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**SECTOR 7 — CHART INFORMATION**

## SECTOR 7

### EASTERN NEW GUINEA—SOUTH CAPE TO EAST CAPE

**Plan.**—This sector describes the SE extremity of New Guinea from South Cape SE to Deirina Islet then NE through West Channel and China Strait to Isulailai Point. Milne Bay lies N and NW of Isulailai Point and is discussed in order, then the coast trends NE to East Cape.

The islands and channels that are adjacent to the coast are described in order of occurrence in the W to E direction.

#### Guna Isu to Isulailai Point

**7.1** The coast trends in a general ENE direction from Guna Isu for a distance of about 31 miles to Isulailai Point. It preserves the same broken character as the land to the W, but the mountain range E of the cape, closely following the bends of the coast, rises to heights of from 305 to 610m and slopes steeply toward the sea.

**Barrier Reef.**—The reef passes South Cape at a distance of 4 miles. The reef with a least depth in this area of 9.7m, SSE of South Cape extends in a ESE direction toward the Louisiade Archipelago. For a description of the Louisiades see Sector 8.

Breakers have been observed about 5 miles SSW of South Cape in the vicinity of the Barrier Reef.

**Suau Island** (10°43'S., 150°15'E.) rises to a height of 239m, about 2.75 miles E of Guna Isu. The island is fronted by a reef which extends up to 183m in places on its N side. A bay lies NE of South Cape, the S extremity of the island, that has isolated patches of 1.8 to 5.5m. The island is separated from the mainland by a channel 0.13 mile wide at its narrowest part, with a least depth of 9.1m in the fairway. Vessels should not use the pass without local knowledge.

Vehi, a small islet 42m high, lies close SSW of South Cape and Baibesiga, 182m high, lies 2.5 miles E of the same point. The SE side of Baibesiga is steep-to, but a shoal extends 0.2 mile from the SW extremity of the island and breaks with any swell. The island Baibesiga is remarkable for having a rounded peak at either end.

**Modewa Bay** (10°41'S., 150°20'E.) is entered 3 miles ENE of Suau Island. The depth in the entrance of the bay is 20.1m, but then the depth gradually decreases toward the head of the bay. Coral reefs, which partly dry, extend from each entrance point of the bay and narrow the entrance to about 1 mile. These reefs are steep-to on the seaward sides with off-lying patches in places.

There are several small villages on the E shore of the bay, and behind the villages the land rises steeply to several peaks, with the highest one having a height of 442m.

Gara River discharges into the NW side of the bay and is joined a few meters above its mouth by the Modewa River. The delta of the river is cleared and several villages are located in the locality.

The reef which extends 1.5 miles SE from the W entrance point of Modewa Bay dries 0.3m. There is an extensive reef off the E entrance point of the bay which also dries 0.3m; a sand cay 3m high stands on the N side of this reef.

There is sheltered anchorage in Modewa Bay with the sand cay, mentioned above, in range with the summit of Badila-bedda-bedda-bonarua bearing 155°, in a depth of 14.6m, mud.

**7.2 Off-lying islands and dangers.**—Brumer Islands are a group of 5 small basaltic islands lying about 7.5 miles E of South Cape and about 4 miles offshore. Between the reefs off the mainland and the islands, there is a channel 2 miles wide that has depths of from 26 to 48m. The shoals and reefs on the N side of the channel should be approached with caution, as they do not always break.

**Badila-bedda-bedda-bonarua** (10°46'S., 150°23'E.), the farthest W of the island group, has a remarkable castellated peak 120m high in its W extremity. A light, shown from a concrete tower 7m high, stands on the highest point of the island.

Harikoia, the second largest island in the group, lies 0.75 mile ESE of Badila-bedda-bedda-bonarua; this island is 165m high. The other islets of this group lies close SE of Harikoia.

Rae Patches are coral reefs that lie off the S side of the Brumer Islands group; there are charted depths of 7.3m over the reefs.

**Brooke Banks** (10°46'S., 150°31'E.), of coral, with depths of from 9.1 to 16.4m, lie from 5 to 10 miles E of Harikoia, and are apparently steep-to.

There is a deep passage through the barrier reef SW of the Brumer Islands. The summit of Baibesiga bearing 350° leads through the channel; at night, the light on the summit of Badila-bedda-bedda-bonarua bearing 047.5° also leads through the channel.

The coast E of Modewa Bay is fronted by reefs to a peninsula 4.5 miles distant. There are three grassy conical hills on the peninsula, the highest one rises to 105m. Northeast of the peninsula are Bira Bira and Guaugurina Bays.

Mount Brainble, with a double peak 396m high, is situated 5.5 miles NNE of the peninsula. The land between these points falls sufficiently to permit a view of the country behind.

**7.3 Mount Bossim** (10°37'S., 150°33'E.), also on the coastal range, is a conspicuous peak 425m high on the N side of the approach to China Strait.

Deirina Island, 85m high, lies on the coastal bank close S of the peninsula described above. A smaller island lies on the reef close S of Deirina. The bright green color of Deirina, in contrast with the dark green of the wooded hills on the mainland, helps identify the island.

**Bira Bira Bay** (10°41'S., 150°26'E.), open E, is entered between Deirina Island and a point 2.75 miles NE. Its shores are fringed by coral reef to a distance of 0.5 mile. There are several small openings in the reef that lead to the mangrove-covered coast.

Good anchorage in a depth of 16.4m, over mud, will be found in the S part of Bira Bira Bay, N of Deirina Island, between the island reef and the shore reef.

To enter Bira Bira Bay, steer for the N summit on the peninsula NW of Deirina Island on a course of 279°. This course will lead S of a 7.3m shoal 1.5 miles SSE of the bay's NE entrance; then bring the SE point of the peninsula in range with Brumer Islands Light, bearing 215°. Anchor when the N and E extremities of Deirina Island are in range 136°.

**Tides—Currents.**—In Bira Bira Bay spring tides rise 1.7m and neaps rise 1.1m. Guaugurina Bay, the bay NE of Bira Bira Bay, is 5 miles wide, with depths of 22 to 24m near its center. The shores of the bay are fringed with coral in places.

A rock 9.1m high lies 1.25 miles E of the S entrance of the bay and a similar rock 6.1m high, lies 1.75 miles W of its N entrance. The depths extending 0.5 mile offshore of the 9.1m high rock are between 5.5m and 7.3m. Jones Patch, with a least depth of 5.2m, lies 1.5 miles S of the rock 6.1m high, described above. The approach to the bay lies between the S entrance point and Jones Patch.

**Quilty Patch** (10°41'S., 150°33'E.), with a least depth of 4.3m, lies 2.25 miles SE of Jones Patch. A 5.2m patch lies midway between Jones Patch and the N entrance to Guaugurina Bay, and a shoal with a least depth of 7.9m lies 1.75 miles ESE of the N entrance point.

The land inside the coast from Guaugurina Bay to Isulailai Point, 10 miles NE, rises steeply to a considerable elevation with deep ravines. Both the summits and the sides of these mountains are covered with thick forests.

This coast forms the N shore of West Channel and China Strait.

## Islands and Reefs Southeast of China Strait

**7.4** The sunken barrier reef S of the islands off the SE end of New Guinea, continues in an ESE direction beyond Stuers Islets and are discussed in Sector 8. The shoalest parts are on a narrow ridge, broken in places by channels.

**Tides—Currents.**—On the submerged barrier reef the tidal streams run at a rate of from 1 to 2 knots, their general direction being NE and SW, but at neap tides they are liable to be considerably modified by the wind. In the neighborhood of Wari Island their direction inclines more to the N and S; over Siriki Shoals they run strongly causing heavy tide rips.

**Stuers Islets** (11°06'S., 151°08'E.) lie 46 miles SE of the Brumer Islands on the sunken barrier reef; there are two islets in the group. Marai is 20m high and Tauwewai, 1 mile NE, is 12.2m high. A reef which dries 0.3m lies 0.5 mile W of Marai. A large reef, which dries in places, lies 0.5 mile SE of Marai Island.

