
SW of Ogliastro Marina (19¾ miles NW), thence:

3 SW of Punta Timpe Rosse (18¼ miles NW), the S extremity of a high promontory fringed by numerous rocks over which breaks form. The coast between Punta Timpe Rosse and La Punta, 5½ miles SE, is dangerous and should be given a berth of at least 1 mile. Thence:

4 SW of Agnone (17¼ miles NW). The small craft harbour of San Nicola di Agnone (13.86) lies at the W end of the village. Anchorage (13.78) can be obtained off the village. Thence:

Chart 1908

5 SW of Porto di Acciaroli (14½ miles NW) (13.87). A dangerous wreck, shown on the chart, lies 5 cables WSW of the harbour. Numerous shoals and dangers lie within the 5 m depth contour between Acciaroli and La Punta, 2 miles SE. Secca del Generale, a dangerous shoal with a least depth of 0·3 m over it, is marked by a light-buoy (E cardinal). Thence:
SW of La Punta (12¾ miles NW). A ruined tower stands on the point. The headland is fringed with rocks and dangers and a rock with a depth of 1 m over it lies 3 cables WSW of the tower. Thence:
SW of Marina di Pioppi (12 miles NW). An ancient tower (40°10′·6N, 15°05′·8E), at the E end of the village, has been incorporated into a villa. A submarine pipeline extends 3 cables offshore from the vicinity of the tower; the seaward end is marked by a light-buoy (special). Thence:

6 SW of Porto di Casal Velino (11¾ miles NW) (13.88). Lights are exhibited from the moles protecting the harbour (13.88), thence:
SW of Marina di Casal Velino (11½ miles NW) (13.80). A tower (13.74) stands on the shore close to the village. Thence:
SW of Castellamare di Bruca (10 miles NW), the village stands on a shrub covered hill behind a wide beach. Torre Velia (13.74) stands amongst the houses. Thence:

7 SW of Marina di Ascea (8¼ miles NW). A submarine pipeline extends 6 cables offshore from the coast. Thence:
SW of Torre Telegrafo (ruined, square) (7¼ miles NW) stands on a steep spur overlooking a low rocky point. A white building stands high on the spur. An isolated rock lies close W of the spur. Thence:

8 SW of Marina di Pisciotta (5¼ miles NW). The village stands close behind a shingle beach. Torre di Piano a Mare (13.74) stands at the S end of the village. The village of Pisciotta stands on a conical hill 5 cables inland. A small craft harbour (13.89) lies close S of the village. Thence:
SW of Torre dei Caprioli (low, truncated, pyramidal, on square base) (2¼ miles NNE). A group of white houses stand 1 mile NW of it. Thence:

9 SW of Torre Formicola (4½ cables NNW) standing on Punta della Quaglia, the NW extremity of Capo Palinuro. A grotto, accessible by boat in good weather, lies below the tower. Thence:
SW of Capo Palinuro a conspicuous promontory, with a flat summit, on which stand a lighthouse (13.74) and disused signal station (13.74). The promontory extends W from the lower, wooded hills of the adjoining coast; its S coast is rocky and red. A framework radio mast and a low, round tower stand close to the lighthouse. Thence:

10 SW of Scoglio della Marina (high, rugged, grey with steep sides) (9 cables E). Thence:
SW of Molpa anchorage (1½ miles E) (13.84). A yellow, rounded cliff separates the mouths of Fiume Lambru (1¼ miles ENE) and Fiume Mingardo (1¾ miles ENE). Four unmarked barriers have been laid close to the mouth of Fiume Mingardo; three run parallel to the coast 150 m offshore the fourth is perpendicular to the coast. Navigation, stopping and fishing close to the structures is prohibited. The barely visible ruins of Castello della Molpa stand on the cliff. Thence:
SW of Monte Sant' Antonio (3½ miles E) (13.74), thence:

11 SW of Torre dell' Isola (square with heavy cornices) (4½ miles ESE), the tower stands on a point. Isolotto di Camerota, a large, low, rock, covered with vegetation, lies ¾ cable off this point. The channel separating the islet from the mainland is 150 m wide and has depths of 2 m. Thence:
SW of Marina di Camerota (5 miles WSW). The village stands on the E side of a rocky promontory. A prominent square belfry stands in the village. A boat harbour (13.91) lies close E of it. Thence:

12 SW of Torre del Poggio (square, light coloured, 10 m in height) (5¼ miles ESE). Thence:
SW of Punta Zincalo (5½ miles ESE) on which stands Torre di Punta Zincalo (square, squat, dark, surmounted by a white structure) (39°59′·9N, 15°23′·2E). Thence:

13 SW of Cala Bianca (6½ miles ESE). A marine farm lies 1 mile SSW of the bay and is marked at its corners with bouys (special). A light-buoy (special) is moored in the centre of the area. Thence:

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14 To a position SSW of Punta Iscoletti (7 miles ESE). The light coloured headland is bare, moderately high with steep rocky sides and surmounted by a tower.

(Directions continue at 13.104)

Useful marks

13.76

1 Torre di Caleo (ruined) (40°10′·4N, 15°02′·5E).

Marina di Ascea School (red coloured) (40°08′·5N, 15°10′·2E). Ascea, a village, stands on olive covered slopes 5 cables inland. The village church (red roof and dome) in the NW part of the village is clearly visible.

Torre Ficaiola (square) (40°05′·8N, 15°14′·4E) stands on a scarp falling sheer to the shore.

2 Torre di Calafetente (40°01′·5N, 15°17′·3E).

Torre Fenosa (light coloured, square) (40°00′·5N, 15°20′·6E).

Torre d'Arconte (ruined) (40°00′·2N, 15°21′·2E). Although ruined the tower can be seen from a moderate distance offshore.

