

SECTOR 4

COAST OF SPAIN—CABO PENAS TO CABO FINISTERRE

Plan.—This sector describes the N and NW coasts of Spain between Cabo Penas and Cabo Finisterre. The descriptive sequence is from E to W, and then SW.

General Remarks

4.1 The coast between Cabo Penas and Cabo Finisterre, which extends W and SW for about 180 miles, consists of high, rugged terrain with numerous prominent peaks rising only a short distance inland. Between Cabo Penas and Golfo de Foz, about 60 miles W, the coast is fairly straight with only a few projecting points; however, from there to Cabo Finisterre, it becomes very irregular and is indented by numerous bays and inlets.

The shoal depths and dangers, which fringe this section of coast, can, in most cases, be considered to lie within 5 miles seaward of the salient points.

Some of the ports and harbors, which are found within the bays and inlets, are commercially important to ocean-going vessels, but most are frequented only by fishing vessels. Puerto de La Coruna and El Ferrol del Caudillo, the two largest commercial ports, are located about 50 miles NE of Cabo Finisterre and are capable of handling all classes of vessels.

Caution.—This coast should be given a wide berth at night or in thick weather. When the position of a vessel is not absolutely known, continuous soundings should be taken and the coast not be approached in depths of less than 120m. Many of the navigation lights are placed so high that they are frequently obscured by fog or mist and cannot be relied upon under such conditions.

Cabo Penas to Cabo Vidio

4.2 Cabo Penas (43°39'N., 5°51'W.), which consists of three rugged and precipitous points, is one of the most salient projections along this coast and is easily identified from any direction. Its cliffs, which attain a height of about 100m, have a whitish appearance and some trees and dwellings stand on the flat top.

A main light is shown from a prominent tower with a dwelling, 18m high, standing on the cape. A radiobeacon is situated at the light.

La Gaviera, a high and steep islet, lies close N of the NE extremity of the cape, and a chain of rocks extends up to about 0.5 mile NNE of it. La Romanella, a drying pinnacle rock, lies at the seaward end of this chain and is the outermost danger. It is marked by breakers when a swell is running. Isla Erbosa, a rocky island, lies 0.5 mile NW of the NW extremity of the cape. Los Conos, a group of pinnacle rocks, lies up to 0.6 mile N of this island. The outermost rock of the group breaks during foul weather and is marked by ripples at other times.

Somos Llungo, a detached and steep-to shoal, lies about 3 miles NE of Cabo Penas. It has a least depth of 34m and breaks heavily during bad weather. La Espadana, a similar shoal with a least depth of 37, lies about 0.3 mile SW of it.



Cabo Penas Light

Caution.—Vessels approaching Cabo Penas from the W, in fine weather or with SW winds, may pass between Somos Llungo and the cape. However, in bad weather, the cape should be given a berth of 5 to 6 miles. This is not only to avoid the breakers on Somos Llungo, but also to avoid the heavy seas raised by the uneven bottom which extends a considerable distance offshore.

Contrary winds are frequent in the vicinity of the cape. Vessels may sometimes approach the cape with a strong NE or E wind and then encounter a W or SW wind near the land. The reverse may occur with W or SW winds.

Strong S winds in the vicinity of the cape may be dangerous and strong NW winds cause heavy seas which may close the ports.

Off Cabo Penas, the general direction of the current is E, particularly in winter. During the summer months, the current sometimes sets W, especially during the prevalence of NE winds. The flood currents set SE and the ebb currents set SW. Generally, they are stronger to the E of the cape than to the W.

Cabo Negro (43°37'N., 5°55'W.), 61 m high, is located 3.5 miles SW of Cabo Penas. It is precipitous and fronted by a rocky ledge. A funicular cable railway is situated on the top of the cape and is conspicuous from seaward.

Punta de la Forcada, marked by a light, is located 2 miles SW of Cabo Negro. It is the NW extremity of the Peninsula de San Juan, which forms the N side of the approach to the Ria de Aviles. Ensenada de Chago, bordered by an extensive beach, lies between the S side of Cabo Negro and Punta de la Forcada. A dangerous wreck lies off this bay, about 1 mile NE of the latter point.

Aviles (43°35'N., 5°55'W.)

World Port Index No. 37600

4.3 Aviles, a well-sheltered harbor, lies within the Ria de Aviles. It is one of the principal export ports for iron and steel and is also a fishing center.

Winds—Weather.—The prevailing winds are either from the NW or NE. Severe NW gales make entry into the harbor extremely difficult. Winds from the SW to NW may increase



The Ria de Aviles

the height of the tide and advance the time of HW. Winds from the NE may cause the opposite effect.

Tides—Currents.—Tides rise about 4m at springs and 3.1m at neaps.

Depths—Limitations.—The entrance channel is 153m wide and has depths of 8 to 10m. The commercial quays have depths of 3.5 to 9m alongside.

An overhead power cable, with a vertical clearance of 50m, spans the fairway in the S part of the harbor.

Generally, vessels up to 130m in length should have an underkeel clearance of 0.6m; vessels between 130 and 150m in length should have an underkeel clearance of 0.9m; and vessels between 150 and 210m in length should have an underkeel clearance of 1.2m.

Vessels entering are usually limited to 210m in length and 10m draft; however, vessels of greater length may enter with special permission. It was reported (1993) that a vessel with a length of 223m and a draft of 10.5m had been accommodated in the port at HW.

The port can handle tanker, general cargo, and bulk vessels. There are also extensive facilities for fishing vessels.

Aviles Berth Information		
Name	Length	Depth
Raices	1,080m	8.0m
Raices extension	250m	12.0m

Aviles Berth Information		
Name	Length	Depth
San Juan East	160m	6.0m
San Juan South	300m	6.0m
San Juan West	278m	3.5m
San Juan Southwest	90m	2.0m
Aceralia East	165m	9.0m
Aceralia East and South	715m	7.0m
Aceralia South	107m	5.0m
Inespal	133m	7.0m

Aspect.—The river entrance is sheltered on the N side by the Peninsula de San Juan, which rises to a height of 72m at the summit of Monte Bocon. Punta del Castello, located close SE of Punta de la Forcada, is the N entrance point. A prominent ravine, with high steep sides, indents the coast between these two points and is conspicuous from seaward.

The entrance channel, which passes S of Punta del Castello, extends E between two parallel embankments and then turns S into the harbor. It is marked by lighted beacons.

A main light (Aviles) is shown from a prominent tower with a dwelling, 14m high, standing on Punta del Castello. A dis-used signal station stands close N of it. An approach lighted buoy is moored 0.6 mile W of the light.

The town of Salinas is situated 1.4 miles SSW of Punta del Castello. Playa del Espartel, a conspicuous white beach, extends from the S side of the river entrance to the town and is easily identified from a considerable distance offshore. The high buildings at the SW end of the beach are also prominent.

Pilotage.—Pilotage is compulsory for all vessels over 50 grt. Vessels should send an ETA 2 hours in advance and confirm it on VHF channel 14 when 10 miles from the port. The pilot boards 1.5 miles NNW of the entrance.

Anchorage.—Vessels waiting to enter may anchor, in depths of 15 to 20m, about 0.5 to 1 mile from Punta del Castello, with Aviles Light bearing between 060° and 150°.

4.4 Cabo Vidrias (43°35'N., 6°01'W.), located 3 miles WSW of Punta de la Forcada, is a high, steep, and salient point which is fronted by several detached dangers. El Peton, with a least depth of 6.5m, lies 1.2 miles NNE of the cape. It is the outermost danger and breaks during heavy weather.

Isla Deva, 81m high, is a prominent small island lying 0.8 mile WNW of the cape.

Puerto de San Esteban (43°34'N., 6°05'W.), a small port, lies at the W side of the Ria de Pravia, 2.9 miles SW of Cabo Vidrias. The entrance to the estuary is protected by breakwaters and training walls. Punta Espiritu Santo, 109m high, is the W entrance point. It has a steep E slope and is surmounted by a prominent hermitage.

Tides here rise 3.9m at springs and 3m at neaps, but may be affected by winds. The bar which obstructs the approach to the river is subject to rapid changes and may be completely obstructed after freshets in the winter. The currents are strong in the vicinity of this bar and may attain rates up to 4 or 5 knots at times.

The entrance channel, which leads between the breakwaters, is about 150m wide and is marked by a lighted range. There is a least depth over the bar of 1.2m and depths of 3.7m in the channel. The harbor, which consists of a basin, lies about 1 mile S of the entrance. It has 950m of total quayage with depths of 3 to 4.9m alongside. Local knowledge is required.

Note.—It was reported (1990) that the port is not open to commercial shipping. Dredging has not been carried out and the channel and berths have silted up.

4.5 Puerto de Cudillero (43°34'N., 6°09'W.), a small harbor, is situated 3 miles W of the entrance to San Esteban. It is entered close W of Punta Rebollera and protected by breakwaters and a chain of islets. A main light is shown from a prominent tower with a dwelling, 10m high, standing on Punta Rebollera. The harbor has depths of 2m and is used by fishing vessels.

Concha de Artedo, a small bay, is located 1.5 miles W of Punta Rebollera and provides shelter during the summer months. It is entered between Punta Castanal and Punta Auster, 1 mile WNW. Vessels may anchor, in a depth of 14m, sand, at its W shore. During the winter, a heavy swell rolls in from the NW and the wind may suddenly shift to the NE making this anchorage untenable.

Las Osteras, a group of drying rocks, extends up to 0.4 mile N of Punta Castanal. Monte Montares, 405m high, stands 1.3 miles SSW of Punta Castanal. A hermitage stands on its SE side and is prominent.

Islote Rabion de Artedo, a high and rocky islet, lies close NW of Punta Auster and is connected to the coast by a chain of rocks. In bad weather, this islet should be given a berth of at least 1 mile as high seas prevail in its vicinity.

Cabo Vidio (43°35'N., 6°15'W.), 89m high, is located 2.5 miles WNW of Islote Rabion de Artedo. This cape is the N extremity of an extensive cultivated plain and is fronted by foul ground which extends up to 0.3 mile seaward. Islote Chouzano, a high and conical islet, lies close N of the cape and is connected to it by a reef. A main light is shown from a prominent tower attached to a dwelling, 9m high, standing on the cape.