**Uluma Reef** (11°06'S., 150°59'E.), about 8 miles W of Stuers Islands, dries 0.3m. The reef lies about 3 miles seaward of the barrier. During a month-long survey surf broke continuously on the reef, but it has been reported that in calm weather the reef is not indicated by surf.

The stranded wreck located on the SW side of Uluma Reef is a good radar target from a distance of 12 miles.

An unexamined 14.6m shoal is reported to lie about 4 miles SW of the stranded wreck.

Blight Patch, of coral, in 11m of water, lies on the barrier reef 5 miles NW of Stuers Islands. Heavy swells are reported

on the patch and in the vicinity of a 4.5m shoal close N. The tidal currents in this area reach rates of 2 and 3 knots.

**7.5 Wari Island** (10°58'S., 151°04'E.), lying about 10 miles NW of Stuers Islands, has a narrow range of hills traversing its entire length that terminates in a well defined peak at each extremity; the W peak is 117m high. In the center the hills dip considerably. A large reef lies parallel to the S coast of the island; the sea always breaks on this island. An islet lies on the E end of this reef and similarly an islet 15.2m lies off the NW extremity of the reef. These two islets have grass covered summits.

Ikaikakeino Islet, 81m high, lies 0.75 mile NW of the W extremity of Wari Island, and Mamaramamaweino Rock, 133m high, lies 1.5 miles farther NW. This is a steep mass of grey rock that is steep-to on all sides, and the summit and NW side have a scattered growth of trees. A bank with a depth of 16.5m extends for 0.6 mile off the rock's SW side.

This gray rock affords an excellent mark from all directions; its shape and isolated position make it appear larger and loftier than it actually is, and from the dark color of its foliage it frequently shows when Wari Island can not be distinguished.

A small steep-to rock, 9.1m high, lies 0.5 mile N of the W extremity of Wari Island. There is convenient anchorage on a ridge of sand and coral, in a depth of 14.6m, between this rock and Wari Island, with the rock bearing 333° and the rock W of the island bearing 237°, but during N winds it is exposed and unsafe.

The tidal current runs with great strength between Ikaikakeino Islet and Wari Island.

**Siga Islet** (10°51'S., 151°08'E.), lying 7.25 miles NNE from the E extremity of Wari Island, is 29m high; it is an excellent landmark easily identified by its shape. A bank, with depths of from 7.3 to 14.6m, extends 2.5 miles in a NW direction and is generally marked by tide rips. Temporary anchorage may be obtained on the bank extending 2 miles NW from Siga Islet.

Close NE of Siga Islet the current sets NNW up to 2 knots.

Lebrun Islets, consisting of Rika-rika, 109m high and Dogigi, lie 6.5 miles NW of Wari Island.

Siriki Shoals, occupying the greater portion of the area between Wari Island, Lebrun Islets, and Dumoulin Islets, are composed of narrow ridges of bright colored sand. There are patches with a least depth of 5.5m on the shoals. Shellard Ridge, the SE extremity of the shoal, lies 3 miles W of Wari Island, and has depths of 12.8 to 18.3m. Mariners are advised to not cross this shoal as other shoal patches may exist.

**7.6 Dumoulin Islets** (10°55'S., 150°46'E.) are comprised of a group of four islets and two rocks situated 16 miles WNW of Wari Island. From S the islets white cliffs show at times, great distinctness, forming a good landmark for vessels approaching China Strait from the S.

Baiiri Islet, 112m high, the largest and most W of the group, is bold except on its NW side. The islets highest point is a conical peak.

Ana Karu Karua, the farthest E, lies 3 miles ESE of Baiiri. It is covered with grass and has a flat top 69m high.

**Caution.**—The depths off the S sides of these islets are irregular and vessels should not pass between them.

Castori Islets is comprised of three islets. **Ilei Islet** (10°46'S., 150°41'E.), the S most and largest of the islets, rises to a height of 82m; the islet is fairly steep-to and is covered with scrub. The farthest N of this group, is a dome-shaped islet 47m high, that lies 2 miles N of Ilei Islet. The other islets and rocks of this group, lie about mid-way between the two larger islets. A bank, with a depth of 9.1m, extends 1 mile E from this middle group.

Arch Islets are two small islets that lie 3 miles NW of the center of Castori Islets. The largest of these two islets rises to a height of 105m. The islets, which lie close together, are wooded and are surrounded by a reef, which extends to a distance of 183m.

A shoal with a depth of 11m is charted 1.5 miles SSW of the Arch Islets.

**Sapikunuri** (10°42'S., 150°36'E.) is a rocky islet 7.6m high lying on the SE side of West Channel, about 2 miles NW of Arch Islets. Shallow water extends all around the islet and a 9.1m patch lies about 1 mile NE of it.

**Nasariri** (10°44'S., 150°45'E.), on the S side of East Channel, is a rocky, wooded, beehive shaped islet 70m high. Nasariri lies on a shoal, with a depth of 11m near its SW extremity, about 9.5 miles ESE of Sapikunuri.

**7.7 Doini Island** (10°42'S., 150°43'E.) lies about 2 miles NW of Nasariri Islet; it is about 2 miles in length and about 1 mile in breadth. The island rises to a height of 155m in its NE part. Except on the SW side, the island is fringed with a reef.

A ridge with shallow water extends 0.5 mile off the S extremity of the island. A rocky islet, with a few trees on it, is situated near the outer end of this ridge. Tuyam, a grassy islet 49m high, lies on the outer extremity of a reef, 0.55 mile E of the eastern point of Doini.

Sheltered anchorage may be obtained off Baibai village (10°41.3'S., 150°42.9'E.), near the N extremity of Doini Island, where there is a break in the reef, in a depth of 22m, about 0.3 mile offshore.

An islet, 75m high, lies 1.25 miles NW of the W extremity of Doini. A rock lies about mid-way between these two islands. A shoal consisting of two 5.5m patches, lie about 1.25 miles W of the 75m islet described above, and a reef with a rock 3m high on it, is situated 1 mile NNE of the same islet. There is a 11m shoal 1.25 miles S of Tuyam Island.

**Rogeia Island** (10°38'S., 150°39'E.) is situated on the SE side of West Channel, and is about 4 miles long in a NW and SE direction and about 1.25 miles wide. There are two peaks in the NW part of the island, that appear saddle-shaped when viewed from the E or W. The SE peak is the highest and rises to a height of 370m.

The SW side of the island is clear of off-lying dangers but on the NE side there are several.

A reef extends 0.33 mile SE from the S extremity of the island; there are three prominent rocks on this reef.

A reef, which dries 1.2m, lies 0.85 mile NE of the S extremity of the island and a wooded islet is situated 0.65 mile NW of the drying reef, with foul ground between them.

Anchorage may be obtained in the bay on the E side of Rogeia Island in depths of from 18.3 to 22m, sheltered from the SE winds.

A crescent-shaped island, 0.75 mile in length, lies N of Rogeia Island and is separated from it by a channel, 183m wide. The NW point of this island is a steep, wooded, knoll with a red cliff, facing West Channel.

A narrow rocky bank with depths of 3.7 to 7.3m extends 0.5 mile NW from the red cliff. There are current swirls and eddies over this bank and when the wind is in a contrary direction there are heavy overfalls.

A rock in a depth of 1.8m, lies about 1 mile E of the red cliff. It has depths of from 9.1 to 11m N and S of it but there is less water off the NW end. The rock is easily seen from aloft and occasionally breaks.

Mount Bossim, on the mainland open N of the red cliff, bearing about 268°, leads N of the rock.

**7.8 West Channel** (10°40'S., 150°35'E.), the SW approach to China Strait, lies between the mainland and Rogeia Island, which lies 1.75 miles offshore. It is free from dangers except for the 7.9m shoal that lies 2.25 miles SW from the W extremity of Rogeia Island, and Weku una (Wekuuna), a rock, fairly steep-to, which dries 0.6m. Weku una lies on the W side of the fairway, 1.25 miles NW of Rogeia Island.

A light is exhibited at an elevation of 7m, from a white column on a concrete base on Weku una.