Anchorages

Ogliastro Marina

13.77

1 Ogliastro Marina (40°14′·2N, 14°56′·5E). With local knowledge anchorage can be obtained for small vessels in depths of about 6 m off the village. A church, with a light coloured belfry, and some modern buildings stand within the village

Agnone

13.78

1 Agnone (40°13′·0N, 14°59′·7E). With local knowledge anchorage can be obtained in depths of 10 to 20 m, sand and mud, good holding ground, off the village. Small local vessels use the anchorage to embark local produce. The anchorage is dangerous in onshore winds.

Marina di Pioppi

13.79

1 Marina di Pioppi (40°10′·6N, 15°05′·5E). The village lies at the head of a small bay; amongst the houses stands a building with a central arched block flanked by two crenellated towers. With good local knowledge anchorage can be obtained off the village on good holding ground. Anchoring in the vicinity of the submarine pipeline (13.75) is prohibited.

Marina di Casal Velino

13.80

1 Marina di Casal Velino (40°10′·7N, 15°07′·6E). Anchorage can be obtained in depths of about 13 m off the village. A sandbank with depths of about 4 m over it extends 3½ cables from the shore.

Marina di Pisciotta

13.81

1 Marina di Pisciotta (40°06′·1N, 15°14′·0E). With local knowledge anchorage can be obtained about 3½ cables off the village in depths of 15 to 20 m, weed and rock. Use of an anchor buoy is recommended.

Torre Ficaiola

13.82

1 With local knowledge anchorage can be obtained for small vessels in depths of about 7 m, 1½ cables off Torre Ficaiola (40°05′·8N, 15°14′·4E) (13.75). Landing can be made on the beach.

Porto Palinuro

13.83

1 **General information**. Porto Palinuro (40°02′·0N, 15°16′·8E) is a small bay lying between the village of Palinuro (40°02′·4N, 15°17′·4E) and Punta del Fortino, 6 cables WSW, on which stands a fort. Anchorage can be obtained in depths of about 19 m, good holding ground, on the alignment (251°) of Torre Formicola (40°02′·0N, 15°16′·2E) (13.75) with Punta del Fortino Fort, 2 cables NE. Smaller vessels can obtain anchorage closer inshore off the E coast of the bay. A dangerous wreck lies 4 cables NE of Punta del Fortino

2 **Local weather**. A SW wind sends a heavy sea into the anchorage. Typically a period of bad weather ends with a brief calm followed by the wind veering quickly N or NW and is particularly dangerous. The good holding ground has enabled vessels to ride out bad weather by mooring with two anchors ahead and one astern, heading NNW.

Molpa anchorage

13.84

1 Molpa anchorage (40°01′·6N, 15°18′·5 E) lies between the SE side of Capo Palinuro and the coast 1½ miles E. Anchorage can be obtained in the W part of the bay in depths of about 10 m clear of Scoglio della Marina (40°01′·5N, 15°17′·7E). Mariners should note a dangerous wreck in position (40°01′·6N, 15°17′·0E).

Marina di Camerota

13.85

1 Marina di Camerota (40°00′·0N, 15°22′·6E). Anchorage can be obtained in depths of about 13 m, sand, on the alignment (100°) of Torre di Punta Zincalo (39°59′·9N, 15°23′·2E) (13.75) with Torre di Cala Bianca, 1 mile further E.

Small craft

San Nicola di Agnone

13.86

1 **General information**. San Nicola di Agnone (40°13′·2N, 14°59′·6E) small craft harbour and fishing haven is under construction (2002). The harbour is protected by an outer mole, approximately 300 m in length, extending SE from the coast, and an inner mole, approximately 150 m in length, extending SSW from the coast towards the head of the outer mole. The entrance faces E, is 75 m wide and has a depth of 5·5 m.

2 **Berths**. The basin is lined with quays with depths alongside of 0·5 to 5·5 m.

Porto di Acciaroli

13.87

1 **General information**. Porto di Acciaroli (40°10′·7N, 15°01′·6E) is a small craft and fishing harbour fronting the town. The harbour is protected from the W by an outer mole, Molo Sopraflutto, which extends generally 2½ cables SSE from the coast. A prominent statue stands on the mole head. The inner mole, Molo Sottoflutto, extends ¾ cable SSW from the shore towards the head of the outer mole. Lights are exhibited from the mole heads; Molo Sopraflutto (white and red mast, 6 m in height), Molo Sottoflutto (green mast). The entrance faces SE and is 100 m wide. The harbour accepts vessels up to 40 m in length and maximum draught 3 m. However the harbour is subject to silting and available depth should be confirmed with the Harbour Master.

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2 **Dangers.** The approach to the harbour is encumbered by several dangers; a dangerous wreck, Secca Vecchia, a dangerous shoal with a depth of 1·8 m over it, and Secca de Generale, a dangerous shoal with a depth of 0·3 m over it, marked by a light-buoy (E cardinal), lie respectively 5 cables WSW, 1½ cables SSE and 3 cables SE of the harbour entrance.

3 **Anchorage**. With good local knowledge temporary anchorage can be obtained off the small craft harbour, the holding ground is good.

Berths. The harbour provides 100 small craft berths in depths of 3·0 to 4·6 m.

Facilities. Comprehensive small craft facilities including repairs, there is a slipway of 100 tons capacity.

Porto di Casal Velino

13.88

1 **General information**. Porto di Casal Velino, also known as Marina di Casal Velino, (41°10′·6N, 15°06′·4E) is a yacht harbour and fishing port 7½ cables W of the village of Marina di Casal Velino. The harbour is protected from the S and E by an L-shaped mole extending 1½ cables SSE then 1½ cables WNW; a light (green post) is exhibited from its head. An inner mole, with a wide triangular head, extends 1 cable S from the shore 1 cable WNW of the outer mole root; a light (red post) is exhibited from the outer part of the head. The entrance faces WNW and is 60 m wide. Currently (2001) charted depths in the harbour of 2·5 to 5·0 m are unreliable and the maximum draught accepted is 0·7 m.