Cabo Vidio to the Ria de Ribadeo

4.6 Punta Esquiton (43°36'N., 6°16'W.) is located 1.5 miles SW of Cabo Vidio. Los Negros, so called because of their dark color, are a group of above-water and drying rocks which extend up to 0.5 mile NNW of the point. During the summer, small vessels with local knowledge can anchor off Playa de Cadavedo, 4.5 miles SW of this group.

Cabo Busto (43°34'N., 6°28'W.), 68m high, is located 10 miles W of Cabo Vidio. It is formed by the N face of a plateau, 800m wide. Foul ground and rocks extend up to 0.4 mile seaward from the N and W sides of the cape. A main light is shown from a prominent tower attached to a dwelling, 10m high, standing close to the cliff top of the cape.



Cabo Busto Light

A ridge of hills extends between Cape Vidio and Cabo Busto and attains heights of more than 610m, about 5 miles from the coast. Monte Palancas, the summit of this ridge, attains a height of 718m, 5 miles ESE of Cabo Busto.

Bajo El Serron (43°38'N., 6°24'W.), a rocky bank, lies about 4.5 miles NE of Cabo Busto. It has a least depth of 39m and is dangerous at all times. In bad weather, heavy seas have been observed breaking over it.

El Peton, a similar bank, lies 2 miles NNW of Cabo Busto. This bank has a least depth of 62m and heavy seas break over it at times.

The Rio Canero flows into the sea 1.3 miles SSW of Cabo Busto. The coast between is high, steep, and reddish in color. Small vessels can anchor, in depths of 5 to 10m, off the river mouth and are sheltered from NE winds.

Concha de Luarca (43°33'N., 6°32'W.), a small bay, lies 2.5 miles W of the Rio Canero. It is entered between Punta Inguilo, 65m high, and Punta Mujeres, 37m high, 0.7 mile W. Punta Focicon is located 0.4 mile W of Punta Inguilo. It is the N extremity of the Peninsula La Blanca which forms the E side of the bay. A light (Punta Blanca) is shown from a tower, with

a dwelling, 9m high, standing on Punta Focicon and a prominent chapel is situated near it.

Rocks and foul ground lie up to 0.4 mile seaward of the entrance points.

Luarca, a small harbor, is situated at the head of the bay and protected by three breakwaters. It has a depth of 3m and is used by fishing vessels and yachts. A lighted range indicates the entrance channel, but local knowledge is required.

4.7 Punta del Cuerno (43°34'N., 6°36'W.), 42m high, is located 3 miles W of Concha de Luarca. The coast between is generally steep and clear of dangers. This point has a prominent reddish horn-shaped rocky projection on its head. La Vaquina, a detached pinnacle shoal, lies close NE of the point and uncovers in rough seas.

Punta Romanella, a steep and rocky point, lies 1 mile WNW of Punta del Cuerno. Islotes Romanellas, three rugged islets, lie close N of this point and are prominent from the E and W. Punta Barroca, surmounted by a chapel, is located 1.3 mile WSW of these islets.

Puerto de Vega (43°34'N., 6°39'W.), a small inlet, is entered SW of Punta Lama, located 1 mile WSW of Punta Romanella. It is only available to small craft with local knowledge. The entrance channel is 13m wide and tortuous. The harbor lies at the head of the inlet and is formed by a mole. It dries at LW and can accommodate small craft and fishing boats with drafts of 1.8 to 2.7m at HW.

4.8 The Ria de Navia (43°34'N., 6°43'W.) lies 3.5 miles W of Puerto de Vega. The estuary is entered between Punta de La Sierra and Cabo San Agustin, 1 mile W, and leads 1.3 miles S to the river mouth, where it is spanned by a cantilever bridge.

A light is shown from a prominent tower, 20m high, standing on Cabo San Agustin and several large white buildings stand close S of it. Monte Jarrio, 365m high, stands 2.1 miles SSW of the river mouth and is conspicuous.

A submarine oil pipeline extends seaward from the W side of the entrance to the river and is marked by a lighted buoy moored 0.5 mile NE of Cabo San Agustin. Small craft can anchor, in a depth of 5m, off a beach, on the SE side of the cape, being careful to avoid the above pipeline.

A shallow channel leads between training walls to a basin lying on the E bank of the river, close below the bridge. Small craft with local knowledge can pass over the bar and reach this basin.

Cabo Blanco (43°34'N., 6°51'W.), 21m high, is located 5.2 miles W of Cabo San Agustin. It is a prominent cliffy point, with white patches on the W side, fronted by drying rocks and foul ground.

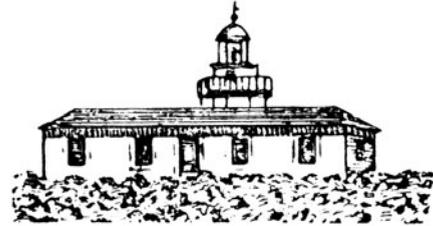
4.9 Cabo de San Sebastian (43°34'N., 6°57'W.) is located 9.7 miles W of the Ria de Navia. The coast between is indented by several small bays which offer shelter to small craft with local knowledge.

The cape is the NE end of a promontory on which stands the town of Tapia. The church in this town has no tower, but is reported to be conspicuous above the other buildings.

Isla de Tapia, 18m high, lies close N of the cape and is fronted by rocks. It consists of an enormous mass of rock and

is connected to the cape by a mole. A main light is shown from a tower attached to a dwelling, 8m high, standing on the island.

Islote Orrio de Tapia, a low conical islet, lies close NW of Isla de Tapia and is connected to it by a reef which almost dries. Foul ground, most of which dries, extends up to 0.3 mile N of the islet.



Isla de Tapia Light

Puerto de Tapia (43°34'N., 6°57'W.), a small harbor, is situated on the W side of Cabo de San Sebastian and is formed by two breakwaters. It has a depths of 2 to 6m and is used by fishing vessels and small coasters.

El Coitelo, a detached bank, lies 1.3 miles NNE of Isla de Tapia. It has a least depth of 14m and breaks with a light swell. Bajo Mar Bella, a similar bank, lies 1.3 miles NNW of the light. It has a least depth of 28m and breaks with a heavy swell.

4.10 Golfo de Foz (43°37'N., 7°15'W.), also known as the Golfo de La Masma, is the broad expanse of water lying between Cabo de San Sebastian and Cabo Burela, 19 miles WNW. The shores of this gulf are foul up to 0.5 mile seaward in places and the depths are irregular over a rocky bottom. A high sea is raised within the gulf in N gales, and a wide berth should be given to the coast at such times. In the winter, gales from the SW are usually accompanied by heavy squalls, especially in the vicinity of the Ria de Foz and winds from the NE raise a steep sea near the shore.

During the summer, the coastal current sets W and is strongest between June and September, when a rate of 2 knots may be experienced off Islote Orrio de Tapia and Cabo Burela. During the winter, the current sets E or SE off Cabo Burela, and with NW gales, attains a rate of 2 knots. The currents are felt but a short distance off the coast with the ebb setting W and the flood setting E. Caution is advised when navigating this coast during unsettled weather.

Fog is frequent in June and July and usually persists for 3 or 4 days. Fogs are almost always preceded by a fresh NE wind. When **Monte Mondigo** (43°31'N., 7°08'W.) is covered by fog or haze and the coast W of San Ciprian is obscured by fog, this usually indicates the approach of a NE wind, but if these places are clear, a W wind will prevail.

4.11 The Ria de Ribadeo (43°33'N., 7°02'W.) is located 4 miles WSW of Cabo de San Sebastian. It is entered between Punta de La Cruz and Isla Pancha, 0.5 mile W, and extends 5.5 miles S to the town of Vegadeo, at the mouth of the Rio Eo. This estuary is encumbered by numerous shifting sandbanks which dry at LW. At HW, it is completely covered and the narrow channels, which lead through the banks, are obscured. A main entrance channel, which leads to the facilities on the W

bank of the estuary, is indicated by sets of lighted range beacons.

A main light is shown from a tower, 13m high, standing on Isla Pancha. A disused light with a dwelling and a factory building are situated close SSW of it and are conspicuous.

Bajo Arredo, a rocky shoal, lies about 0.3 mile NW of Punta de La Cruz. It has a least depth of 8.2m and breaks during NW gales. Bajo Panchorro, another rocky shoal, lies about 200m N of Isla Pancha. It has a least depth of 3.4m and breaks with any sea.

A cantilever bridge, with a vertical clearance of 30m, spans the estuary 0.8 mile S of the entrance.

4.12 Villa de Ribadeo (43°32'N., 7°02'W.) (World Port Index No. 37670) stands on the W side of the Ria de Ribadeo, 1.2 miles S of the entrance. A tall building with red colored domes that reflect in the sun stands in the town and is conspicuous from seaward. The harbor extends 1 mile S from the cantilever bridge and is encumbered with sand banks. Tides here rise 4m at springs and 3.1m at neaps, but they can be affected by the wind. The tidal currents can attain rates up to 3 knots.

Muelle de Porcillan, 350m long, dries and is used by small craft. Muelle de Mirasol, the main quay, is situated at Figueirua, S of the town. It is 275m long and has a depth of 3.8 to 4.2m alongside. It is extended 200m NE by a jetty and is used by coasters, fishing vessels, and yachts. The entrance channel has depths of 1.4 to 5m; vessels up to 4.5m draft can be handled. Pilotage is compulsory and available for vessels over 50 grt, but all vessels require local knowledge. The harbor can be contacted on VHF channel 12 or 16.

The harbor is reported to be inaccessible in bad weather due to the whole area fronting the estuary being covered by breakers. Vessels can anchor, in depths of 7 to 11m, in the outer part of the estuary but local knowledge is required.

The Ria de Ribadeo to Ensenada de Santa Marta

4.13 Punta Corbeira (43°34'N., 7°07'W.), 9m high, is located 3.3 miles W of the Ria de Ribadeo and fronted by rocks. The small town of Rinlo stands on its E side and is visible from seaward. A creek flows into the sea on the W side of the town and can be used by small craft.