**East Channel** (10°39'S., 150°43'E.), the SE approach to China Strait, lies between Rogeia and Sariba Island, 2 miles NE. Samarai Island and a smaller island lie in the middle of the channel at its NW end. Vessels crossing the barrier reef E of Uluma Reef might find it advantageous to use this channel.

**Samarai Island** (10°37'S., 150°40'E.) lies about 1 mile NE of Rogeia Island. The island rises to a height of 47m in its SE part. There is a deep channel on either side of the island, and it is fringed by a reef except on its NW side where there is a wharf. The reef dries about 137m off the NE side and about 0.13 mile off its SW side. A circular shoal with a least depth of 3.9m lies about 137m N of the main wharf. A light is shown from a steel pile structure 6m high located approximately in the center of this shoal. A 5.5m patch is located about 36m SW of the light structure.

A thickly wooded islet lies 0.55 mile NW of Samarai Island; it is fringed by a reef extending about 91m from its W side.

**Samarai** (10°37'S., 150°40'E.) (World Port Index No. 53170) is the settlement on the NW side of Samarai Island. The Main Wharf (No. 1) is 93m long and 13m wide, with a depth of 7.8m alongside. Vessels are advised to berth port or starboard side-to by port officials. Ship's equipment is used for cargo work, and tankers also berth at this wharf.

A private coastal wharf operates W of the main wharf.

Tidal currents between Samarai and the islet 0.55 mile NW, are reported to be irregular and often attain a velocity of 6 knots; there is hardly any slack water, but the full strength of the current only lasts about an hour. A strong tide rip extends about 0.2 mile from the N end of Samarai.

The spring tides rise 1.8m and the neaps rise about 1.1m.

Pilotage is not available. VHF channels 16, 12, 8, and 6 are available. Limited water, marine diesel fuel, and some provisions are available. Bunkering is supplied by pipeline. Air service is at nearby Gurney.

The International flag "N" is placed on the end of the wharf from which the tidal streams flow. Slack water is indicated by placing the flag at the center of the wharf.

Anchorage may be taken about 0.3 mile W of Samarai Light in a depth of about 33m or 0.8 mile SW of the light in a depth of about 29m, coral and sand.

**Caution.**—Care is needed while berthing as patches, with a depth of 6.7m over them, lie 91m NNW of the N end of the main wharf.

**7.9 Sariba Island** (10°36'S., 150°42'E.) lies on the N side of East Channel and is separated from New Guinea by China Strait. The island is irregular in shape, about 5 miles in length in a NW and SE direction and 2.5 miles wide at its widest part. The island rises to a height of 296m in its W part.

Anchorage may be taken in the bay S of the 296m height, in a depth of 22m, mud, with the W entrance point of the bay, in range 281° with the N extremity of Samarai Island.

A thickly wooded islet connected to Sariba Island by a reef, lies close N of the W extremity of the island. A 4.5m shoal, steep-to, is located 0.4 mile NNE of the islet.

Anchorage may be taken E of above described shoal in a depth of 13 to 16.4m, mud, with the light on the N extremity of Sariba Island bearing 030°, 0.8 mile distant. A shoal with a least depth of 7.6m lies close N of the anchorage.

A reef-fringed islet lies on the E side of China Strait, 1 mile NNE of the N extremity of Sariba Island. A smaller mangrove islet stands on the S side of the reef. The W side of the fringing reef has been reported to be extending farther W.

Igwali Island, larger than the islet described above, 1 mile NE of the N extremity of Sariba, is thickly wooded and rises to a height of 122m.

**Ito Island** (10°34'S., 150°46'E.), about 1.5 miles in length, lies 1.5 miles E of Igwali Island. It is indented on its NW and S sides, and rises to a rounded peak 152m high. Its shores are, for the most part, composed of mangroves, and the underbrush is so thick as to be almost impenetrable. A belt of coral fringes the island.

A shoal with a least depth of 7.3m lies 0.4 mile E of Igwali Island and a 3m spot lies about 0.2 mile NW of the N extremity of Ito Island.

An islet, fringed by reef, lies about 0.75 mile E of the light on the N extremity of Sariba Island. There is a bay between this islet and the light but it is not advisable to anchor here, owing to the strong tidal stream eddying around the islet. There is a rock with a depth of 0.3m in the mouth of the bay.

An island 108m high, with a rounded summit, lies 1 mile SSE of Igwali Island, 0.15 mile off the NE side of Sariba Island. Between these two islands are several shoals with depths of from 3 to 7.6m.

A prominent double-topped hill 192m high, lies near the NE end of a peninsula, 0.8 mile SE of the above island. A shoal with a least depth of 1.2m, lies 1.5 miles ENE of the double-topped peak. A rock 12.2m high, lies about 1.5 miles SE of the same peak. A reef extends 0.15 mile N of the rock.

A channel 91m wide with depths 9.1m in the fairway, separates the SE end of Sariba Island from the W extremity of Sideia Island. The tidal streams in the channel attain a rate of 7 knots, with dangerous overfalls and eddies, rendering navigation hazardous except at SW.

**7.10 Sideia Island** (10°36'S., 150°50'E.), lying E of Ito and Sariba Islands, is about 8 miles long in an E and W direction and is about 7.5 miles in breadth in a N and S direction. Jenkins Bay indents the W side of the island to a distance of about 6.75 miles.

The land rises to narrow, thickly wooded hills. Mount Kopaki, 393m high is the highest point in the island.

Jenkins Bay opens toward China Strait. The area NE and E of Sariba Island in the vicinity of Jenkins Bay has not been surveyed.

The S side of Sideia Island is fronted by East Channel; it is steep-to and indented by several bays. Bagamoti Islet covered with scrub is situated 3 miles SE of the W extremity of the island.

**Margaret Island** (Populai Island) (10°40'S., 150°53'E.), situated 0.5 mile off the SE point of Sideia Island, has a fairly level, thickly wooded summit 152m high.

The channel between these two islands has depths from 12.8 to 37m. At spring tides the current runs strongly through this channel; it is advisable to close Margaret Island shore in passing through.

The SE extremity of Sideia Island is fringed by a coral reef extending 183m offshore. The E coast of the island extends N from the SE extremity and is indented by two bays near the N end of this stretch, which are dangerous to enter; these two bays are fronted by an islet. Negro Head is situated about 3.5 miles NW of the islet. A reef extends 4 miles E of Negro Head; breakers are distinctly seen on this reef.

**Challis Head** (10°32'S., 150°48'E.), the NW extremity of the island, lies 3.25 miles W of Negro Head, and like the former has a coral reef which extends 0.25 mile from it in an E direction. The bay which lies between these points is fouled with coral reefs.

**Caution.**—The N side of Sideia Island has not been closely surveyed, and due caution must be used when navigating here.

A chain of rocks and shoal water extends 4 miles WNW of Challis Head to the E side of China Strait. At the outer end of this chain there are three patches with 1.2m or less water. These patches show distinctly, but rarely break. About 0.75 mile SE of these patches there is a triangular reef which dries. Within 0.5 mile radius N to E of the NE point of the triangular reef, there are five drying reefs. A depth of 4.6m lies 1 mile E of the triangular reef.

These dangers may all be seen on the chart.

**7.11 Basilaki Island** (10°38'S., 151°00'E.) is separated from the SE side of Sideia Island by Fortescue Strait. The strait is about 0.2 mile wide at its S end, opening to a width of 1.5 miles at the N end.

Basilaki Island is 10 miles in length in an E and W direction and has an average width of 3.5 miles. The higher grounds are covered with a thick forest of tropical trees. Mount Fairfax, one of three peaks on the ridge that forms the backbone of the island, has a knob shaped summit 503m high that is conspicuous from all directions.

A small conical islet lies close off the SW extremity of Basilaki Island; it is connected to the mainland by a sunken reef.

**Weitoa Island** (10°40'S., 150°56'E.) is separated from the SW peninsula of Basilaki Island by a channel 0.2 mile wide.

An unexamined shoal with a depth of 11m, coral and sand, lies about 2.5 miles SW of Weitoa Island.