2 **Berths**. In addition to the quays lining the basin four piers extend WNW from SSE section of the outer mole.

Facilities. Limited small craft facilities, minor repairs only.

Supplies: fuel; water; provisions in small amounts.

Marina di Pisciotta

13.89

1 **General information**. Marina di Pisciotta (40°06′·1N, 15°14′·0E) is a boat harbour and fishing haven protected by an angled outer mole extending ½ cable SW then 1¼ cables SSE; a light (red tower) is exhibited from the head. An inner mole, which also exhibits a light (green tower), extends ½ cable W from the coast towards the outer mole head. The entrance faces SSE, is 60 m wide and has a least depth of 0·7 m. Charted depths of 1·5 to 3·0 m within the basin are unreliable consequently the maximum draught currently (2001) accepted is 1·2 m. Vessels up to 8 m in length are accepted. The haven is under development; mariners use the harbour at their own risk.

2 **Berths**. The haven provides 100 small craft berths.

Facilities. Modest small craft facilities.

Supplies; water; provisions.

Palinuro landing

13.90

1 **General information**. Palinuro landing lies within Porto Palinuro (40°02′·0N, 15°16′·8E) (13.83). A mole extends 180 m ENE from the W shore of the bay, close E of Punta del Fortino, protecting a quay 220 m in length which occupies the W side of the bay. A light (green pillar on pedestal, 5 m in height) is exhibited from the head of the mole. Vessels up to 20 m in length are accepted.

2 **Berths**. The quay has alongside depths of 2·0 to 7·5 m.

Marina di Camerota

13.91

1 **General information**. Marina di Camerota (40°00′·0N, 15°22′·6E) is a yacht harbour protected from the S by a mole extending 450 m E from the coast; a light (red mast, 5 m in height) is exhibited from its head. An inner mole, which also exhibits a light (green mast, 5 m in height), extends S from the shore protecting the E side of the harbour. The entrance faces ESE and is 60 m wide. Vessels up to 25 m in length are accepted. The harbour is subject to silting and currently (2002) the maximum draught accepted is 2·6 m.

2 Vessels must remain at least 5 m off the mole heads when entering or leaving harbour because shoaling. Entry and departure are prohibited during hours of darkness and in reduced visibility because of unreliable lights marking the entrance.

3 **Dangers**. A dangerous wreck with a least depth of 8 m over it lies 180 m off the harbour entrance. The wreck of an aircraft lies, in a depth of 10 m, 200 m off the beach of Marina di Camerota

Berths. The harbour provides 260 berths at quays and pontoons in depths of 1·0 to 4·5 m, however depths are unreliable.

4 **Facilities**. Comprehensive small craft facilities including some repairs. Harbour construction works have still to be completed (2002).

Supplies: fuel; water; provisions.

Other names

13.92

1 Camerota (40°01′·8N, 15°22′·5E).
Centola (40°04′·2N, 15°18′·7E).

PUNTA ISCOLETTI TO LATITUDE 39° NORTH

GENERAL INFORMATION

Charts 1908, 1976

Area covered

13.93

1 This section covers the mainland coast of Italy between Punta Iscoletti (39°59′·6N, 15°25′·2E) and Latitude 39° North, 60 miles SSE. The section is arranged as follows:

Punta Iscoletti to Capo di Bonifati (13.95).
Capo di Bonifati to Latitude 39° North (13.120).

Topography

13.94

1 Golfo di Policastro lies between Punta Iscoletti (39°59′·6N, 15°25′·2E) and Isole Sant' Ianni, 14 miles E. The gulf has some similarity to Golfo di Salerno in that the W and E shores are high and rocky whilst the head is low and sandy with numerous towns and villages; of these Scario (40°03′N, 15°29′E), Policastro (40°05′N, 15°32′E) and Sapri (40°04N, 15°38′E) are the most important.

2 The gulf is ringed by mountains which rise relatively close to the coast and continue to characterise the coast S

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of the gulf as it extends SSE towards Capo di Bonifati (39°33′N, 15°53′E) and beyond to the S limit of this volume.

PUNTA ISCOLETTI TO CAPO DI BONIFATI

General information

Chart 1908

Route

13.95

1 A coastal route leads, from a position SSW of Punta Iscoletti (39°59′·6N, 15°25′·2E), 12 miles ESE to a position WSW of Capo Scalea (39°50′·3N, 15°46′·0E), then 15 miles SSE to a position W of Capo di Bonifati (39°32′·8N, 15°53′·0E).

Topography

13.96

1 The high mountainous coast continues along the W shore of Golfo di Policastro, strongly influenced by Monte Bulgheria (40°04′·3N, 15°25′·9E). In the vicinity of Policastro (40°04′·6N, 15°32′·1E) the mountains recede from the coast a little and the hills are covered with olive trees. In the vicinity of Capo Bianco (40°03′·5N, 15°37′·6E) the land becomes higher and more rugged once again and these characteristics continue SSE to Isolotto Sant' Ianni (39°58′·1N, 15°43′·00E), the E extremity of the gulf.

2 The coast then extends 8½ miles SSE, retaining its rocky, rugged appearance, to the vicinity of Capo Scalea (39°50′·3N, 15°46′·0E). South of the headland Fiume Lao and Fiume Abatemarco enter the sea; both rivers flow through wide, well wooded valleys. Between Diamente (39°40′·8N, 15°49′·0E) and Capo di Bonifati, 9 miles SSE, mountains once again dominate the coast.

Depths

13.97

1 The coastal route remains in deep water, free from isolated dangers. Generally the 100 m depth contour lies well within 3 miles of the coast only approaching this distance offshore at the head of Golfo di Policastro and in the vicinity of Belvedere Maritimo (39°37′·3N, 15°51′·0E).