Punta Promontoiro, located 2.8 miles W of Punta Corbeira, is fringed by reefs which extend up to 0.3 mile offshore. Restinga de Remior, a rocky ledge, lies parallel to the coast between this point and Punta Prados, the E entrance point of the Ria de Foz, 2.5 miles W. Co de La Cana, the outermost danger of this part of the coast, lies about 1.5 miles NW of Punta Promontoiro. This rocky shoal has a least depth of 22m and breakers begin to form in its vicinity in bad weather.

The **Ria de Foz** (43°34'N., 7°15'W.) is entered between Punta Prados and Punta de Los Cairos, 14m high, 0.5 mile NW. This inlet extends S for 2.5 miles to the mouth of the Rio Masma. It dries at LW and is only used by small craft and fishing boats with local knowledge. The bar at the entrance dries and is impassable at LW. Weather permitting, small craft with drafts up to 3.3m can enter at HW. The small town of Foz stands on the W side of the estuary.

Punta de Los Cairos, cliffy and steep-to, is fronted by Los Cairos, a group of five rocks standing almost as high. Castro de

Foz, 80m high, stands 0.7 mile SW of the point. This hill is prominent from the N and NE and is surmounted by conspicuous pine trees.

Monte Mondigo, 564m high, stands 5.5 miles SE of the entrance to the Ria de Foz. This isolated peak can be seen from a considerable distance offshore and appears as a rounded cone rising out of the sea; however, during the summer, the peak is usually obscured. Pico Penabor, 329m high, stands 2.5 miles S of the entrance to the Ria de Foz. This peak is very steep and prominent from seaward. It can usually be seen when Monte Mondigo is obscured.

Monte Corneria, 436m high, stands 4 miles SSW of the entrance to the Ria de Foz and is a good mark from all directions. Monte Frouseira, 421m high, stands 3 miles WNW of Monte Corneria and is conspicuous when viewed from the E.

The Rio del Oro flows into the sea 2.2 miles NW of the entrance to the Ria de Foz. Its entrance can be identified by three bridges which span the river. Small craft can cross the bar at the mouth and enter the river at HW.

4.14 Cabo Burela (43°40'N., 7°21'W.), 31m high, is located 7.7 miles NW of the entrance to the Ria de Foz and is fronted by a reef and foul ground. The coast between is fronted by several small points with sandy beaches between them. Several large white buildings stand on this cape and are conspicuous from offshore.

Arnelas, a rocky shoal, lies about 1.5 miles E of the cape. It has a least depth of 20m and breaks with a heavy sea. Petano, another rocky shoal, lies about 0.7 mile E of the cape. It has a least depth of 4.8m and breaks with a heavy sea; another depth of 4.8m lies 240m E of Petano. Piedra Burela, a rock, lies 0.6 mile SE of the cape, at the outer edge of the reef. It is 8m high and is marked by a beacon.

Monte Cabaleiro, 502m high, stands 4 miles SW of Cabo Burela. Its peak is conical and prominent from seaward.

Burela (43°39'N., 7°21'W.), a small harbor, is situated 1 mile S of Cabo Burela and protected by breakwaters. Several houses stand on the cliffs backing the harbor and a conspicuous factory chimney stands close N of them. Two prominent silos stand at the N breakwater.

The harbor has an entrance 90m wide. A quay, with a depth of 1.8m, is situated on the inner side of the N breakwater. It is used by coasters and fishing vessels. Vessels up to 2,800 dwt, with a maximum draft of 7m, can be handled at HW. The port can be contacted by VHF and local knowledge is required for entering. Anchorage can be obtained, in a depth of 6m, sand with good holding ground, about 0.2 mile NE of the head of the N breakwater.

4.15 Punta Castro (43°41'N., 7°24'W.), 27m high, is located 2 miles NW of Cabo Burela. It is fronted by a reef and several drying rocks which provide protection to the Rio Junco, entered close SW. Small craft with local knowledge can enter this river and seek shelter from NE seas.

Cacheimo de Tierra, with a least depth of 0.8m, lies 0.3 mile offshore, about 1 mile NW of Cabo Burela. Cacheimo de Fuera, with a least depth of 13.7m, lies about 1.2 miles NNW of Cabo Burela. During bad weather, the sea breaks on both of these rocky shoals.

Co da Baixa, with a least depth of 18.9m, lies about 1 mile NNE of Punta Castro. Juan Marino, with a least depth of 15.8m, lies about 1.2 miles N of the same point. Both of these shoals break with a moderate sea.

Vessels are advised to give this part of the coast a berth of at least 2 miles in all weathers.

4.16 Ensenada de San Ciprian (43°42'N., 7°26'W.), a small bay, is located 4 miles WNW of Cabo Burela. It fronts the approach to Puerto de San Ciprian and lies between Punta Atalaya, the N extremity of Cabo San Ciprian, and Cabo Moras, 2 miles NW.

A main light (Atalaya) is shown from a tower, 14m high, standing on Punta Atalaya. A disused light, with a dwelling, 9m high, stands close W of it. Monte Medela, a 243m high peak, stands 2.2 miles SSW of Cabo San Ciprian and is prominent. Co Tras Atalaya, a rocky bank with a least depth of 3.6m, lies about 0.3 mile NNE of Punta de Atalaya. Cabo Moras, 30m high, is rugged, steep, and has a pointed rock at its base.

Restinga de San Clemente, extending up to 0.5 mile E of Cabo Moras, has a least depth of 7.8m.

Bajos Congrejeiros, a group of rocky patches, lies 0.5 mile N of Cabo Moras and has depths of 12 and 15m. Sierra Moras, a similar group, lies between Bajos Congrejeiros and the cape and has a depth of 14m. Co d'Area Mayor, a rocky patch with a least depth of 7m, lies about 0.5 mile SSE of Cabo Moras.

Los Farallones, three rocky islets, lie 0.9 mile N of Cabo San Ciprian and are fronted by foul ground. They are marked by a buoy, moored close NW. El Pie, 36m high, is circular, flat-topped, reddish, and the most prominent of the three. The bay may be entered S or W of these islets.

Puerto de San Ciprian (43°42'N., 7°28'W.), a small and shallow harbor, lies in the SE corner of the bay. It is reported to have depths of 2m and is now only used by fishing boats.

Puerto de Alumina Espanola (San Ciprian), a small private port, lies in the SW corner of Ensenada de San Ciprian, 1 mile WNW of Cabo San Ciprian. The harbor is formed by breakwaters which have berths on the inner sides. It can be approached through Canal Norte, which passes W of Los Farallones, or through Canal Este which passes S of the islets. The fairways of both channels are indicated by lighted ranges and have depths of 20 to 24m.

The main berth is 280m long with a depth of 14m alongside. The auxiliary berth is 80m long with a depth of 7.5m alongside. Both are equipped with facilities to handle bulk cargoes. The port can accommodate vessels up to 80,000 dwt and 12.9m draft. Pilotage is compulsory for all vessels of more than 150 gross tons. Pilots can be contacted on VHF channel 14 or 16 at least 2 hours prior to arrival at the pilot boarding station. Pilots generally board 1 mile N of Los Farallones.

Anchorage can be obtained, in depths of 16 to 20m, sand, close E of the S breakwater.

4.17 Pico de La Vela (43°43'N., 7°30'W.), 154m high, stands 1 mile W of Ensenada de San Ciprian. It is conical in shape and forms a prominent landmark, being the highest peak near the coast in this vicinity.

Islote Ansaron, 81m high, lies 1 mile W of Cabo Moras. The N side of this rugged and barren islet is very steep, but its S side slopes gradually to the sea. Co del Ansaron, a rocky shoal

with a least depth of 8.8m, lies close N of the islet and breakers occur over it in bad weather.

Punta Roncadoira (43°44'N., 7°31'W.), 83m high, is located 3.5 miles WNW of Los Farallones. It is steep and has a small bay on the W side. Los Netos, two small islets, lie N of the W entrance point of this bay. A main light is shown from a prominent tower, 14m high, standing on Punta Roncadoira.

The **Ria de Vivero** (43°43'N., 7°36'W.) lies 3 miles W of Punta Roncadoira. The estuary is entered between Punta de Faro and Punta Socastro, 1 mile NW, and extends 2.2 miles S to the town of Villero.

Punta Socastro, 67m high, is steep and fronted by rocks and foul ground. El Co, a detached rocky patch, lies 0.3 mile ENE of the point. It has a least depth of 11m and breaks in bad weather. A light is shown from a tower, 6m high, standing on the point.

Punta de Faro is the termination of Monte Faro Juances, 193m high, which stands close SE of it. This conical peak is an excellent landmark when viewed from seaward because of its isolated position and regular profile. A light is shown from a tower, 6m high, standing on Punta de Faro. Cos de Esteiro, a group of rocks with depths of 4 to 7m, lie up to 0.8 mile NE of the point. Insua de Area, 19m high, lies 0.7 mile S of Punta de Faro. The channel passing E of this islet is foul.

The shores of both sides of the estuary are generally high and steep, and provide good shelter. When approaching the estuary, the most conspicuous peak is Penedo do Galo, which stands 1.5 miles E of the town. It is 547m high and is surmounted by a prominent white pillar. A conspicuous hermitage, which stands on the slope of this peak, is clearly visible when the top of the mountain is obscured.

Puerto de Cillero, a small harbor, lies on the E side of the estuary and is protected by breakwaters. There is a quay, 200m long, on the inner side of the breakwater, with depths of 6 to 8m alongside. Another quay, 90m long, has depths of 4 to 6m alongside. The harbor is used by fishing vessels and small coasters. The harbor can be contacted by VHF and local knowledge is required for entering.

Villa de Vivero, a small town, stands on the E bank of the entrance to the Rio Landrove, 1 mile S of Cillero. It is formed by a coastal quay and a pier which follows the alignment of the river, which is about 80m wide and encloses an inner harbor dredged to a depth of 3m. The port is used by fishing vessels and small craft.

4.18 Punta Camero (43°46'N., 7°38'W.), 46m high, is located 2.5 miles NNW of the entrance to the Ria de Vivero. The coast between is bold and steep-to. Vigia de Vicedo, a 155m high peak, stands 0.5 mile SW of the point and is prominent.