Hoop Iron Bay lies on the SW side of Basilaki Island, N of Weitoa Island. Good anchorage, protected from winds except those from the E and SE, may be found in a depth of 24m over stiff mud, in the small bay on the NE side of Weitoa Island, with the N entrance point of the bay bearing 313°; it is out of the influence of the tidal current.

There is also anchorage in the same depth in the NW part of Hoop Iron Bay.

In the channel between Weitoa and Basilaki Islands, the flood current sets to the W and the ebb to the E. Many tide rips and eddies occur in this vicinity at springs when the tidal current attains a velocity of more than 4 knots.

The coast between the E entrance point to Hoop Iron Bay and a point lying 4 miles ESE is indented by five sandy coves, separated by rocky points. A rock, which generally breaks, lies 0.5 mile off the coast, 1.5 miles SE of the E entrance of Hoop Iron Bay.

Rocky Islet, 24m high, is a dark-colored rock with a thin covering of grass on its summit, that lies 2 miles W of South Point. The islet appears to be steep-to on all sides.

**South Point** (10°41'S., 151°02'E.), in the S extremity of Basilaki Island, is a well defined bluff. The rocky and steep coast trends NE 1 mile from South Point to the S point of a bay. A coral reef extends 0.15 mile from the N shore of this bay and a reef, which dries, runs parallel to the N shore and around the NE entrance point of the bay for a distance of 1.5 miles. Foul ground continues to within 1 mile of the S entrance point of Pitt Bay.

**7.12 Haines Island** (10°41'S., 151°04'E.) lies close off the SE extremity of Basilaki Island. The island has a saddle-shaped summit, which rises to a height of about 76m. These two peaks are steep and covered with trees on the W side, but show a grassy slope to the E.

Kaiti Island (Connor Island), situated about 1 mile NE of Haines Island, rises to a height of 172m near its center. The NW side of the island is steep-to and the SE side of the island terminates in a small pyramid-shaped rock, almost detached.

The channel between Kaiti and Haines Islands is about 1 mile wide and has depths of more than 37m. A black rock about 1m high is situated near the NW end of the channel and vessels making for Pitt Bay should pass E of this rock. The current in the channel has been estimated at 3.5 knots at spring tides.

An islet 101m high, lies about 0.5 mile E of Kaiti Island and Baba-garai Island, 24m high, lies on the same reef about 0.5 mile farther E.

Kita-bona-bona Island, about 1 mile NE of Kaiti Island, is thickly wooded and about 27m high; it is surrounded by a strip of sandy beach. The channel between these two islands is fouled by a steep-to sunken coral patch, in 3.7m; its use is not recommended.

**Pitt Bay** (10°38'S., 151°04'E.), the largest bay on the E coast of Basilaki Island, has depths that vary from 26 to 33m, sand and coral, but detached shoal areas with depths of 0.3 to 9.1m lie within 0.75 mile of the NW side and head of the bay.

The N entrance point to Pitt Bay is well-marked by a conical brown rock 7.6m high that resembles a can buoy. There are

rocks, dangerous to navigation extending 0.75 mile offshore within the bay about 1 mile SW of the brown rock.

Pitt Bay affords good anchorage except during strong NE to E winds, in 22m, coral and sand, with the conical brown rock, described above, bearing 040°. Vessels approaching the bay from the NE should take care to avoid the 5.5m shoal lying about 1.25 miles 110° from the conical brown rock.

The coast of Basilaki Island trends N from the N entrance point of Pitt Bay, about 1.75 miles to Cape Lookout, the NE extremity of the island. Mount Fairfax has a succession of regular, conical peaks, gradually decreasing in height as they approach Cape Lookout. These peaks are remarkable in appearance when viewed from the NW of SE.

**7.13 North Point** (10°35'S., 151°02'E.), 2.5 miles WNW of Cape Lookout, is the W entrance point of a bay that is divided in two arms by a tongue of land. An islet, encircled by a coral reef, lies close N of this tongue of land. A patch with a least depth of 6.4m lies 0.75 mile ENE of the islet.

Vessels may obtain anchorage in the E arm of the bay in a depth of 29m, mud. Good anchorage may also be obtained SW of the islet in depths of 26 to 29m mud, but local knowledge is required.

Hewoli Point lies 2 miles WSW of North Point and White Point lies 5 miles farther W. Steep-to coral patches with depths of from 3.7m to 5.5m lie from 0.5 to 1.25 miles off the N coast of Basilaki Island between Hewoli Point and White Point.

**Grant Islet** (10°33'S., 151°02'E.), situated about 1.75 miles NNE of North Point, is composed of coral. The islet is surrounded by reefs extending 0.25 mile offshore.

Westward of Grant Islet, discolored water, in which depths of 7.3 and 9.1m were obtained, extends toward North Point and Sideia Island.

**Caution.**—The northern coast of Basilaki Island is not closely surveyed, and caution must be used in navigating this area.

## China Strait—Northwest Side

**7.14 Gesila Island** (10°35'S., 150°38'E.), lying about 2.5 miles NE of Weku una and 1.75 miles NW of Samarai, is located 0.4 mile offshore and nearly parallel with the coast NE of it. The island, thickly wooded at its NW end, is 67m high and steep-to on its S side. The 11m line lies about 0.2 mile off its SE extremity.

The island is used as a quarantine station.

A shallow bay lies 1 mile N of Weku una, and a bay, with soft mud at its entrance, lies NE of Gesila Island.

A steep-to point is situated on the mainland about 2 miles NE of the E extremity of Gesila Island. A depth of 10.3m lies about 160m SE of this point. A rock, having a depth of 0.9m lies 0.5 mile NE of this point and about 0.2 mile offshore. There are depths of 16.4 to 18.3m off the S side of this rock and 11 to 14.6m between the rock and the shore. This danger lies in the way of a vessel passing along the shore to avoid the tidal currents, and only shows well under favorable conditions. The water is discolored by a stream which discharges 0.4 mile to the W.

**Isulailai Point** (10°34'S., 150°42'E.), a low point, is the SE extremity of New Guinea. The land 0.5 mile W of the point rises to a hill 146m high. A reef extends about 183m SE of the Point.

A light is exhibited from a white column on a concrete base, 3.7m in height, on the point. A conspicuous yellow windsock is a useful landmark 0.4 mile SW of Isulailai Point.

A coral patch with a depth of 7m, lies about 0.25 mile offshore, 0.45 mile N of Isulailai Point. A 7.3m patch lies 0.13 mile farther N. These two patches are not generally visible from aloft.

An island, 18.3m to the top of the trees, lies close offshore, 5.25 miles NNW of Isulailai Point. The island is fringed by a reef to a short distance only, with deep water beyond.

A shoal, with a least depth of 2.4m, lies 0.3 mile E of the S end of the island.

**Caution.—Dorasi Shoal** (10°31'S., 150°42'E.) is a narrow ridge of sand about 1.5 miles in length in a NW to SE direction, with a least depth of 3.6m near its center, which lies 3 miles N of Isulailai Point Light. The shoal is steep-to on its N and S sides, but it only shows when the light is favorable.

## China Strait

**7.15** China Strait is the narrow deep-water channel between the SE extremity of New Guinea and Sariba Island. It is about 4 miles in length in a NE and SW direction, and about 0.75 mile in width at its narrowest part, which is at its N entrance. Depths in the fairway exceed 26m, except for the dangers previously described.

During the SE monsoon season the positions of the higher mountains, which on a clear day would be visible, are indicated by a thick cloud hanging over the land. In these conditions, while yet outside the barrier reef, the Brumer Islands show clearly. The most conspicuous peak on the Brumer Islands is the castellated summit on the W island, and farther N the bright green hills of Deirina Island are visible against the darker coastal hills.

When a vessel is near the fairway over the sunken barrier reef, Rogeia Island is visible against the coastal mountains of the mainland. Sariba Island is visible over the SE part of Rogeia Island. The double-topped island of Doini and the peaks of Basilaki are also visible from the fairway.