Tunny fishing

13.98

1 Tunny nets extend 2½ cables from the coast close SW of Torre Muzza (40°00′·9N, 15°26′·3E) (13.104).

Marine farms

13.99

1 Marine farms have been established within Golfo di Policastro and are shown on the chart. Although marked by buoys and light-buoys (special) mariners should note that the lights can be unreliable.

Prohibited areas

13.100

1 Entry of an area radius 100 m centred on (40°04′·0N, 15°30′·5E) is prohibited because of a seawater intake.

Navigation, anchoring and fishing are prohibited in an area 400 m in length lying 100 m off Villammare (40°04′·5N, 15°35′·8E); the area contains unexploded ordnance.

Submarine pipelines

13.101

1 Submarine pipelines extend:

8 cables SSE of Fiume Bussento (40°04′·3N, 15°30′·8E). The outer end is marked by a buoy (special), see 13.100 seawater intake.

5 cables WSW from a position close N of Torre Santa Venere (39°59′·8N, 15°42′·1E). Anchoring and fishing are prohibited within a radius of 5 cables of the shore end. The seaward end is marked by a buoy (special).

2 9½ cables W from (39°55′·0N, 15°45′·7E).

1 mile W from the vicinity of Torre San Nicola (39°51′·0N, 15°47′·0E) (13.104).

3 cables WSW of a position on the coast 1 mile SE of Torre di Diamante (39°40′·8N, 15°48′·9E).

8 cables ESE from a position 9 cables S of Torre di Scalea (39°48′·7N, 15°47′·3E).

4 cables WNW from a position 7 cables SSE of Capo Tirone tower (39°37′·5N, 15°50′·8E).

8 cables WNW from the vicinity of Torre Parise (39°34′·0N, 15°52′·3E).

Natural conditions

13.102

1 **Current.** A weak N-going current sets along the coast E of Golfo di Policastro.

Local weather. When the slopes of Monte Bulgheria (40°04′·3N, 15°25′·9E) and Monte Coccovello (40°03′·0N, 15°42′·9E) are covered with streaks of cloud, known locally as *Secce*, a period of violent S winds should be expected.

2 Within Golfo di Policastro S winds create a heavy sea which becomes more violent closer inshore. Generally strong S winds are short lived.

Principal marks

13.103

1 **Landmarks:**

Monte Bulgheria (40°04′·3N, 15°25′·9E) (13.74).

Torre Spinosa (square with heavy cornices) (40°02′·7N, 15°29′·0E).

Monte Olivella (40°05′·8N, 15°40′·6E).

Monte Coccovello (40°03′·0N, 15°42′·9E).

Maratea belfry (white) (39°59′·7N, 15°43′·5E).

Statue del Redentore (white, 22 m in height) (39°59′·3N, 15°43′·3E).

Chimney (wool factory) (39°54′·6N, 15°46′·5E).

Motel (39°42′·8N, 15°48′·4E).

Monte Montea (39°39′·7N, 15°56′·7E).

Monte Cozzo Sangineto (39°37′·0N, 15°56′·7E).

Torre del Capo (39°33′·1N, 15°53′·1E).

2 **Major lights:**

Scario (white tower and dwelling, 12 m in height) (40°02′·9N, 15°29′·4E).

Capo di Bonifati (white metal framework tower on hut, 7 m in height) (39°32′·7N, 15°53′·0E).

Directions

(continued from 13.75)

13.104

1 From a position SSW of Punta Iscolotti (39°59′·6N, 15°25′·2E) the track leads ESE passing, with positions relative to the headland:

S of Porto degli Infreschi (5 cables NE). The small cove has rocky shores and a beach at its head. Torre Infeschi (ruined) stands on the SW headland of the bay. Thence:

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S of a marine farm (1 mile E), marked by a light-buoy (special), thence:

2 S of Torre Spinosa (4 miles NE) (13.103), a radio mast stands on a hill behind the tower. Thence:

S of Scario Light (4¾ miles NE) (13.103). The town of Scario lies 3 cables N and is fronted by a small craft harbour (13.115). Within the town stands a church (round belfry on squat tower, three rows of windows). Scario affords the best anchorage for large vessels in Golfo di Policastro (13.108). Thence:

3 S of Fiume Bussento (6½ miles NE). A green islet divides the river mouth into two channels; a masonry bridge, prominent from the SSE, spans the river 2½ cables above the mouth. A seawater intake and associated pipeline extend 5 cables SE of the river mouth, see 13.100 and 13.101. Thence:

S of Policastro (7¼ miles NE) the town, fronted by a yacht and fishing harbour (13.116), covers the foot of a hill. Within the town stands a castle (40°04′·6N, 15°31′·3E). Thence:

4 S of Capitello (7¾ miles NE). A tower stands close E of the village. The coast is fringed with rocks for 4 cables E of Capitello. Thence:

SSW of Villammare, also known as Marina di Vibonati (9½ miles NE). A church (dark, square belfry with a clock on its E side) stands within the town. Thence:

5 SSW of Sapri (11 miles ENE). The town lies at the head of a cove entered between Punta del Fortino and Capo Bianco, 6½ cables SE. A light (red square tower, 4 m in height) is exhibited from Punta del Fortino and is also known as Carlo Piscane Light. Fiume Brizzi, spanned by a concrete bridge with seven arches, enters the NE part of the cove. Within the village stands Ospizio del Buon Pastore, a distinctive building with a small grey tower (40°04′·5N, 15°37′·3E). Construction of a new small craft harbour is underway (2001) (13.117). The pier at the head of the bay is used as a base for small craft. Thence:

6 SSW of Scoglio dello Scialandro (10¼ miles ENE), a dark above water rock, 2 cables S of Capo Bianco, difficult to distinguish except from SE. There is a boat haven on the inshore side of the island. Thence:

SSW of Torre delle Grive (11 miles ENE), difficult to distinguish, thence:

SSW of Acquafreda (12 miles ENE). Torre Rotondella (upper part ruined) stands 2½ cables S of the village. Thence:

SW of Maratea (13¼ miles E) standing on the N slope of Monte San Baggio (39°59′·3N, 15°43′·6E), although conspicuous from the W the town is obscured from the SW. Thence:

7 SW of Statue del Redentore (13½ miles E) (13.103). The statue of Christ is illuminated at night between 1 Apr and 30 Sep. Thence:

SW of Isolotto Sant' Ianni (13¾ miles E), the islet is 8 m high and surmounted by a cross. The lower part of the island is covered with vegetation. The fairway of the channel between the islet and the mainland has a depth of 12 m but should not be attempted without local knowledge. Secca della Giumenta, a dangerous shoal with a least depth of 1·3 m over it, lies 4 cables SE of the island. Thence:

8 SW of a marine farm (1¼ miles ESE), the area is marked at each corner with a buoy (special). A light-buoy (special) is moored in the centre of the area. Thence:

9 SW of Fiumara di Castrocucco (16 miles ESE). The river is spanned, 5 cables above its mouth, by a metal bridge with five arches; the river banks are fringed with trees. Thence:

SW of a conspicuous chimney (17 miles ESE) (13.103), thence:

SW of Isola di Dino (17¾ miles ESE), the island is 65 m high, flat and cultivated on its upper part. It is connected to the mainland by a drying reef through which there is a boat passage. Thence:

10 SW of Porto San Nicola (19 miles ESE), a sandy cove overlooked by the village of San Nicola Arcella. Palazzo di Principe, a yellow building standing high and a two storey house standing near the viaduct at the head of the cove are prominent. Torre San Nicola (square) stands on the coast, a submarine pipeline extends 1 mile W from the tower (13.101). Thence:

11 SW of Capo Scalea (19 miles ESE). The high flat promontory has steep, rocky sides and is cultivated on top. Torre Dino (round, red conical roof) stands on the summit.

13.105

1 The track then leads SSE passing, with positions relative to Torre Dino (39°50′·4N, 15°46′·2E):

WSW of Scalea (1½ miles SSE). The town is built on the terraced slope of a hill which is surmounted by medieval ruins. Torre di Scalea stands, with several houses, on Scoglio La Torre a large rock at the S end of the town; from a distance it has the appearance of an island. An area adjacent to the tower, marked by a red buoy, is reported dangerous due to unexploded ordnance. Secca della Giumenta, two rocky reefs awash, lie up to 2½ cables offshore close W of the town. Thence:

2 WSW of Cirella Vecchia (7¼ miles SSE) a remarkable group of ruined houses standing on the crest of a bare hill. Thence:

WSW of a motel (7¾ miles SSE) standing in the S part of the town of Cirella which has few houses and is fronted by a remarkable arched wall. Thence:

3 WSW of Isolotto di Cirella (8¼ miles SSE). The islet has a rounded form when seen from N or S. A square tower (ruined) stands on its summit and an above water rock lies close E of the islet. There are depths of 11 m, sand and weed, in the middle of the channel separating the islet from the mainland; the channel shoals rapidly towards the sides. With local knowledge shelter for small vessels can be found under the lee of Isolotto di Cirella. Thence:

4 WSW of Diamante (9¾ miles SSE). The white houses of the village are prominent and scattered across a small coastal plateau. A rocky reef extends a short distance W from the edge of the plateau. Torre di Diamante (square, surmounted by a flag staff), a former signal station, stands on the coast. The seabed off Diamante is rocky but with good local knowledge anchorage (13.114) can be obtained. An outfall pipeline extends 3 cables WSW of a position on the coast 1 mile SE of Torre di Diamante. Thence:

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5 WSW Capo Tirone (13¼ miles SSE), a rocky headland, fringed with rocks and shoals extending up to 2 cables offshore. The headland is surmounted by a tower. A submarine pipeline extends 4 cables WNW from a position 7 cables SSE of the tower. Thence:

WSW of Belvedere Marina (13½ miles SSE). The village is close S of Capo Tirone, contains a church (square, light-coloured belfry) and is fronted by a beach. A submerged reef lies ½ cable off and parallel to the beach. A submarine outfall extends 650 m WNW from a position 7 cables S of Capo Tirone. Thence:

6 WSW of Castello del Principe (ruined, dark) (15½ miles SSE), adjacent to a group of new houses with red roofs. Thence:

WSW of Torrente Sangineto (16 miles SSE). A bridge spans the river close within the mouth. Thence:

WSW of Torre Parise (square, grey) (17 miles SSE). A submarine pipeline extends 8 cables WNW from the vicinity of the tower. Thence:

7 To a position W of Capo di Bonifati (18¼ miles SSE). Torre del Capo (13.103) (round) stands on a prominent green hill 4 cables N of the headland. Torre Bonifati (square) stands in a walled enclosure. A large yellow building, with an enclosing fence, stands on a rocky spur and obscures Torre Bonifati from the SE. Capo di Bonifati Lighthouse (13.103) stands on the SW part of the headland; the lighthouse is not easily seen.

(Directions continue at 13.128)

Useful marks

13.106

1 Torre Muzza (light coloured, square, part ruined) (40°00′·9N, 15°26′·3E). The tower stands in an elevated position.

Tower (square) (40°01′·7N, 15°27′·0E), stands on a pointed hill.

Torre dell' Oliva (dark) (40°03′·7N, 15°30′·0E).

Torre di Caino (square, ruined) (39°56′·7N, 15°44′·1E). The tower stands on the summit of a rocky promontory which from NW or SE appears as a sharp cone.