The **Ria del Barquero** (43°46'N., 7°40'W.), also known as the Rio del Bares, is entered between Punta Camero and Cabo de Bares, 1.5 miles NW, and extends 3 miles SW to El Barquero. The shores of this estuary are high and steep-to, and provide shelter from all except NE winds.

Isla Coelleira is located 0.3 mile NNE of Punta Camero and separated from it by a narrow and deep passage. The island is 82m high, grass covered, and its N and NE sides are steep. The passage S of the island should not be attempted with N or NW gales, as the

sea breaks right across it. A light is shown from a tower, with a dwelling, 7m high, standing on the summit of the island.

From Punta Camero, the E side of the estuary extends 0.5 mile W to Punta Chileiteria and then 1 mile farther W to Punta Cueva Baja, a high and rocky point. This stretch of shore is steep-to and is dominated by Monte Ventoso, 155m high, standing 0.4 mile ESE of Punta Chileiteria. A prominent look-out hut is situated on its summit.

Puerto de Bares, a small village, stands on the N side of a bay at the W side of the estuary. It is fronted by a breakwater which provides shelter to small craft.

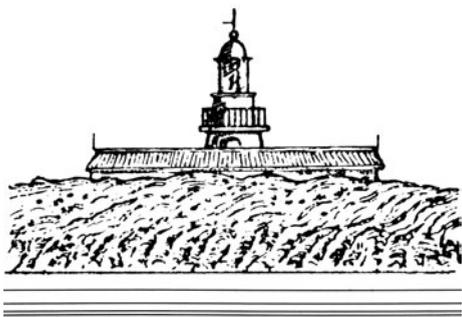
In summer, coasters anchor, in depths of 16 to 20m, within the estuary. However, local intensification of winds between S and SW has been reported in this estuary. Vessels seeking shelter from SW winds of force 9 have reported experiencing winds of force 11 to 12 within the anchorage. Vessels should also use caution to avoid any fishing nets which are sometimes laid across the entrance.

El Barquero, a village, stands in the shape of an amphitheater at the head of the estuary. It is situated on the slopes of the W bank of the Rio Sor and fronted by a small harbor. The entrance channel is narrow and shallow. Small craft and fishing vessels, with drafts up to 3.3m, can reach this harbor at HWS. When NE winds prevail, a swell breaks over the bar and makes the entrance impracticable.

Cabo de Bares, the N entrance point of the estuary, is formed by high mountainous land which terminates in Monte Facho de Maeda. This peak, 337m high, stands 2.5 miles S of the cape and is conspicuous.

4.19 Punta de La Estaca de Bares (43°47'N., 7°41'W.) is located 1.5 miles NW of the W entrance point of the Ria del Barquero and is the N point of Spain. It extends in a gentle slope from Monte Bares and terminates in rugged and pointed rocks. Several small islets lie close NW of the point. Monte Bares, 208m high, is surmounted by a conspicuous disused signal station.

A main light is shown from a tower with a dwelling, 10m high, standing on the point. A radiobeacon is situated at the light.



Punta de la Estaca Light

If the sea is smooth, the outer islet off Punta de La Estaca de Bares may be passed at a distance of about 1 mile, but with a heavy sea from the W or NW, it should be given a berth of at least 3 miles.

Tides—Currents.—Off Punta de La Estaca de Bares, the flood tidal currents set NE and E while the ebb currents set SW and W. Both currents attain rates of up to 2 knots and extend a considerable distance offshore.

Farther offshore, the currents set with the prevailing winds and are strong with fresh winds from the W or E. It has been reported that for a day or two before a gale, the current sets towards the direction from which the bad weather is approaching.

Caution.—The coast between Punta de La Estaca de Bares and Cabo Prior (43°34'N., 8°19'W.), about 30 miles SW, consists almost continuously of steep and inaccessible rocks. During bad weather, it should be given a berth of between 7 and 11 miles.

Ensenada de Santa Marta

4.20 Cabo Ortegal (43°45'N., 7°53'W.), which forms the W side of Ensenada de Santa Marta, is located 9 miles W of Punta de La Estaca de Bares. The cape consists of a mountainous promontory which terminates in Punta de Los Aguilones, its NE extremity.

A main light (Cabo Ortegal) is shown from a tower, 10m high, standing on Punta de Los Aguilones. Cabo Ortegal is easily identified from both the E and W, but not from the N. The upper reaches of the cape are frequently obscured by clouds, especially with NE winds when they are almost always covered.

Los Aguilones is a chain of steep, sharp-pointed, and bare islets which extends N from Punta de Los Aguilones. Caballo Juan, the outermost islet, is 41m high and lies 0.5 mile seaward of the point. The narrow passages leading between some of these islets are deep, but they should not be attempted without local knowledge.

Ensenada de Santa Marta, an extensive bay, is entered between Punta de La Estaca de Bares and Punta de Los Aguilones, 8 miles W. The Ria de Santa Marta flows into its head. Ensenada de Carino, a small bay, is located on the W side of Ensenada de Santa Marta, 2 miles S of Punta de Los Aguilones. Monte Gargacido, 353m high, stands 0.5 mile S of Punta de Los Aguilones and Monte Faroleiro, 350m high, stands 0.5 mile S of it. Both of these peaks are well-defined and prominent when viewed from the E.

The Ria de Santa Marta can only be approached with safety during the summer. During the winter, heavy seas raised by winds between the NW and NE are experienced near the entrance.

Punta Bandeja is located 5.5 miles SW of Punta de La Estaca de Bares. The coast between consists of steep, whitish rocks, with a few scattered beaches. This point is the N extremity of Monte Cova Guion, a ridge, which rises to a height of 102m and can be easily identified by several white rocks on its summit. A rocky ridge, with depths of less than 11m, extends up to 0.7 mile NW of the point and terminates in Piedras Meas, two rocks close together, 0.6m high and steep-to. These rocks form the outermost danger from the shore of Ensenada de Santa Marta. Gorgola, a detached 3.7m patch, lies 0.5 mile NNW of the point. In strong winds, the narrow passage between Piedras Meas and the point is covered by breakers.

Punta Espasante, a steep headland, is located 1 mile SW of Punta Bandeja. A prominent watch tower stands on its summit.

Ensenada de Espasante, a small bay, lies between Punta Espasante and Punta do Tallo, 0.7 mile SW, and its shores are fringed by shoal ground. Anchorage can be taken, in depths of 5m or more, about 300m from the shores of the bay, preferably towards its S end where the bottom is sand. A small village stands on the N side of this bay and is fronted by a jetty which is used by fishing boats.

Punta del Castro is located 2 miles S of Punta de Los Aguillones. The coast between is bold, rugged, and steep-to.

Ensenada de Carino, a small bay, lies between Punta del Castro and Punta del Castro da Moura, 1 mile SSE. A small harbor, protected by a breakwater, is situated at the head of the bay. The Commercial Wharf, on the W side of the breakwater, has two berths; one berth is 210m long, with a depth of 9m alongside, while the second berth is 180m long, with a depth of 7m alongside. Other berths have depths of 4 to 6m alongside and are used by local fishing vessels.

Monteron del Oeste, a drying reef, extends 0.2 mile NE from Punta del Castro da Moura. Monteron del Este, a 1m high pinnacle rock, lies 0.2 mile E of the same point.

The **Ria de Santa Marta** (43°43'N., 7°51'W.) is entered between Monte de Mazanteo, 219m high, and Monte Castro de Ladrado, 175m high, 2.5 miles ESE. Both of these conical-shaped hills are prominent. Isla de San Vicente, 56m high, lies in the approach, 1.5 miles ESE of Monte de Mazanteo. Two approach channels, one on either side of this island, lead to the river mouth.

Santa Marta de Ortigueira (43°41'N., 7°51'W.), a small town, stands on the E shore of the river and is fronted by a harbor which dries at LWS. A narrow and tortuous entrance channel leads between tidal flats to the harbor and passes over a bar with a depth of 1.5m. The harbor is used by small coasters and fishing vessels with drafts up to 3.5m at springs and 3m at neaps. Local knowledge is required as the fairway is unmarked and the tidal currents can attain rates up to 6 knots at springs.

Esenada de Santa Marta to the Ria de el Ferrol

4.21 Punta del Limo (43°46'N., 7°54'W.) is located 1.5 miles WSW of Punta de Los Aguillones. The coast between is fringed by drying rocks. Bajo Lee, a rock which always breaks, lies about 0.3 mile N of the point. Punta del Limo, high and precipitous, is the NW extremity of Cabo Ortegal. It rises in gradually higher plateaus to Garita del Limo, 558m high, 1.5 miles S. The point is not easily identified from seaward because of the high land behind it.

Inland, the coast extending up to 6 miles SW is dominated by Sierra de La Capelada, which rises steeply to heights in excess of 400m.

Punta del Cuadro (43°44'N., 7°57'W.), located 2.5 miles SW of Punta del Limo, is the outer extremity of a spur which projects NW from Sierra de La Capelada. The point may be identified by a steep and black cliff at its extremity and by Piedra del Cuadro, a large square-faced rock, standing close off its N side. A large white hermitage stands on the mountain slope, 2.5 miles SW of this point, but is only visible from between NW and SW.

The Islas Gabeiras, two large detached rocky islets, lie close to the coast, 1.8 miles SW of Punta del Cuadro.

Caution.—A restricted area, the limits of which are shown on the chart, lies 5 miles NNW of Punta del Cuadro. Anchoring, fishing, and trawling are prohibited within this area.

A shoal, with a depth of 11m (existence doubtful), is reported to lie about 6.5 miles NW of Punta del Cuadro.

Punta Candelaria (43°43'N., 7°51'W.) is located 4.5 miles WSW of Punta del Cuadro and is fronted by foul ground. This part of the coast is known locally as El Fronton de Candelaria and is a rugged, lofty, and inaccessible section of terrain. A main light is shown from a tower with a dwelling, 9m high, standing on the point. Monte Candelaria, 396m high, stands 0.8 mile S of Punta Candelaria and is conspicuous.

A rocky bank, with a depth of 24m, lies 0.5 mile NW of Punta Candelaria and breaks in heavy weather.