**Tides—Currents.**—In the narrow part of China Strait the currents run from 3 to 6 knots, decreasing to 2 or 3 knots in the wider parts and approaches. The NE current commences about 3 hours before HW by the shore and runs until about 3 hours after; the SW current runs for the remainder of the 12 hours. The currents, however, vary an hour or more on either side of the times given. Strong E winds retard the NE current considerably.

In West Channel the currents follow, approximately, the trend of the coast. At quarter flood at Samarai Island the SW current is slackening; shortly afterwards the NE current begins to make itself felt outside West Channel, and, meeting the opposite current, causes tide rips in the vicinity of Weku una. There is comparatively little current in the bright N of Weku una.

In East Channel the tidal currents set strongly through the passes between Rogeia and Doini Islands, but they are not

nearly as strong as those in West Channel. The SW current through China Strait, impinging on Rogeia Island, runs partly through West Channel and partly through East Channel along the island's shore, while close along the S shore of Sariba Island there is no current.

The NE current impinging on Sariba Island, is partly deflected to the NW, and uniting with the NE current from West Channel, at springs, causes heavy tide rips and overfalls at the N entrance of China Strait.

A strong eddy will be found on each side of China Strait, and near the shore NW of Isulailai Point. It should be remembered that the ebb current sets obliquely on this point.

On the sunken barrier reef to the S of China Strait the tidal currents run with a force of from 1 to 2 knots and in a general direction of NE and SW, but at neap tides they may be considerably modified by the wind. In the neighborhood of Wari Island their direction inclines more to the N and S. Over Siriki Shoals the tidal currents run strongly, causing heavy tide rips.

In the vicinity of Brumer Islands the currents are less strongly felt, and during the SE monsoon season an almost constant current appears to set toward the W, although it is distinctly affected by the ebb and flood currents.

**Directions.**—China Strait may be entered from the S by passing either through West Channel or East Channel. In approaching the strait from the southward it is recommended to make the Dumoulin Islets, about 20 miles SE of New Guinea, which frequently show clearly when the other islands can not be seen. There are several good approaches through the barrier reefs W of these islets, then to West Channel.

**Caution.**—The land in the vicinity of China Strait is frequently obscured by rain.

**7.16** Vessels with a draft not exceeding 7.6m may approach from the W, with the summit or the light on Badila-bedda-bedda-bonaru bearing 093°. This course will lead across the barrier reef and leads close S of a 9.8m patch and N of a 10.1m patch. When in a position about 2.5 miles from the light a vessel should steer 071° to pass 0.75 mile N of the island then steer on Sapikunuri until the light astern bears 245°, then steer a course of 065° to West Channel. The 065° course leads over a 11.9m patch and close N of a 11.6m patch.

The track from SW leads, in deep water, through the barrier reef in a position about 5 miles from Badila-bedda-bedda-bonarua with the light bearing 047°30' and when about 3.5 miles from the light steer 000° to join the track from the W. This same break in the reef may be crossed with the summit of Baibesiga Island in range 350°.

A good approach that can also be used crosses the barrier reef with the Arch Islets bearing between 033° and 001°.

Approach West Channel on the 065° course until the light on Weku una bears 019° when that course should be steered. This course will pass E of a depth of 7.9m. Once past this depth midchannel courses may be steered through China Strait, taking care to avoid the previously described shoals and steer to pass E of Dorasi Shoal, at the N entrance.

In entering China Strait from the N these directions must be reversed.

East Channel, which leads N of Doini Island, is free of dangers, except for the reef off the E extremity of Rogeia Island.

A vessel, having cleared Lebrun Islets, may steer to pass midway between Samarai and Sariba Islands to China Strait, then as directed above under West Channel.

## Milne Bay

**7.17 Milne Bay** is about 7.5 miles in width between Saraoni Island, the S entrance point, and Killerton Point, the N entrance, and extends W about 20 miles to its head. To the W of Saraoni Island, the S shore of the bay continues bold and steep and is slightly indented by a succession of bights.

At the head of the bay a thickly populated plain extends 4 or 5 miles inland to a low mountain range, and then to the W the Owen Stanley Range rises. Running parallel to the latter range and separated by extensive valleys is the Stirling Range, extending along the N coast of the island.

The N shore of Milne Bay is also mountainous, rising to heights of over 914m. The coast is indented by a series of bights and the E entrance is fronted by the Killerton Islands. The bay has charted depths over 549m.

**7.18 Milne Bay—South side.**—The bold shore line rises quickly to a height of 305m, at distances from 0.75 mile to 2 miles inland, however, W of Discovery Bay it is over 2.5 miles inland and N of this height the land is relatively low and flat to the coast. Mount Allemata, 678m high, is situated about 2 miles inland, 18 miles WNW of Saraoni Island.

The coastal water along the S coast of Milne Bay is free of charted dangers as far W as Discovery Bay, except for a dangerous rock charted at the mouth of Dawa Dawa River, about 10 miles WNW of Saraoni Island.

Alotoa is a village located on the N shore.

**Saraoni Harbor** (Kana Kopi Bay) (10°29'S., 150°39'E.) is entered between the W edge of Saraoni Island and a point about 0.2 mile W. The bay has general depths of 18.3 to 27m to within 183m of its head, and extends for about 0.4 mile in a southerly direction. At the head of the bay there is a dock and a pier.

**Discovery Bay** (10°25'S., 150°24'E.) (World Port Index No. 53195) from seaward appears low and wooded; it may be identified by the bright green trees in the background. The W part of the bay is distinctly marked by a reef, which is partly awash.

An L-shaped wharf is located at the E entrance point of the bay. There is a depth of 5.2m along its NW face and a depth of 11.3m alongside its SW face.

The village of Waga Waga is situated at the head of the bay. Several ruined wharves lie on the E shore and at the head of the bay.

Anchorage may be taken in the middle of Discovery Bay in depths of 22 to 26m, sand and mud. The E shore should be favored by entering vessels, since it is steep-to. The reef on the W side should be avoided, as its inner portion is not always discernible.

Between Discovery Bay and the SW extremity of Milne Bay, the shore is fronted by reefs and shoals extending as far as 0.3 mile offshore in places.

From Saraoni Harbor the coast trends in a WNW direction about 15 miles to the E entrance of Discovery Bay.

**7.19 Milne Bay—North side.**—From **Killerton Point** (10°21'S., 150°38'E.), close W of Killerton Islands, for about 13 miles W to Stringer Bay, the N shore of Milne Bay is steep-to and indented by a series of small bays along the foot of the Stirling Range.

Lihitabu Point lies 2.5 miles W of Killerton Point. There are several small inlets between these two points that are fronted by shoal water. A 9.1m depth lies about 0.22 mile S of Lihitabu Point.

**Alotoa** (Sanderson Bay) (10°19'S., 150°27'E.) (World Port Index No. 53165) is situated on the N shore of Milne Bay 8.5 miles WNW of Lihitabu Point. The district administrative headquarters is situated here. The port is marked by a light.

On the W entrance point of the bay there is an L-shaped wharf with a head 36m long having a depth of 6.7m alongside. A wharf for ocean-going and coastal shipping is situated on the E side of Sanderson Bay. The deep-water section is 93m long with depths of 8.4m alongside. The coastal shipping part is 56m long with an alongside depth of 4.9m.

In 1990, 115 vessels with a total of 436,504 dwt used the port. There is a bunkering facility and water is seasonally available. A berthing dolphin is to be added to the berth that is 93m long.

Pilotage is not compulsory for Alotoa, however, if pilotage is required, a request via Port Moresby radio (P2M) giving 48 hours notice of ETA. The vessels arrival should be sent not less than 12 hours via Port Moresby radio and is to be confirmed not more than 5 hours or less than 4 hours prior to arrival, again via Port Moresby radio. The pilot boards about 0.6 mile SSW of the light.

**7.20 Head of Milne Bay.**—The head of the bay extends in a general N and S direction and is about 5 miles in length. The N shore of the head of the bay is low and featureless, with dense groves of coconut palms backed about 2 miles inland by heavy jungle.