Torre Fiuzzi (squat, crenellated, light-coloured, surmounted with a shelter) (39°52′·5N, 15°47′·4E).

Anchorages

Porto degli Infreschi anchorage

13.107

1 Porto degli Infreschi (40°00′·0N, 15°25′·6E). With local knowledge temporary anchorage for small vessels can be obtained within the cove. The anchorage must be quitted at the first sign of onshore winds. A marine farm lies 5 cables SE of the anchorage; a light-buoy (special) is moored at the centre of the area.

Scario

13.108

1 Scario (40°03′·2N, 15°30′·0E). Anchorage can be obtained in depths of about 13 m, good holding ground, about 3 cables offshore, ENE of Scario Light (40°02′·9N, 15°29′·4E) (13.103); there are depths of 5·5 m 1 cable NE of it. Smaller vessels can obtain anchorage in depths of about 8 m ½ cable off Scario Light; closer inshore the bay shoals rapidly and there are numerous rocks.

Sapri

13.109

1 **General information**. Sapri (40°04′·2N, 15°37′·4). Anchorage for small vessels can be obtained in depths of about 11 m within the cove with Punta del Fortino Light (40°04′·3N, 15°37′·2E) (13.104) bearing (294°). The berth provides maximum swinging room of 1¼ cables. Smaller vessels with good local knowledge may anchor nearer the head of the cove in depths of about 5 m. The anchorage is untenable in SW winds.

2 **Facilities**. There is a small hospital in the town.

Supplies: fuel; water; provisions available in small quantities.

Praia a Mare

13.110

1 Praia a Mare (39°53′·8N, 15°47′·0E). With local knowledge temporary anchorage can be obtained in depths of about 15 m, sand, good holding ground, off Praia a Mare. Mariners should beware of the submarine pipeline extending 9½ cables W from the coast 1½ miles N of Praia a Mare.

Isola di Dino

13.111

1 **General information**. Isola di Dino (39°52′·5N, 15°46′·4E). Anchorage can be obtained N or S of the island clear of the submarine cable laid between the island and the mainland. The cable landings are marked by light-beacons. The best berth is with the E extremity of the islet bearing 180°, 1½ cables distant, sand and weed, good holding ground.

Current. When the wind is fresh a modrately strong current develops between the island and mainland. Strong winds between ENE and N can induce whirlpools which render these anchorages untenable.

Porto San Nicola

13.112

1 Porto San Nicola (39°51′·2N, 15°47′·2E). With local knowledge anchorage can be obtained in depths of about 13 m within the bay. With the exception of an above water rock around which there are depths of 9 m, the bay is clear of dangers. A submarine pipeline extends W from Torre San Nicola (39°51′·0N, 15°47′·0E) (13.104).

Scalea (Scoglio La Torre)

13.113

1 **General information**. Scalea (39°48′·7N, 15°47′·3E). With local knowledge anchorage can be obtained near Scoglio La Torre (13.104) however proximity to the dark, rocky ridge which extends ¼ cable offshore at the N end of the beach should be avoided because of the rocky seabed. A submarine pipeline (13.101) extends ESE from the coast, 9 cables S of Scoglio La Torre.

Local weather. In December and January violent ENE winds can render the anchorage untenable.

2 **Current**. The normally weak N-going current can be augmented by the outflow from Fiume Lao and Fiume Abatemarco (39°45′·6N, 15°47′·9E).

Diamante

13.114

1 Diamante (39°40′·8N, 15°49′·0E). With good local knowledge anchorage can be obtained in depths of about 12 m, good holding ground, 2¾ cables S of the village. Vessels have been able to ride out strong N winds in this berth. Temporary anchorage can be obtained, sand and weed, off a beach close NW of Diamante.

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Small craft

Porto Scario
13.115

1 **General information**. Porto Scario (40°03′·2N, 15°29′·5E) is a small craft and fishing harbour protected from the S by an outer mole which extends 100 m E then 160 m ENE from the coast; a light (red mast, 5 m in height) is exhibited from the mole head. An inner mole extends SSE towards the head of the outer mole; a light (green post) is exhibited from the inner mole head. Within the harbour an inner basin is formed by a quay extending SW from the inner mole. The harbour entrance faces ENE, is 50 m wide and has depths of about 6 m. The inner mole head should be given a berth of at least 40 m. Vessels up to 30 m in length and maximum draught 4 m are accepted.

2 **Berths**. The harbour provides 160 berths in depths of 1 to 10 m.

Facilities. Comprehensive small craft facilities including repairs.

Supplies; fuel; water; provisions.

Marina di Policastro
13.116

1 **General information**. Marina di Policastro (40°04′·4N, 15°31′·5E) is a small yacht and fishing harbour fronting the town of Policastro. The harbour is protected from the S by an outer mole extending 300 m ESE from the coast, a light (red mast, 5 m in height) is exhibited from the mole head. An inner mole extending S from the coast protects the E side of the harbour; a light (green mast, 5 m in height) is exhibited from its head. Another mole extending from the N side of the harbour divides the harbour into outer and inner basins. The harbour entrance faces E, is 75 m wide and has a least depth of 3 m. Vessels up to 15 m in length are accepted.

2 **Berths**. The harbour provides 150 berths in depths of 2 to 5 m.

Facilities. Limited small craft facilities.

Supplies: fuel; water; provisions in small quantities

Sapri
13.117

1 **General information**. Sapri (40°04′·0N, 15°37′·8E). Construction of a small craft harbour protected by moles is currently (2002) under way. The new harbour is planned to have depths in the basin of 4 to 7 m, to accept vessels up to 40 m in length and provide approximately 200 berths.

2 **Danger**. Steel sheeting with a least depth of 2·5 m over it lies in position 048° distance 3¼ cables Punta del Fortino Light (40°04′·3N, 15°37′·2E) (13.104).