Punta Lameda is located 2 miles SW of Punta Candelaria. The coast in the vicinity of the point is high and precipitous. Vigia Eigil, 314m high, stands 0.8 mile ESE of the point and is conspicuous.

Bajo Mascoto, with a depth of 36m, and El Petebellon, with a depth of 29m, lie 3.3 and 2.3 miles W, respectively, of Punta Lameda.

4.22 The Ria de Cedeira (43°30'N., 8°04'W.), an inlet, is entered between Punta Fulgoso, located 0.8 mile S of Punta Lameda, and Punta Chirlateira, 0.8 mile W. It is shallow and usually only used by coasters and fishing vessels with drafts less than 4m. As a port of refuge, it is conveniently located for small craft which cannot round Cabo Ortegal in strong NE winds. During such times, the inlet is easily approached and shelter is provided once the entrance is reached. Local knowledge is recommended for entering the inlet.

The entrance to the inlet can be identified by Monte Burneira, 211m high, standing 1 mile S of the W entrance point, and by Vigia Eigil, previously described above in paragraph 4.21. Both of these peaks are surmounted by ruined towers. In addition, a conspicuous chapel stands on a dark slope, 0.3 mile S of Punta Fulgoso.

Punta Chirlateira is bold, rugged, and fringed by rocks. Several dangers lie up to 0.8 mile NW and 0.3 mile N of the point. El Peton, a detached 10m patch, lies at the seaward edge of the dangers extending to the NW.

Cedeira, a small village, stands on the NW side of the mouth of the Rio Cedeira, which flows into the NE corner of the inlet. It is fronted by a small harbor which is protected by breakwaters. The harbor has depths of 2m and is used by fishing vessels. Vessels may anchor, in a depth of 4m, good holding ground, close E of the breakwaters.

4.23 Punta Frouseira (43°37'N., 8°11'W.), the seaward end of a small peninsula, is marked by a light and lies 4.5 miles SW of Punta Chirlateira. The coast between consists of a number of small inlets and bays which are separated by rocky points. Monte Prados, 183m high, stands midway on this coast. Playa de La Frouseira, a prominent white beach, extends 1.5 miles E from the point.

Piedra Ucha de Fuera, a detached rock, lies about 0.7 mile WNW of Punta Frouseira. It has a depth of 15m and breaks in

moderate seas. Piedra Ucha de Tierra, a rock awash, lies about 0.3 mile W of the same point.

Monte Campelo (43°36'N., 8°12'W.) rises steeply from the sea, 2.5 miles SW of Punta Frouseira. It is 242m high and from the NW appears like a large saddle; however, when viewed from NE, it appears conical. The coast between is indented by two small bays. A hermitage stands on the N side of Cala Portonovo, the N bay, and is conspicuous from seaward.

Between Monte Campelo and Punta Castelo, about 2.5 miles SW, the coast remains steep and of moderate height. Punta de Santa Comba lies about midway between Punta Castelo and the NE extremity of Cabo Prior, 2.7 miles W. A hermitage stands on the summit of the point.

Cabo Prior (43°34'N., 8°19'W.) is located 6.7 miles SW of Punta Frouseira and has a steep NW face about 1.2 miles long. It is the W extremity of a high and rocky promontory which extends 2 miles NW from the general line of the coast. A main light is shown from a tower with a dwelling, 7m high, standing on the N side of the cape. Numerous dangers lie up to 0.5 mile N and 0.7 mile NE of the light.

The promontory appears as an island when viewed from the NE or SW because of the low land which joins it to the coast. From the NW, it blends in with the high land behind, but can be identified by a look out tower situated on the summit.

Caution.—The currents off the cape are governed by the winds. Caution should be observed when passing the cape in NW gales, as there are strong onshore currents at such times. These onshore currents are also equally strong within the bight lying between the cape and the Islas Sisargas, 25 miles SW.

Near the coast, the tidal currents set E during the flood and W during the ebb. They generally form eddies in the bays and off the salient points.

4.24 Bajos Delgados (43°37'N., 8°18'W.) extend up to about 3.5 miles NNE of Cabo Prior. This narrow bank has depths of 8 to 43m and during heavy weather, seas break over its entire length.

Banco de Bermeo (43°41'N., 8°15'W.), with a least depth of 18m, lies about 7.5 miles NNE of Cabo Prior. In calm weather, this bank is frequented by numerous fishing vessels. In bad weather, the sea breaks on it and vessels should stay well clear.

Punta Erbosa is located 2.5 miles S of Cabo Prior and Isla Erbosa lies close off it.

A measured distance of 2,013.8m, on a running course of 047°-227°, lies NW of this point and is marked by two pairs of beacons.

Punta Castro, a rocky point, is located 1.2 miles SSW of Punta Erbosa. The Islas Gabeiras, two dark-colored and barren rocks, lie 0.3 mile WNW of this point.

Bajos Terracidos lies centered 1.2 miles W of the Islas Gabeiras. This rocky bank has very irregular depths and the sea breaks on it in heavy weather.

Cabo Priorino Chico (43°28'N., 8°20'W.), located 3 miles S of Punta Castro, is the SE extremity of Cabo Priorino, a peninsula which forms the N side of the entrance to the Ria de El Ferrol. Cabo Priorino is so called because of its resemblance to Cabo Prior to the N. Cabo Priorino Grande, the SW extremity of Cabo Priorino, is located 0.5 mile NW of Cabo Priorino Chico and both of these headlands are dark colored. Bajo del

Zorron, a shoal with irregular depths, extends about 0.5 mile SW from Cabo Priorino Chico.

A light is shown from a tower with a dwelling, 5m high, standing on Cabo Priorino Chico. Monte Ventoso, a prominent hill, stands 1.5 miles NE of the light. A prominent lookout tower and a signal station are situated on its summit, which is 239m high.

Bajo Cabaleiro lies about 1.3 miles NW of Cabo Priorino Grande. This rocky bank has a least depth of 27m and seas break on it in heavy weather. Banco Las Laixinas lies between 2 and 4 miles W of the same cape. This rocky bank has depths of 17 to 37m and seas also break on it in heavy weather.

The Ria de El Ferrol

4.25 The Ria de El Ferrol (43°28'N., 8°19'W.), an extensive inlet, is entered between Cabo Priorino Chico and Punta Coitelada, 1.5 miles SE, and extends 8 miles E to a port area. It narrows close within the entrance, but then opens out into a broad expanse of water surrounded by high land which provides excellent shelter from all winds. The moderate depths with good holding ground make this inlet one of the best and safest harbors in Spain.

Punta del Segano is located 0.5 mile NNE of Punta Coitelada, on the S side of the entrance. It rises to a hill, 57m high, which is surmounted by a watch tower. Bajo Muela del Segano, a shoal awash, lies close off the point and is marked by a lighted buoy moored on its N side.

Punta de San Martin, marked by a light, is located 1.2 miles ENE of Punta del Segano, at the narrowest part of the channel. A refuse tip, situated close W of the point, is reported to frequently emit smoke.

Ensenada de Carino lies on the N side of the entrance between Cabo Priorino Chico and Punta de San Carlos, 1.7 miles E. This small bay is clear of dangers and is frequently used by vessels awaiting daylight to enter. A light is shown from the ruins of Bateria de San Cristobal which stands 0.3 mile NW of Punta de San Carlos. Castillo de San Carlos, a ruined fort, stands on Punta de San Carlos.

The shores of the narrows are rocky and barren except for some patches of cultivation near La Leusada, 1 mile NE of Punta de San Carlos, where several buildings stand. The land on both sides is high, with Monte San Cristobal dominating the N side and Monte Faro dominating the S side. Monte Faro, 262m high, rises 0.5 mile S of Punta de San Martin; a television mast, 52m high, stands on its summit.

Castillo de San Felipe, a large fortification, stands 0.7 mile ENE of Punta de San Carlos and is conspicuous.

Punta Redonda is located 0.5 mile ENE of Punta de San Martin. Castillo de La Palma stands on W side of this point and is conspicuous.

The approach to the narrows is indicated by a lighted range and the fairway through the narrows is marked by lighted buoys. The inner part of the inlet extends 3 miles E from the narrows to the head of navigation. The small inlets and bays, which line both shores, are mostly shallow and may contain shellfish beds.

Depths of 12 to 28m are found in the entrance and in the narrows; depths of 10 to 16m are found E of the narrows.

Puerto de El Ferrol del Caudillo (43°29'N., 8°14'W.)

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4.26 Puerto de El Ferrol del Castillo is a commercial port and has one of the best-protected harbors in Spain. In addition, it is the site of a large Spanish Naval Dockyard which includes drydocks and shipyards.

Tides—Currents.—Tides rise about 3.7m at springs and 2.9m at neaps. During strong W winds, the tidal rise may sometimes be up to 0.2m higher.

The ebb tidal current begins at HW and sets out over the entire inlet. Outside the E end of the narrows, it attains a maximum rate of 2.5 knots at springs; elsewhere, it attains a maximum rate of 0.5 to 1 knot at springs.

The flood current begins at LW and attains a rate of 1.2 to 2.5 knots at springs outside the E end of the narrows.

In the narrows, the tidal currents generally follow the direction of the channel and attain maximum rates of 3 knots at springs. Tidal rips may be formed off Punta Leiras, at the S side of the inlet.

Depths—Limitations.—Muelle de Concepcion Arenal and Muelle de Fernandez Ladreda border the E side of Ensenada de Malata. They have 1,180m of total quayage, with depths of 6 to 12.5m alongside.

Muelle Nuevo, 270m long, is situated at the head of an area of reclaimed land within Ensenada de la Malata and connected to the shore by a causeway 350m long. It has a depth of 14m alongside.

Muelle Exterior Espignon, at the SE side of Ensenada de la Malata, is 262m long and has a depth of 9m alongside.

Darsena de Curuxeiras, a basin, has depths of 2 to 6m and is used by fishing vessels, ferries, and small craft.

Muelle Comercial, on the N shore of the inlet, has a depth of 11m alongside.

There are five main drydocks within the port, the largest being 330m long and 51m wide. It can accommodate vessels up to 230,000 dwt. There are also extensive repair and outfitting berths within the inlet.