The head of the bay is fronted by numerous mud banks which extend up to 0.45 mile offshore. There are several rivers which discharge into the bay in this area and after rain, torrents of water flow into the bay and discolor the water for some distance from shore, producing the appearance of shoal water.

**7.21 Stringer Bay** (10°18'S., 150°24'E.), on the N side of the bay, 2.5 miles W of Alotoa, affords anchorage in 11 to 36m.

Aleford Islets, a group of 4 small islets, lie from 1 to 2 miles offshore at the head of the bay. They are surrounded by reefs, but the depths E of them increase from 18.3m at 0.5 mile off to 37m and 55m from 1.5 to 2.5 miles off.

A rock, with a least depth of 3m, lies 1.75 miles SSE of the easternmost islet of the Aleford group and a shoal patch with a depth of 2.1m lies about 0.9 mile NW of this rock. Shoal patches with a least depth of 2.1m lie 0.5 mile to 1 mile S of this rock.

**Giligili Anchorage** (Gili Gili Anchorage) (10°25'S., 150°22'E.) lies in the NW part of Milne Bay, close W of a small islet that lies about 0.15 mile offshore SW of Stringer

Bay. The anchorage provides good holding ground in 9.1 to 37m, gray mud. Should protection from SE winds, which blow strongly at times, be desired, anchorage can be taken W of the NW islet of the Aleford group.

A shoal of coral formation, with a 14.6m, lies about 0.8 mile NNE of the NE islet of the Aleford group.

Waga Anchorage is situated in the SW part of Milne Bay and affords anchorage for several vessels.

**7.22 Killerton Point to East Cape.**—From Killerton Point the coast trends in an ENE direction about 16 miles distant to **East Cape** (10°14'S., 150°52'E.). Mount Gera-gera, 506m high, rises 3.75 miles NE of Killerton Point; Mount Killerton, 491m high, rises 1.5 miles farther ENE. From the SE and NW the summit of Mount Killerton shows as three round knobs; the middle one is highest. Towards East Cape, the E extremity of New Guinea, the valleys between the hills become deeper, giving the point, the appearance of islands, when seen from a distance.

**Killerton Bay** (10°21'S., 150°40'E.) is entered between Killerton Point and a point nearly 4 miles NE. The shores of the bay are low, wooded, and partly cultivated.

Killerton Islands, situated in the SW part of the bay, consist of three principal islands and four smaller islets. They are wooded and lie in a general E and W direction. The islands of this group are surrounded by reefs and shoal water. There are deep water passages between the larger islands of the group, but local knowledge is required to transit them.

Waga Tu Maiawa Island, the W most of the group is fringed by a reef and is separated by Mahabarina Island (0.5 mile NE), the N most, by a deep channel 0.2 mile wide in the middle of which lies Messum Rock. A shoal in a depth of 3.8m lies about 0.4 mile WSW of the SW point of Waga Tu Maiawa Island.

The coast between Killerton Bay and Nuamuri Point, 4.5 miles ENE, forms several sandy bays, with foul ground extending up to 0.5 mile off them.

**Kubui Point** (10°15'S., 150°50'E.), bold and steep, and backed by a hill with a double summit 123m high, is situated 5 miles NE of Nuamuri Point. From Kubui Point the coast trends NE for 3 miles to East Cape.

**Caution.**—**Sullivan Patches** (10°22'S., 150°45'E.), with a least charted depth of 5.5m, lie 3.5 miles S of Nuamuri Point. Yunnan Shoal, with a charted depth of 2.7m lies, 1.25 miles S of the same point. A 9.1m shoal lies about 0.8 mile NNE of Yunnan Shoal.

A depth of 7.3m has been reported to lie 1 mile SW of Kubui Point.

As the waters in this area have not been completely examined, on no account should vessels pass N of Sullivan Patches.

## East Cape

**7.23 East Cape** (10°14'S., 150°52'E.) is the E extremity of the peninsula forming the N side of Milne Bay. About 0.3 mile SW of East Cape there is a double peak, 128m high, that is the termination of the range along this peninsula. This peak is wooded on the NW and S sides but is cultivated on the NE side.

Discolored water was reported to exist about 1.5 miles SW of East Cape.

There are several islands and dangers lying in the approach to Goschen Strait when coming from the S or E. The main channels have sufficient water, but are not marked by buoys. Most of the channels may only be navigated with the sun in a favorable position.

**Meimeiarā Island** (Mei-Mei-ara Island) (10°13'S., 150°53'E.) is thickly wooded and lies on the shelf that extends ENE of East Cape. Near the middle of the island a grassy mound rises to a level with the top of the trees.

A fringing reef extends 0.25 mile from the N side of the island, and 183m from its W side. Foul ground and numerous shoals exist within a radius of 1 mile S through NE of the island. There is a light on the S coast of Meimeiarā island.

**Caution.**—The light is obscured ENE of Boia-boia-waga Island.

Meimeiarā Island is separated from East Cape by Hornbill Channel which will accommodate vessels of 3.7m draft. There is a considerable tidal current through the channel and with a SE wind a breaking sea extends across the passage. The passage may be made keeping close to the reef on the E side of the channel. Local knowledge is essential to make this passage.

Jackdaw Channel is about 0.2 mile between the 5.5m lines on either side, with a least depth of 6.1m in the fairway. This channel passes between Meimeiarā Island on the SW and Boia-boia-Waga Island on the NE. Mount Fairfax, on Basilaki Island in range 165° with the W tangent on an islet in the Obstruction Islands group leads through Jackdaw Channel clear of the dangers.

**Boia-boia-Waga Island** (10°13'S., 150°54'E.), 1.25 miles NE of Meimeiarā Island, is wooded and is surrounded by a fringing reef. A sandbank, awash at HW lies 0.5 mile W of the island. There is a depth of 4.6m charted about 0.3 mile S of the sandbank and a depth of 5.2m about 0.4 mile SSW of the same bank. These depths lie on the E and W sides, respectively, of Jackdaw Channel.

Taodovu Reef, about 1.5 miles long in a N to S direction, lies 2 miles E of Boia-boia-waga Island. There are depths from 1.8 to 3.7m over the reef. A steep-to patch with a depth of 2.5m lies about 0.5 mile NW of the N end Taodovu Reef.

Messum Channel is about 0.2 mile wide and lies between two reefs. The W reef lies with its center 100°, 2 miles distant, from the light on Meimeiarā Island. A shoal with a least depth of 1.2m lies 0.25 mile S of this reef and is a hazard in the approach to Messum Channel.

Messum Channel lies at right angles to the direction of Raven Channel and is a valuable alternative route to Goschen Strait from the S. The least known depth in Messum Channel is 8.5m. The channel should be used only with local knowledge.

There are three islets that are important for the transit of Messum Channel; two of them are in the Obstruction Islands group. Lelei-Gana Islet lies 5.5 miles distant 156° from the light on Meimeiarā Islet. Togisi Islet, the smaller of these two, lies 0.33 mile N of Lelei Gana Islet. Hibwa Islet, the third of these three islets, lies on a reef E of Raven Channel, 6.5 miles distant, 098° from the Meimeiarā Islet light.

**Directions for Messum Channel.**—Approach Raven Channel from the SW and when Togisi Islet and the E tangent

of Lelei-Gana Islet come in range 175°, bring this mark astern to the S entrance of Messum Channel. There are no marks for the channel. When between the two reefs on the E and W side of the channel steer as required to clear the dangers. When clear N of the reefs alter course to 006°. When Hibwa Islet bears 119° make good a course of 299°, which leads midway between the reef extending NE of Boia-boia-waga, and the patch off the N extremity of Taodovu Reef, then into Goschen Strait.

In Messum Channel the tidal currents set NE and SW.

Dana-gedu is an extensive reef about 4.75 miles in extent that lies in a general NE and SW direction that is parallel to, and lies about 3 miles off the E peninsula of New Guinea. Raven Channel is approached W of this reef.

**7.24 Iabama Islet** (10°17'S., 150°56'E.), 69m high, is the N islet of the Obstruction Group, and lies 1.75 miles E of Dana-gedu reef.