Porto di Maratea
13.118

1 **General information**. Porto di Maratea (39°59′·4N, 15°42′·5) is a small craft and fishing harbour sheltered by two elbowed moles. Molo Nord extends SE from the coast, Molo Sud extends W. Lights are exhibited from the head of both; Molo Nord (red post, 3 m in height), Molo Sud (green mast, 5 m in height). The harbour entrance faces WNW, is 40 m wide and has depths of about 15 m. The harbour accepts vessels up to 45 m in length and maximum draught 4 m.

2 **Berths**. The harbour provides 600 berths in depths of 3 to 9 m at quays and pontoons.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Other names
13.119

Belvedere Marittimo (39°37′·3N, 15°51′·3E).
Ispani (40°05′·4N, 15°33′·0E).
Serra Vingiolo (39°53′·9N, 15°47′·7E).
Tortora (39°56′·6N, 15°48′·4E).
Vibonati (40°06′·0N, 15°35′·1E).

CAPO DI BONIFATI TO LATITUDE 39° NORTH

General information

Charts 1908, 1976

Route
13.120

1 A coastal route leads, from a position W of Capo di Bonifati (39°32′·8N, 15°53′·0E), 34 miles SSE to Latitude 39°N.

Topography
13.121

1 The coast extends SSE towards Stretto di Messino retaining its generally rocky, rugged character; it is often fronted by long narrow beaches. The entire coast is backed by mountains rising close inland.

Depths
13.122

1 The coastal route remains in deep water free from isolated dangers. The coast is steep-to, the 100 m depth contour lying within 3 miles of the coast. Inshore the coast is generally free from dangers to seaward of the 20 m depth contour which lies within 5 cables of the shore.

Marine reserve
13.123

1 The Oasi Blu di Isca protected area encloses Scogli Isca (39°09′·0N, 16°03′·5E). Navigation, fishing and stopping within the area is prohibited. Any activity considered to compromise the environment of the protected area is prohibited. Local authorities may approve access for research. The area is bounded by the following positions:

39°08′·8N, 16°03′·3E
39°08′·9N, 16°03′·5E
39°08′·7N, 16°03′·4E
39°08′·7N, 16°03′·5E

Current meter
13.124

1 A current meter has been secured to the seabed in position (39°07′·6N, 16°03′·8E), anchoring and fishing are prohibited within a radius of 250 m of the position.

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Submarine pipeline

13.125

1 A submarine pipeline, shown on the chart, extends 2 cables SW from a position 3 cables SW of Torre di Fuscaldo (39°25′·0N, 16°00′·7E) (13.128).

Local weather

13.126

1 Winds from N and E and particularly ENE are often strong, due the effect of the mountains, and can sometimes cause considerable damage. Strong SW and SSW winds, most common during the winter, raise a considerable sea along this coast.

Principal marks

13.127

1 **Landmarks:**

Guardia Piemontese tower and tank (dark, round) (39°28′·1N, 15°59′·9E).

Santuario di Santa Maria (39°31′·8N, 15°57′·2E). The sanctuary stands on the summit of Monte Cresta la Serra (elevation 620 m), a barren, red coloured peak.

Paola Railway Station (39°21′·7N, 16°02′·1E).

Monte Cocuzzo (39°13′·2N, 16°08′·1E).

Belmonte Calabro church (tiled cupola surmounted by smaller dome) (39°09′·7N, 16°04′·8E).

White pillar (surmounted by cross, 30 m in height) (39°09′·6N, 16°04′·2E), stands on a crenellated terrace.

2 **Offshore mark:**

Wave Recorder Buoy (39°27′·2N, 15°55′·1E).

Major light:

Paola (large stone tower, 17 m in height) (39°21′·8N, 16°01′·9E).

Directions

(continued from 13.104)

13.128

1 From a position W of Capo di Bonifati Light (39°32′·7N, 15°53′·0E) the track leads SSE passing, with positions relative to the light:

WSW of Capo Testa (2 miles SE), a dark rocky spur interrupting a long stretch of light coloured beach. A group of yellow houses stands halfway up the slope behind Capo Testa. A dangerous wreck lies 7 cables SW of Capo Testa. Thence:

WSW of Porto di Cetraro (2¼ miles SE) (13.133) close S of Capo Testa. Thence:

2 WSW of Cetraro (3 miles SE). The town stands on the ridge of a hill sheer above the beach. Torrente Sant Giacomo enters the sea close N of the town. The river mouth is spanned by a steel bridge. Thence:

WSW of Acquappesa (4¼ miles SE), thence:

WSW of Intavolata (5½ miles SE), a small village. A pointed rock (10 m high) stands near the beach, close S of the town. A little further S is a masonry bridge with three arches. Thence:

3 WSW of Guardia Piemontese tower (13.127) (7¼ miles SE) at the N end of the town. Guardia Piemontese stands on top of a hill which is cut by two rows of viaducts. A belfry (white, square) stands at the S end of the town. Thence:

WSW of a wave recorder buoy (6 miles SSE) (13.127), thence:

4 WSW of Torre di Fuscaldo (white, round) (9¾ miles SE). The tower stands above and behind the houses of Marina di Fuscaldo. A submarine outfall extends 2 cables SW from Marina di Fuscaldo. The town of Fuscaldo lies amongst olive trees 7½ cables E of the tower and is easily identified by its red roofs. A church (small cupola on each side of facade) (39°24′·8N, 16°01′·6E) stands in front of and below the town. Thence:

5 WSW of Paola Light (12¾ miles SSE) (13.127) which stands on the N side of Marina di Paola, the resort of Paola. A viaduct connects the resort and town. Thence:

WSW of Paola (13 miles SE). The town stands in a natural amphitheatre, on a spur of the coastal mountain range, and contains many modern buildings. An arched viaduct, in an elevated position to the S of the town, is prominent. The railway station (13.127) can be seen clearly from sea. A disused pier, 120 m in length, lies 1 cable S of the railway station; navigation bathing and fishing are prohibited in its vicinity. The pier is unlit. Thence:

6 WSW of San Lucido (16 miles SSE). The village stands on a high plateau which rises almost sheer from the beach. A partly ruined castle (39°18′·4N, 16°03′·2E) and a wall stand on a rocky mass in front of the village; at the S end of the wall is a viaduct with numerous arches. The coast in the vicinity of San Lucido is fringed with rocks and shoals extending 1 cable offshore. Thence:

7 WSW of Fiumefreddo Bruzio (20¼ miles SSE). A bastion and the remains of a castle stand to the S of the town. The wreck of a motor yacht lies awash in a depth of about 4 m close off the coast between Fiumefreddo Bruzio Railway Station (39°14′·8N, 16°03′·7E) and the mouth of Torrente Vedano (39°13′·2N, 16°03′·7E.). Thence:

WSW of Monte Cocuzzo (22½ miles SSE) (13.127) thence:

WSW of Longobardi (22¼ miles SSE), the town is prominent. Thence:

8 WSW of Belmonte Calabro (24¾ miles SSE). A church and cross on a white pillar (13.127) are conspicuous. Thence:

WSW of Scogli Isca (25¼ miles SSE). The two rocks, approximately ½ cable apart, lie 4 cables offshore; the largest is 12 m in height. A marine reserve has been established around them, see 13.123. Thence:

9 WSW of Amantea (26 miles SSE) a town standing partly on a plain and partly on a hill. A round tower, standing on the hill and shown on the chart, overlooks the town but is only visible from the NW. A stone embankment with a large arch stands below the town. A cemetery on a hillside close S of the town is easily seen from seaward. Marina di Amantea, a coastal village W of the town, can be identified by a tall factory chimney and a slender spire in the S part of the village. Thence:

10 WSW of Torre di Guardia (white, round) (28¼ miles SSE). The tower stands on a steep hill which ends as a dark cliff fringed with rocks. Thence:

WSW of Scoglio Formicola (28½ miles SSE), the rock is 0·6 m high and lies 2½ cables offshore. Thence:

WSW of Fiume Oliva (29½ miles SSE). The river has a bed of light coloured gravel and is spanned by two bridges close within its mouth. Thence:

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11 WSW of Torre San Giovani (round, attached to a square building) (30¼ miles SSE). The tower stands on the coast and is surrounded by huts. Thence:

WSW of Fiume Savuto (32¼ miles SSE), white shingle has been deposited at the river mouth. The river is spanned by a railway bridge with three arches. Thence:

12 WSW of Torre del Casale (round with upper part ruined) (33¼ miles SSE). The tower stands on the crest of hill which slopes gently towards the S bank of Fiume Savuto. A number of new buildings stand along the coast for 2 miles S of Torre del Casale including several hotels. Lights from the town show up well at night. Thence:

W of Monte Mancuso (35½ miles SSE), a radar station stands on the summit.

The W coast of Italy S of latitude 39°N is described in *The Mediterranean Pilot Vol. 1*.

Useful mark

13.129

1 Torre di Rienzo (square, surrounded by a ruined wall) (39°32′·3N, 15°54′·0E). The tower stands on a steep, rugged, red coloured part of the coast.

Anchorages

Marina di Fuscaldo

13.130

1 Marina di Fuscaldo (39°25′·0N, 16°00′·4E). With local knowledge fair weather anchorage in depths of about 10 m, sand, good holding ground, can be obtained off Marina di Fuscaldo. In less favourable conditions anchorage can still be obtained but further offshore. It is dangerous to remain at this anchorage in SW winds. Mariners should note the outfall pipeline extending 2 cables SW from Marina di Fuscaldo.

Marina di Paola

13.131

1 Marina di Paola (39°21′·6N, 16°01′·8E). With local knowledge anchorage can be obtained in depths of about 15 m, 1¾ cables offshore. In fair weather small vessels anchor closer inshore in depths of about 6 m, good holding ground. If conditions deteriorate and winds with an E component or onshore winds develop the anchorage must be quitted at once.

2 Anchorage off Torre di Paola should be avoided because of poor holding ground and this berth is more exposed to the sudden breakers, known locally as *guttafarra* which come in from the SW particularly in the summer.

Marina di Amantea

13.132

1 Marina di Amantea (39°08′·1N, 16°04′·2E). With local knowledge anchorage can be obtained close inshore in depths of about 8 m, sand, good holding ground, off Marina di Amantea. Mariners should beware of a prohibited anchorage area enclosing a current meter (13.124).

Small craft

Porto di Cetraro

13.133

1 **General information**. Porto di Cetraro (39°31′·7N, 15°55′·3E) is a small craft and fishing harbour protected by an outer mole, Molo di Sopraflutto, extending 2½ cables SE from Capo Testa. Molo Martello extends NE, from a position NW of Molo Sopraflutto Head, towards Molo Sottoflutto, also known as Molo San Giorgio, which extends SSW from the coast. The harbour entrance lies between the heads of Molo Martello and Molo San Giorgio, is marked by lights; Molo San Giorgio Head (green mast, 4 m in height), Molo Martello Head (red mast, 4 m in height), is 60 m wide and has a depth of about 5 m. Maximum draught accepted 4 m. Vessels entering and leaving the harbour must remain at least 20 m clear of Molo San Giorgio Head because of the partial collapse of the breakwater.

2 **Berths**. The basin is lined with quays.

Facilities. Comprehensive small craft facilities including repairs.

Supplies: fuel; water; provisions.

Other names

13.134

1 Monache, Fiume delle (39°08′·4N, 16°04′·2E).
Verre, Torrente (39°09′·7N, 16°04′·0E).

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