A tank cleaning and gas-freeing berth, which is 300m long and has been reported (1994) suitable for vessels up to 350,000 dwt, is situated on the S side of the inlet and consists of a T-shaped jetty with a depth of 11.5m alongside.

Generally, vessels up to 350m in length and 14m draft can be handled alongside.

Aspect.—Ensenada de la Malata lies on the NW side of the inner part of the inlet. The naval base and the town of La Grana are situated on the W side of this bay. The commercial port and the town of El Ferrol are situated on the E side of this bay and extend to the N shore of the inlet. The major shipbuilding and repair facilities lie at the S shore of the E end of the inlet.

Pilotage.—Pilotage is compulsory. Pilots can be contacted on VHF channel 14 and generally board off the entrance to the inlet. During heavy weather, pilots may board close SE of Punta de Priorino Chico.

Regulations.—Vessels are prohibited from navigating within 50m of the naval installations without prior permission.

Anchorage.—Vessels anchor, in depths of 11 to 15m, sand, with good holding ground, in the S part of Ensenada de La Malata. Excellent shelter is provided against all winds. Small

craft usually anchor closer to La Grana, on the W side, while vessels working cargo anchor closer to El Ferrol.

Caution.—A prohibited area, the limits of which are shown on the chart, lies in the S part of the harbor. A degaussing range lies within the area and anchoring and trawling are prohibited in this vicinity.

Several small ferry vessels frequently cross the harbor areas.

The Ria de Ares and the Ria de Betanzos

4.27 The Ria de Ares and the Ria de Betanzos (43°25'N., 8°18'W.) are the NE and SE branches, respectively, of a large gulf which is entered between Punta Coitelada and Punta del Seijo Blanco, 3.3 miles SSW. This gulf extends 6 miles SE from the entrance to the Ria de El Ferrol and is completely exposed to NW winds.

A conspicuous hill, 300m high, stands 6.5 miles ESE of Punta Coitelada and between the two branches. A prominent chapel is situated on its rounded summit.

Since the outer part of the gulf is exposed to NW winds and swells, it is only frequented by vessels capable of entering either of the two branches for shelter. Both of these branches have good holding ground and are free of dangers.

Between Punta Coitelada and Punta Miranda, 3 miles ESE, the N shore of the gulf is steep and rocky with several rocks fringing the shore. A prominent radio mast stands 1.4 miles E of Punta Coitelada. The Islas de Miranda, a group of islets and rocks, lies on a reef which extends 0.3 mile WSW from Punta Miranda. The outermost and largest islet is 12m high and has steep sides and a flat top. Bajo La Miranda, a rocky shoal with a least depth of 3.7m, lies about 0.3 mile SW of the Islas de Miranda. In heavy weather, the sea breaks over this shoal, but at other times, it is only marked by eddies. A wreck, with a depth of 8.9m, is reported to lie 1.2 miles SSE of Punta Miranda.

The coast between Punta Miranda and Punta Cruz, 0.5 mile E, is steep, rocky, and fringed by reefs.

The S side of the gulf between Punta del Seijo Blanco and Punta Torrella, 2 miles ENE, is steep, rugged, and fronted by several small islets and rocks which lie up to 0.4 mile offshore. Between Punta Torrella and Punta de San Amadeo, 2 miles SE, the coast is indented by a bight known as Ensenada de Cirno.

4.28 The **Ria de Ares** (43°25'N., 8°13'W.) is entered between Punta Cruz and Punta Carboeira, 2 miles SSE. It extends 2.5 miles E to the entrance of the Rio Eume.

A wreck, with a depth of 4m, lies about 0.5 mile offshore, 1 mile N of Punta Carboeira. It is now reported (1994) to be a fish haven.

On the N side of this branch between Punta Cruz and Punta Castillo de Ares, 0.3 mile ENE, the coast consists of reddish cliffs fringed by rocks. A prominent ruined castle stands on the cliffs above Punta Castillo de Ares.

Ensenada de Ares, entered between Punta Castillo de Ares and Punta Camouco, 1 mile E, provides good shelter to small craft, but strong NW winds send heavy seas into this bay. Islete Mouron, 15m high, lies close off Punta Camouco and has steep sides and a flat top. A wharf used by lighters fronts the village of Ares at the W side of the bay.

Small vessels can anchor, in a depth of 5m, about 0.2 mile off Punta Castillo de Ares. Larger vessels anchor, in depths of 5 to 7m, farther offshore.

Ensenada de Redes is entered between Punta Camouco and Punta Lousada, 0.7 mile SSE. It provides shelter to small craft, but is shallow and encumbered by shellfish beds.

The **Ria de Betanzos** (43°22'N., 8°14'W.) is entered between Punta de San Amede and Punta Carboeira, 2 miles E, and extends 2 miles S to an area of drying flats. The Rio Mandeo is the largest of several rivers which flow into the head of this branch. The E and W shores are both steep, rugged, and fronted by several small islets and rocks. La Freixa, a rock with a depth of 0.7m, lies on a spit which extends 0.3 mile WSW from Punta Carboeira.

Punta Fontan is located 1.5 miles SSE of Punta de San Amede; a prominent ruined castle stands on it. Several fish canning installations stand at the W shore of the branch.

Sada, a small harbor, lies close S of Punta Fontan and is formed by two moles. It is used by fishing vessels and yachts.

The Rio Mandeo flows into the head of the branch and can be navigated by boats at HW as far as the town of Betanzos, 3.5 miles above its entrance. A conspicuous bridge spans the mouth of the river.

Vessels can anchor, in depths of 5 to 11m, sand, E and NE of Punta Fontan. Good anchorage can also be obtained in a depth of 9m, mud and sand, ESE of Punta de San Amede.

Caution.—A measured distance of 1,850m is situated in the vicinity of Punta Miranda. It is indicated by pairs of beacons standing on the N shore of the gulf and can best be seen on the chart.

Several shellfish beds and fish havens lie within the gulf and the two branches and may best be seen on the chart.

The Ria de La Coruna

4.29 The **Ria de La Coruna** (43°22'N., 8°22'W.) is entered between Punta del Seijo Blanco and Punta Herminio, 2 miles W. This inlet extends 2 miles S to its head at the mouth of the Rio del Burgo. Puerto de La Coruna and the city of La Coruna are situated at the W side of this inlet, 1.5 miles within the entrance. The city stands on a peninsula which is connected to the mainland by a narrow and short isthmus. The numerous prominent buildings of the city extend over this isthmus and S of the mainland.

Punta del Seijo Blanco (43°21'N., 8°21'W.), high and rugged, may be identified by a winding vein of white stone which extends upwards and appears from a distance like a road.

La Mula, a detached shoal with a least depth of 13.6m, lies 0.8 mile NNW of Punta del Seijo Blanco and breaks in bad weather. Piedra del Seijo, a rocky shoal with a depth of 9.8m, lies 0.3 mile NW of the same point.

Islote Canabal, steep-sided with a flat top, lies close off the E shore of the inlet, 0.4 mile SSW of Punta del Seijo Blanco. It is connected to the mainland by a reef.

Punta Mera, 1 mile S of Punta del Seijo Blanco, is the outer end of a peninsula which rises to Monte Mera close inland. This hill is dark colored and almost bare.

Range lights are shown from two towers standing on Punta Mera. A racon is situated at the front tower.

Ensenada de Mera, at the E side of the inlet, is entered between the S side of Punta Mara and Morro de Canido, 0.5 mile SE. This hill rises from a rocky point and has a prominent rounded top. Shelter is provided against winds between the NE and SE within this small bay.

The coast between Morro de Canido and the mouth of the Rio del Burgo, 2 miles SSW, is irregular, rocky, and foul. Bajo Guisanda, a detached shoal, lies 0.7 mile SW of Morro de Canido. It has a least depth of 5.1m and is marked by a lighted buoy, moored close W.

Isleta de Santa Cruz, on which a prominent castle stands, lies close to the shore at the head of the inlet, 1.2 miles ENE of the mouth of the Rio del Burgo. Range lights are shown from two towers standing on the S shore of the inlet, close E of the islet. It is reported that these towers stand amongst trees and are very difficult to identify in daylight.

Punta Herminio (43°23'N., 8°24'W.) is the N extremity of the peninsula which forms the W side of the Ria de La Coruna. Monte Alto, the highest part of the peninsula, stands 0.5 mile S of the point and a small lookout building stands on it.

A main light is shown from a tower with a dwelling, 49m high and known as Torre de Hercules, standing on the N end of the peninsula, 0.5 mile WSW of Punta Herminio. A radio-beacon is situated at the light.



Torre de Hercules

Banco Yacentes, an extensive rocky bank with a least depth of 7.5m, lies centered in the approach to the inlet, about 1 mile NE of Punta Herminio. When a heavy sea is running, this whole bank breaks; in gales, turbulent waters extend to Punta del Seijo Blanco.

A wreck, with a depth of 17m, lies on the W side of the entrance, 0.8 mile ESE of Punta Herminio. It is marked by a lighted buoy moored close N.

Puerto de La Coruna (43°22'N., 8°24'W.)

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4.30 Puerto de La Coruna, a commercial port and fishing center, is situated on the W side of the Ria de la Coruna.

<p>Puerto de la Coruna Home Page</p> <p>http://www.puertocoruna.es</p>
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Tides—Currents.—Tides rise about 3.6m at springs and 2.8m at neaps.

Depths—Limitations.—Canal de Seijo Blanco, indicated by a lighted range, leads from the N between the E side of Banco Yacentes and Punta del Seijo Blanco. In fair weather, vessels with drafts not exceeding 9m, may pass through this channel. Extreme caution should be exercised and this channel should not be attempted in heavy weather.

Canal de Punta Herminio, indicated by a lighted range, leads from the W between Punta Herminio and the SW side of Banco Yacentes. Vessels, with drafts not exceeding 16m, may pass through this channel.

Mendez Nunez Quay and Bateria Quay, in the NW part of the harbor, have 467m of total quayage, with depths of 5.5 to 8m alongside.

Muelle de Transatlanticos, reported operational in 1994, is 484m long, with a depth of 11m alongside.

Muelle de Centenario, extending from the S part of the harbor, has 640m of total quayage with a depth of 16.5m alongside.