Raven Channel, the best passage through the reefs N of Obstruction Islands, lies on a general E and W axis. The channel lies about 4 miles ESE of East Cape and is difficult to navigate; great caution is necessary. The reefs on either side are steep-to and have shallow depths of only a few feet over them, but their edges show distinctly from aloft when the sun is favorably situated. The channel between the reefs is about 0.2 mile wide at its narrowest part.

A shoal with a least depth of 4.9m lies 2 miles 009° from the summit of Iabama Islet; a 9.1m patch lies 2 miles N of the same summit.

**Directions for Raven Channel.**—Vessels approaching the channel from the SW steer for East Cape bearing 023°, giving the SW extremity of Dana-gedu Reef a berth of about 1 mile. When the S extremity of Lelei-Gana Islet bears 093°, change course to 046° and make this course good for a distance of about 4 miles, until Hibwa Islet bears 083.5°. Alter course to 083.5° with Hibwa Islet ahead, to pass through the center of Raven Channel. There is a light on the reefs on each side of the channel and a light on Hibwa Islet. This course passes through the 9.1m patch and close to the N edge of the 4.9m shoal patch. When Lelei-Gana Islet bears 213°, course should be altered to 033° with that islet astern. This course will lead into Goschen Strait clear of all dangers.

It has been reported that the current in the W approach has a northward flow as strong as 5 knots at times. An E-going current from 1.5 to 3 knots was reported in the channel.

The best time to navigate Raven Channel is in the early daylight hours.

**7.25 Obstruction Islands** (10°19'S., 150°57'E.) take their name from the position they occupy SE of East Cape. In addition to the islets in the group that were described with Messum and Raven Channels there are several other islets and reefs in this group.

**Walters Reef** (10°21'S., 151°00'E.), a patch of sunken rocks, is the E extent of this group of dangers. About 1.25 miles SSW of Walters Reef there is a patch of sunken rocks with two 5.5m coral heads close NE of it.

About 1.75 miles SW of Walters Reef, there is a reef that is the S most of the dangers lying in the immediate vicinity of the

Obstruction Islands. There are two sandbanks on this reef which dry 0.9m; they are nearly always marked by breakers. A thickly wooded islet, with a conical summit 49m high, is situated 2.25 miles NNW of this reef.

**Caution.**—This area has not been adequately surveyed and less water may exist than charted.

**Nuakata Island** (10°17'S., 151°01'E.) rises to a wooded, conical height of 327m. This is the principal island in the vicinity of East Cape and lies about 8 miles SE of it. This island is a conspicuous mark for vessels navigating in the locality.

There are three anchorages in the various bays on the N and W sides of the island. Anchorage may be taken in the bay on the N side of the island in a depth of 35m sand, with the W entrance point of the bay in range with East Cape bearing 288° and the E entrance point bearing 049°. This position is exposed to NE squalls which are sometimes experienced. A reef extends 1 mile N of the NW extremity and a rock awash is NW of the E entrance to the bight on the N side of this island.

A shoal with a depth of 9.1m extends 0.5 mile WSW of the W extremity of the island. Anchorage may be taken 0.4 mile N of the W extremity in 31m sand. This anchorage is protected from all winds E of S. The bay on the SE side of the W extremity affords anchorage in 33m, sand, during the NE monsoon, with the W extremity bearing 293° and the SE entrance point bearing 170°.

The S extremity of Nuakata Island terminates in a wooded bluff 46m high W of a depth of 4m, 0.4 mile S. A sunken coral reef extends 0.4 mile SW of the point and 0.75 mile SE of the point is another reef, awash, with a rock which dries 0.9m. A sunken rock, or shoal, lies about 1.25 miles NNE of the point.

**7.26 Fallows Reef** (10°14'S., 151°00'E.), with a depth of 1.8m, lies 1.75 miles N of the NW extremity of Nuakata Island. Hibwa Islet, 0.9m high and sandy, lies 0.75 mile SW of Fallows Reef. A 1.5m patch lies close E of the S extremity of the reef.

A reef, with a least depth of 0.3m, is charted 1 mile ENE of the N extremity of Nuakata Island.

Boirama Island is separated from the E part of Nuakata Island by a narrow channel; its summit is about 157m high; the vivid green grass covering the summit is conspicuous when approached from the S.

Diawari Island, situated about 0.5 mile S of Boirama Island, is conical shaped and rises to a height of 149m; the peak is covered with thick grass. The island is fringed by a reef which extends 0.75 mile S and 0.4 mile to the E and N. The bright green summit of the island makes an excellent landmark when approached from the S.

**Mid Sand Bank** (10°24'S., 151°03'E.), situated about 5.5 miles S of Nuakata Island, dries 1.2m. A reef, with a depth of 2.1m, lies about 1.5 miles W of the bank; the reef sometimes breaks.

There are four detached reefs, with depths from 2.1 to 5.8m, that lie on a line 1.75 miles NNE to 0.75 mile SE of Mid Sand Bank.

A line of reefs and shoal water with several small islets situated on them, extend in a SE direction about 15 miles from Diawari Island. The depths on the reefs vary from 2.4 to 6.1m.

**Grace Islet** (10°21'S., 151°07'E.), 27m high to the top of the trees, lies 5 miles SE of Daiwari Island. The islet is composed of coral and is thickly wooded. A shoal, which dries 0.9m, and a small islet, 12.2m high, lie, respectively, 3 miles WNW and 1.75 miles W of Grace Islet. A shoal 11.5m is reported to lie about 3 miles SW of Grace Islet.

Hull Islet, 31m high to the top of the trees, lies 4.5 miles SE of Grace Islet.

**Blakeney Islet** (10°26'S., 151°13'E.), a low thickly wooded islet 38m high to the tops of the trees, lies 3 miles SE of Hull Islet. This islet occupies a central position in the main approach route to Goschen Strait from the S. The reef, previously described, extending SE of Diawari Island, terminates in a 6.1m patch, 2.75 miles S of Blakeney Islet.

Mesley Patches, with depths of 3.7 to 8.2m, lie 3.5 to 5 miles W of Blakeney Islet.

**7.27 Gallows Reef** (10°17'S., 151°09'E.) is situated in the fairway at the E end of Goschen Strait and leaves a navigable channel about 1.75 miles wide on either side of it. The reef is an extensive horseshoe-shaped ridge of coral, open W; the greater part of it is awash. A few spots at the eastern end of the reef dry.

The sea breaks heavily on the SE side of the reef, which is steep-to; no bottom was found at 219m. The entire reef is steep-to and a reef at the N extremity dries 0.6m.

Tidal currents in the channel N of Gallows Reef are E and W and attain a rate of about 2 knots although influenced by the prevailing wind. The current is usually N in the area of Gallows Reef.

**Shortland Islet** (10°32'S., 151°05'E.) is an oval shaped islet about 35m high to the top of the trees, situated 10 miles SW of Blakeney Islet. Encircling the islet are Shortland Reefs, extending 0.5 mile from the W side of the islet and 3.5 miles E. There are occasional sand cays on the reefs, with bushes on them. There is a light on the NE side of these reefs.

Between Shortland Islet and Grant Islet, 3 miles WSW, there is a channel about 1.25 miles wide between the reefs. The middle of the passage was reported to have a depth of 22m.

A heavy tidal race is almost always found in this passage.

Byron Islet, low and covered with trees, lies 2.25 miles SE of Shortland Islet. This islet is nearly joined to S extremity of Shortland Reefs and is a good mark for that danger.

**Slade Island** (10°35'S., 151°12'E.), the farthest W of the Engineer Group, lies 4.5 miles SE of Byron Islet. The other islands in the group extend ESE about 4 miles. Slade Island rises to a height of 197m near its center. A well-defined green bluff marks the W point of the island. Butchart Islet, 46m high, lies off the N extremity of the island, and a rock 6.1m high lies close off its SE extremity.

Skelton Island, situated close SE of Slade Island, is 174m high.

Watts Island, the SE island of the Engineer Group, is 130m high near its W end. Toward the center the island dips considerably and near the E end rises to a tableland about 107m high, which terminates in steep cliffs on the S side.