San Diego Quay, at the S side of the harbor, has 650m of total quayage, with a depth of 11m alongside.

The petroleum terminal, in the SE part of the harbor, has four berths, 260 to 560m long, with depths of 13 to 17m alongside. Tankers up to 140,000 dwt, 44m beam, and 16.5m draft can be handled.

It was reported (1992) that the largest vessel to enter the harbor was 144,890 dwt, 293m in length, with a draft of 15.3m.

Aspect.—The harbor is protected from the N by Dique de Abrigo Barrie, a breakwater which extends 0.7 mile ESE from the shore.

The city, which backs the port, consists of two parts. The modern part occupies the isthmus of the peninsula and extends S beyond the S part of the harbor. The old part occupies the E section of the peninsula. The city hall, which stands directly N of the harbor area, can be distinguished by its three conspicuous gilt domes. The Instituto de La Coruna, standing 0.5 mile SW of the city hall, can be distinguished from the surrounding buildings by its great size and numerous windows.

Pilotage.—Pilotage is compulsory for vessels of more than 50 grt. Pilots can be contacted on VHF channel 12 and generally board, as follows:

1. Vessels with a draft of 9m and under—about 1.7 miles E of Torre de Hercules.
2. Vessels with a draft greater than 9m and all vessels carrying dangerous cargo regardless of draft and navigating under emergency conditions—about 2.2 miles WNW of Torre de Hercules.

Anchorage.—Vessels awaiting a berth usually anchor in the lee of the breakwater as directed by the pilot. However, a ground swell is sometimes experienced which causes heavy rolling. Temporary anchorage can be obtained, in depths of 13 to 15m, sand, within Ensenada de Mera, but W winds send in a heavy swell.

Caution.—An outfall pipeline extends 0.7 mile NNW from the vicinity of Isleta de Santa Cruz, at the head of the inlet.

Puerto de La Coruna to the Islas Sisargas

4.31 Boy da Largo (43°23'N., 8°25'W.), a rocky shoal, lies 0.5 mile WNW of Punta Herminio and is the outermost of several dangers in this vicinity. It has a least depth of 4.6m and breaks when a sea is running.

Ensenada del Orzan (43°23'N., 8°25'W.) is entered between Punta Herminio and Punta Penaboa, 1.2 miles W. This low and rocky bay recedes 1.3 miles SE and has a sandy beach at its head. An isolated rocky shoal, with a depth of 33m, lies 1.5 miles NNW of Punta Penaboa.

Monte San Pedro, 140m high, stands close S of Punta Penaboa and is an excellent landmark when viewed from seaward.

Isla Redonda (43°22'N., 8°28'W.) lies close offshore, 1 mile SW of Punta Penaboa. This islet is low and fronted by a reef. It is reported that an oil refinery stands on the coast, close S of the islet, and is visible from seaward.

The **Islas de San Pedro** (43°23'N., 8°27'W.), an extensive group of islets and rocks, extends along most of the coast between Punta Penaboa and Isla Redonda.

El Merlon, a rock with a depth of 4m, and Rompedoiros, a group of rocks awash, lie 0.8 mile WNW and 0.9 mile W, respectively of Punta Penaboa. These form the outermost dangers in this vicinity. Piedra Ferbedoira, a drying rock fringed by foul ground, lies 0.7 mile W of Isla Redonda.

Seno de Baldayo, a large bight containing numerous dangers, lies between the Islas de San Pedro and the Islas Sisargas, 17 miles W. During thick weather, vessels should keep in depths over 110m when passing this area.

Punta Langosteira (43°22'N., 8°30'W.), a steep and rocky promontory, is located 1.5 miles WSW of Isla Redonda. A steep-to rock, with a depth of 12m, lies about 0.5 mile NNE of this point and the sea breaks over it.

Laxes Secas, a group of rocks, lies on the outer extremity of a spit which extends 0.5 mile NW from the W side Punta Langosteira. The group has a least depth of 2.5m; the sea breaks over the spit in heavy weather.

Placer de Pero Dente and Bajo Atalayero, both extensive rocky banks, lie 1.5 miles NNW and 4.5 miles WNW, respectively, of Punta Langosteira. The sea breaks over both of these banks in heavy weather. Bajo Pego, a steep-to rock with a least depth of 4m, lies 2.7 miles WSW of Punta Langosteira.

A conspicuous chimney, 218m high, stands at a power station, 1.8 miles SSW of Punta Langosteira.

Caution.—Depths of 5 to 18m, existence doubtful, have been reported (1993) to lie within 2 miles of Punta Langosteira.

4.32 Punta Atalaya de Cayon (43°19'N., 8°35'W.) is located 5 miles SW of Punta Langosteira. The coast between



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consists of a series of beaches separated by rocky points. Pico Carboeiro, standing 6 miles S of Punta Langosteira, has an isolated, crested summit and is prominent from seaward. Monte de La Estrella stands 1.7 miles S of Punta Atalaya de Cayon and a prominent white hermitage is situated on its summit.

Cala de Cayon, a small cove, indents the coast 0.5 mile SW of Punta Atalaya de Cayon. A village stands at its head and the entrance is indicated by a lighted range. Small craft, with local knowledge, frequent this cove. Punta Insua de Cayon, located on the W side of the entrance to the cove, can be identified by a windmill which stands on its highest part.

The coast up to 3.5 miles WSW of Cala de Cayon is low, backed by high ground, and fronted by dangers extending up to 0.5 mile offshore. Playa de Baldayo, an extensive beach, lies between 2.7 and 5 miles WSW of Cala de Cayon. Punta de Razo is located at its W end. Cala de Razo, a small cove, lies on the E side of this point and is sheltered from the N by a short reef which dries. A prominent factory building stands on its E entrance point.

Bajos de Baldayo (43°20'N., 8°42'W.), two groups of rocks, lie between 1.5 and 4 miles N of Playa de Baldayo. La Mayor, 4m high, is a rocky head which lies at the N end of Los Forcados, the S group. The remaining heads of both groups are awash or barely visible at LW.

Coba da Pomba, a pinnacle rock with a depth of 11m, lies about 0.7 mile N of the N extremity of Las Tumbadoiras, the N group. Feital do Mar, with a depth of 35m, lies 1.5 miles W of Coba da Pomba and breaks in a heavy sea. Both groups are fringed with foul ground and should be given a wide berth.

Monte Cambre (43°17'N., 8°42'W.), 199m high, is a prominent, isolated, and conical hill standing 0.5 mile inland, 1.7 miles ESE of Punta de Razo. Monte Neme (43°16'N., 8°44'W.), 396m high, stands 1.8 miles SSW of Punta de Razo and is the highest peak near the coast. Its dark colored summit slopes gently to a wide base and is prominent from seaward.

Atalaya de Malpica (43°19'N., 8°49'W.), a small peninsula, is located 4 miles WNW of Punta de Razo. The shore between is very steep and high. The peninsula, 75m high, is joined to the



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mainland by a narrow isthmus on which stands the village of Malpica. Cala de Malpica, a small cove, lies on the E side of the isthmus and affords shelter. A small basin, protected by a breakwater, is used by small craft and fishing vessels with local knowledge.

Cabo de San Adrian (43°21'N., 8°50'W.) is located 1.5 miles NW of Atalaya de Malpica. It is the N extremity of a peninsula which extends 1.5 miles N from the coast. Monte Bea, 181m high, rises close S of the cape and a large white hermitage stands on its NE slope.

4.33 The Islas Sisargas (43°22'N., 8°50'W.), a group of islets, lies on an extensive rocky ledge which extends 2 miles N from Cabo de San Adrian. At LW, they appear as one island, but at HW, they are broken into three by passages through which the sea passes.

Sisarga Grande, 107m high, is located at the W side of the group. It is the largest islet and has steep sides and an uneven

top. A main light is shown from a tower, with a dwelling, 11m high, standing on the NW part of this islet.

La Malante, the NE islet, is of similar appearance to Sisarga Grande and has two prominent summits. Sisarga Chica lies close S of La Malante and is separated from Cabo de San Adrian by a passage, 0.5 mile wide.

All of the islets are uncultivated and are extensively covered by ferns. Numerous isolated rocks, over which the sea breaks with great force, lie within 1 mile of the Islas Sisargas. Cabezo del Norte Oeste, with a depth of 8.2m, lies about 1 mile NNW of the W extremity of Sisarga Grande and Las Mayores, a detached patch with a depth of 6.2m, lies about 0.5 mile NNE of La Malante.

The channel, which leads between Sisarga Chico and the coast, is narrowed to a navigable width of about 400m by extending shoals. The currents in this channel are strong and with any swell, heavy breakers form. Vessels, without local knowledge, should not attempt to use it.



Puerto de la Coruña—Tanker Pier

Vessels, with local knowledge, can anchor, in depths of 5 to 10m, close off the SE side of Sisarga Grande. This anchorage is sheltered from winds between the NW and NE and is the only place with a sandy bottom.

Caution.—An explosives dumping area, the limits of which are shown on the chart, is centered 25 miles NNW of the Islas Sisargas. It has been reported that the area is no longer in use (1995).

Firing exercises are frequently carried out in the waters lying between 6 and 24 miles N of the Islas Sisargas.

The Islas Sisargas to Cabo Finisterre

4.34 Punta Nariga (43°19'N., 8°55'W.), marked by a light, is located 3.5 miles WSW of Cabo de San Adrian. The coast between is indented by three coves. The E cove is used by fishing vessels seeking shelter and the village of Beo stands at its head. The middle cove is shallow and foul. Puerto de Barizo,

the W cove, is protected from N winds by a drying reef which extends NW from its E entrance point. Extensive mussel beds lie within this cove; anchorage is prohibited.

Arrecife de Couce, a reef with a depth of 2.7m, lies about 0.5 mile WNW of Punta Nariga.

A bay, with two coves at its head, lies between Punta Nariga and Punta Eiras, 2.7 miles SW. A small peninsula, which separates the coves, rises close inland to Monte Faro de Corme. This conspicuous peak is 228m high and a prominent hermitage, with a monument, stands on the summit.