The channel between Watts and Skelton Islands is about 0.5 mile wide, and not having been thoroughly examined it should be avoided.

**7.28 Bright Islet** (10°32'S., 151°12'E.) is situated 3 miles NNE of Slade Island. This is the farthest W of a group of six small islets that lie N of, and parallel to, the islands of the Engineer Group. Several coral patches lie between Bright Islet and Shortland Reefs, 4 miles W; their position may be seen on the chart. There is a light on Bright Island.

Ridge Shoal, with a depth of 11m, lies 2.25 miles N of Bright Islet.

Good and Deeds Islet lie, respectively, 2 and 3.5 miles E of Bright Islet. These low wooded islets are situated in a reef encumbered area.

**Haszard Island** (10°35'S., 151°22'E.), about 18.3m, lies 6.75 miles SE of Deeds Islet.

**Caution.**—A dangerous area extends from a position about 1.5 miles E of Deeds Islet SE to Haszard Island. These waters have not been thoroughly examined. Discolored water was reported about 4.5 miles E of Deeds Islet.

Hummock Island, 1 mile S of Haszard Island, is almost connected to it by a coral reef. Hummock Island has a low hill at its N end, is low in the center, and then rises to a remarkable hill 59m high at its S extremity.

There is shoal area and several small islets that lie N of Engineer Group and S of Good and Deeds Islet, whose position may best be seen on the chart. No vessel should attempt to pass through this area except in fine weather and with a good lookout aloft.

**Night Bank** (10°34'S., 151°23'E.), with a least depth of 5.5m, is situated 1.25 miles NE of Haszard Island. A tide rip generally marks its position.

The tidal currents charted E of Night Bank run at the rate of 2.5 knots at springs; the flood sets N and the ebb S.

**7.29 Bentley Island** (10°43'S., 151°15'E.), 5 miles S of Skelton Island, is fringed by a reef which extends 0.75 mile from its SW side. The hill on the island is divided in two parts, each part being about 107m in height.

Mudge Island is situated about 3.5 miles ESE of Bentley Island. This low, thickly wooded coral island is surrounded by a reef.

**Hardman Islets** (10°26'S., 151°19'E.) are two low islets, 38m high to the top of the trees, which lie 5.5 miles E of Blakeney Islet. An extensive coral reef surrounds the islets.

There are several patches of discolored water, and a patch of 11.6m depth between Hardman Islets and Haszard Island; this area as well as that E of Hardman Islets NE to Laseinie Islands have not been completely surveyed.

**Laseinie Islands** (10°24'S., 151°25'E.), situated about 7 miles ENE of Hardman Islets, consists of six islands and islets lying on a reef. Dawson Island, the largest of this group, rises to a height of 137m. When the summit of this wooded island is seen from the E or W it appears flattened, but if seen from the N or S it appears conical.

Two islets lie within 1.5 miles SE of Dawson Island; NW of the island, about 2.5 miles distant, are three islets in the Kegawam Islands, which are part of the Laseinie Islands. There is a light, obscured by trees in certain directions, on the NW side of the reef connecting Kegawam Islands.

A coral reef appears to connect the whole group; there are a few sand cays on this reef.

The sea W of Dawson Island has been seen to break.

**7.30 Normanby Island—South coast.**—The N side of Goschen Strait is fronted by the S coast of Normanby Island, from Cape Ventenat at the E entrance to Cape Prevost 16.5 miles WNW at the W entrance.

**Cape Ventenat** (10°12'S., 151°13'E.), the SE extremity of Normanby Island, is wedge shaped and well defined when seen from E or W. The cape gradually rises to a height of 1,097m, 6 miles NNW. A strip of sandy beach borders the cape, and a coral ledge extends about 0.2 mile S of it.

Grind Reef skirts part of the coast from a position 3 miles SW of Cape Ventenat, in a NNE direction for about 9 miles distant. There is a sandbank on the reef which dries 0.9m and there are depths over the reef of 0.6 to 4.3m.

Ventenat Islets are two wooded islets with well defined summits which lie inside the barrier, 1 mile SW of Cape Ventenat. The SE islet is 77m high and the NW islet is 47m high.

Centipede Bay lies 3 miles NW of Cape Ventenat and is open S. The head of the bay is 0.5 mile wide and has a sandy beach fronting a lagoon.

Make-ia Point, 1.75 miles W of Centipede Bay, is fringed by a coral ledge. The coast W of this point continues steep and without any marked features for a distance of 2.75 miles to Makumaku Point, which is also fringed by a coral ledge.

The coast continues in a W direction from Makumaku Point for about 9 miles to Cape Prevost. This coast is steep-to. A depth of 20.1m is charted 2.75 miles WNW Makumaku Point.

**Cape Prevost** (10°06'S., 150°57'E.) is steep and well defined. The mountain range rises steeply within the cape and a height of 1,067m is charted 3.25 miles ENE of the cape.

The W and N coast of Normanby Island are described beginning in paragraph 9.9.

**7.31 Goschen Strait** (10°10'S., 151°00'E.) lies between East Cape, the NE extremity of New Guinea, and the island and dangers SE of this cape; the N side of the strait is formed by the S shore of Normanby Island. The strait is about 16 miles in length in an E and W direction and 6.75 miles wide between Cape Prevost and Boia-boia-waga Island.

The mountains on the N side of the strait are covered with dense tropical forest and descend in steep slopes to the waters edge.

Tidal currents between Grind Reef and Gallows Reef set E and W at a rate of about 2 knots; between the islands westward it is no doubt stronger, and is probably much influenced by the prevailing wind. It has been reported that the tidal streams in the vicinity of Gallows Reef are strong and that the current usually sets N in this area.

Directions for vessels approaching Goschen Strait are variable and vessels may select the approach which is most appropriate.

A vessel can cross the sunken barrier reef NE of Uluma Reef and pass between that reef and Stuers Islets in depths of 10.1 to 16.5m with Mamaramaweino Rock, 2.25 miles NW of the W end of Wari Island, bearing 344°. When nearing the rock course should be altered to pass 1 mile W of it, and when abeam of it steer to make good a course of 029° so as to pass 1 mile E of Baba-garai Island. When abeam Baba-garai alter course to pass 1.5 miles W of Slade Island, and when the W extremity of Slade Island is in range with the W extremity of Bentley Island bearing 161°, astern, this course leads between Bright Islet and Shortland Reefs. When Shortland Reefs light bears 249° astern and the S point of Dawson Island bears 069°, steer that course, but note that it leads over a depth of 6.1m, 2.75 miles S of Blakeney Islet. When Blakeney Islet bears 310°, alter course to 356° and make that course good, which lead up to about 2 miles E of Gallows Reef. Keep a good check on the vessel's position, as the tidal currents sets at the rate of about 2 knots to the E or W in the approach to Goschen Strait. When the N extremity of Nuakata Island bears 268°, then shape a midchannel course through Goschen Strait.

An alternate route may be followed from Baba-garai Island, by shaping a course to pass in midchannel between Grant and Shortland Islets. It should be borne in mind that the tidal currents in the passage between Grant and Shortland Islets are very strong and a vessel should be conned from aloft. When clear of the islets steer for Nuamuri Point, 8 miles SW of East Cape, then through Raven or Messum Channel as previously directed.

Vessels may also pass between Lebrun Islands and Siga Islet then WNW to East Channel and follow previously described routes to Goschen Strait.

Vessels are recommended to make the NE passage in the afternoon and SW passage before noon, so the sun will be in its most favorable position for seeing the reefs.

Vessels proceeding NE, after clearing China Strait, may steer to pass through the passage S of Blakeney Islet on a course of 087°. When Bright Islet comes in range with the W end of Slade Island a course of 029° leads clear N. When fixing position from China Strait E, bearings of the land to S have been satisfactory. Due to the tidal currents, frequent fixes are advised.

**Caution.**—No exhaustive survey of Goschen Strait has been made and the passage should only be made in favorable light conditions and with a lookout aloft.