Punta del Roncudo (43°17'N., 9°00'W.), a low point fringed by shoals, is located 2 miles SW of Punta Eiras. It rises close inland to Monte Jurita, 170m high. This hill is rugged and has several peaked summits which appear as buildings from a distance. A light is shown from a tower, 11m high, standing on the point.

The **Ria de Corme y Lage** (43°15'N., 8°59'W.) is entered between Punta del Roncudo and Punta de Lage, 2.2 miles

SSW. This inlet is open to NW gales and except for Bajo de La Aveira, lying 1.2 miles S of Punta Roncudo, its central part is clear of dangers. The shores are generally steep, with the N side being the highest, and the Rio Allones discharges into the head.

Monte Castelo, 312m high, rises 2.5 miles SE of Punta de Lage and is prominent. Picos de Borneiro, 377m high, stands 1.5 miles ESE of Monte Castelo, but is less prominent. Monte Blanco, 91m high, stands near the head of the inlet on the NE side of the mouth of the Rio Allones. It is conical and sand covered.

Payo Gordo bank, a detached 45m bank, and Cabezo de Lage, a 27m bank, lie 2 miles W and 2.5 miles WSW, respectively, of Punta del Roncudo. Both of these banks break in heavy weather. Bajo de La Aveira, a rocky shoal with a depth of 5.5m, lies 1.2 miles S of Punta del Roncudo. The coast between Punta del Roncudo and Punta del Carrel, 1.2 miles SE, is steep-to, rugged, and fronted by reefs.

Corme, a small town, is situated within a small bay on the N side of the inlet, 1.5 miles SE of Punta Roncudo. A basin, protected by a breakwater, fronts the town and is used by fishing vessels. The shores of the small bay are foul and local knowledge is required.

Lage, a small town, is situated within a small bay on the S side of the inlet, 0.8 mile SE of Punta de Lage. A small harbor, protected by breakwaters, fronts the town and is used by small coasters and fishing vessels.

Punta de Lage (43°14'N., 9°01'W.), the S entrance point of the Ria de Corme y Lage, is the outer extremity of a peninsula which extends 1 mile N from the coast. It consists of a cliff, 74m high, and is fronted by a reef. A light is shown from a tower, 11m high, standing on the point; a conspicuous cemetery stands on the SW slope of the peninsula. Cabezo de Lage, a rocky shoal, lies 1.5 miles N of the point. It has a least depth of 27m and breaks in heavy weather.

4.35 Punta de Catasol (43°13'N., 9°02'W.) is located 1.5 miles SW of Punta de Lage. This prominent point is high, yellowish in color, and fringed by foul ground extending up to 0.5 mile offshore.

Puerto de Camelle is located 3 miles SW of Punta de Catasol. This small cove is encumbered by numerous rocks, but small craft with local knowledge can shelter within.

Penal de Veo, 248m high, is a large and conspicuous rock standing on the summit of a hill, 2.7 miles W of Puerto de Camelle. The coast between is very irregular and is fronted by foul ground extending up to 0.6 mile offshore.

Cabezo del Medio, with a depth of 17m, and Cabezo de La Percebeira, with a depth of 18m, lie 1.2 miles NNE and 1 mile NNW, respectively, of Puerto de Camelle. Both of these detached shoals break with a heavy sea. Seco de Veo, with a depth of 22m, lies 3 miles NNW of Penal de Veo and in heavy weather, a steep sea rolls over this shoal, but it has not been known to break. Depths of less than 40m lie between this shoal and the coast.

Cabo Trece is located 1.5 miles W of Penal de Veo. It is low and fronted by foul ground extending up to 0.5 mile seaward. Ensenada de Trece, a small open inlet, lies on the E side of this cape. A cemetery, which from a distance appears as a white

building, is situated 0.2 mile SE of the N extremity of the cape and is prominent.

Las Baleas, consisting of two detached shoals with depths of 12m and 16m, lies 1.5 miles WNW of Cabo Trece.

Ensenada de Villano lies between Cabo Trece and Cabo Villano, 2.3 miles SW. The shores of this bay are steep, indented, and fronted by foul ground extending up to 0.8 mile offshore.

Cabo Villano (43°10'N., 9°13'W.), a steep and rocky promontory, rises to a height of 77m. A rocky islet, which terminates N in a large rock known as Estufro, lies close off the cape. The summit of the promontory stands close SE of the extremity of the cape, and from a distance, resembles a conical, inclined tower.

A main light is shown from a prominent tower, with a cupola, 25m high, standing on the highest part of the cape. A racon and a radiobeacon are situated at the light.

A disused light stands on a peak, 1.2 miles SSE of the main light. A conspicuous group of wind generators is reported to stand 0.5 mile SSE of the main light.

El Bufardo, a pinnacle rock awash, lies about 0.4 mile NW of the cape.

Caution.—An IMO-adopted Traffic Separation Scheme extends up to 25 miles from the coast between Cabo Villano and Cabo Finisterre and may best be seen on the chart.

Punta de Monte Farelo (43°08'N., 9°13'W.) is located 2 miles S of Cabo Villano and rises close inland to a hill. The coast between is steep, rocky, and fronted by reefs.

Las Quebrantas, an extensive rocky shoal with a least depth of 2m, lies centered 1.5 miles NW of Punta de Monte Farelo. Leixon de Juanboy, a detached rocky patch with a least depth of 8.8m, lies 2 miles W of the same point. The sea breaks over these dangers in heavy weather.

4.36 The Ria de Camarinas (43°07'N., 9°13'W.) is entered between Punta de Monte Farelo and Punta de La Barca, 1 mile SW. This inlet recedes 2.3 miles E and is indented by two small bays on its S side and one small bay on its N side. Puerto de Camarinas stands on the W side of this latter bay. The Rio del Puente del Puerto, a shallow river, discharges into the NE part of the inlet and is navigable by boats at HW. The inlet provides shelter to small vessels from all except W winds.

Between Punta de Monte Farelo and Punta Villueira, the S extremity of the peninsula forming the N side of the inlet, the coast is fronted by numerous dangers. Cabeza de Fuera, with a depth of 4.3m, is the outermost danger and lies 0.5 mile SW of Punta de Monte Farelo.

Punta del Castillo is located 0.3 mile E of Punta Villueira. A prominent fort stands on the point and shoals extend up to 0.3 mile S of it.

Punta de la Barca (43°07'N., 9°13'W.), the S entrance point of the inlet, rises steeply to Cerro de Mugia, a 63m high hill. A prominent large building stands on the N slope of this hill and a light is shown from the point.

Ensenada de Mugia lies close SE of Punta de La Barca. The town of Mugia stands on its W side. The central part of this bay is clear, but its shores are foul. A small harbor fronts the town and is used by small craft.

Punta de Chorente, located 1 mile SE of Punta de La Barca, rises inland to Corpino de Chorente, a steep and conical hill. La Higuera, a detached rock with a depth of 1m, lies 0.3 mile NNE of the point. The bank, on which this rock lies, breaks in rough weather.

Ensenada de Merejo is entered between Punta de Chorente and Punta Merejo, 0.5 mile E. It is used for the cultivation of mussels and is prohibited to shipping.

The coast between Punta Merejo and the entrance to the Rio del Puente del Puerto, 1.5 miles NE, is rocky and high.

Puerto de Camarinas is situated within a small cove on the N side of the inlet and is protected by a breakwater. The shores of the cove are quayed, but dry and can only be used by small craft.

The **Rio del Puente del Puerto** (43°07'N., 9°10'W.) extends 2.2 miles inland to Puente del Puerto. It can be used by boats at HW. Anchorage can be taken, in a depth of 8m, sand, off Puerto de Camarinas.

4.37 Punta de la Buitra (43°06'N., 9°15'W.) is located 2 miles SW of Punta de la Barca. The coast between is indented by a bight with two coves at its head. Alto de Cacheimo, a hill 168m high, rises between the two coves. Punta de la Buitra is the NW extremity of a rugged headland which rises steeply to Alto de la Buitra, 156m high. El Facho de Lourido, 310m high, rises 1.5 miles SE of Punta de la Buitra and is prominent.

Punta Matamao, located 1.5 miles S of Punta de la Buitra, is high and steep. Punta Moreira, fronted by rocks, projects N from the coast, 1 mile SSW of Punta Matamao.

Ensenada de Cuno is entered between Punta Moreira and Cabo Torinana. This inlet is clear of dangers, but of little use to shipping because of its stony bottom.

Cabo Torinana (43°03'N., 9°18'W.), 77m high, is a rugged peninsula which is joined to the mainland by a low isthmus. It

is not easily identified from a distance, but appears as an island from the SW. A small rocky islet lies off its W side and has two peaks.

A main light is shown from a tower, 11m high, standing on the W side of the cape. A racon is situated 1.6 miles SSE of the light. A disused light stands close E of the main light.

Several dangerous rocks and shoals lie within 0.6 mile of the cape and break in heavy weather.

Caution.—Depths off the coast between Cabo Torinana and Cabo Finisterre, 11 miles S, are very uneven and soundings give little warning of its proximity in thick weather. In this vicinity, the tidal currents set N during the flood and S during the ebb.

Local magnetic anomalies have been reported to exist within 13 miles of Cabo Torinana.

4.38 Punta Cusinadoiro (Punta de la Vala) (43°01'N., 9°17'W.) is located 3 miles SSE of Cabo Torinana. The coast between is mostly steep and rocky. Monte Gordo, 189m high, stands 0.5 mile inland, 1.8 miles SE of Cabo Torinana, and is prominent.

The bay, entered SE of Punta Cusinadoiro, provides temporary anchorage, in depths of 8 to 10m. Mellon de Lires, a steep and rocky islet, lies on the S side of the mouth of the Rio del Castro, at the head of the bay.

Cabo de La Nave (42°55'N., 9°18'W.) is located 8 miles S of Cabo Torinana and rises close inland to a steep and prominent hill, 252m high. Bajo Sambrea, with a depth of 8.9m, lies 2 miles NNW of this cape. La Muniz, a pinnacle rock with a depth of 4.1m, lies 1.5 miles WNW of Cabo de La Nave.

Cabo Finisterre (42°53'N., 9°16'W.) is located 2.8 miles SSE of Cabo de La Nave and is described in paragraph 5.2.