



Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.

**SECTOR 4 — CHART INFORMATION**

# SECTOR 4

## NAMPO SHOTO

**Plan.**—This sector describes the islands in the Nampo Shoto group in a N to S direction, with Izu Shichito the first group of islands described, then Ogasawara Gunto and Kazan Retto in order. The off-lying reef Okino-tori Shima (20°25'N., 136°05'E.) is described, then the off-lying island of Minamitori Shima (24°17'N., 153°59'E.).

### General Remarks

**4.1** Nampo Shoto, a chain of islands, extends about 650 miles S from O Shima, previously described in [paragraph 3.10](#), to Minami-Io Shima. The Nampo Shoto are volcanic islands and eruptions of submerged volcanoes frequently occur, with new shallows being formed from time to time.

**Winds—Weather.**—Izu Shichito (Izu Shoto) is a warm area with considerable rainfall. It is considered one of the windiest areas in Japan, with over 20 days of gale strength wind per month during the winter. The air temperature is high throughout the year. In the winter the air temperature is somewhat higher than Tokyo; however, strong winds make the air feel cooler.

Ogasawara Gunto is dominated by the monsoons. During the cold season, December to March, the winds are NE to N, while during the warm season, April to November, SE winds prevail. Because it is on the N edge of the NE trade wind belt, this area frequently has NE winds in April and September as the monsoons weaken. Air temperatures are higher than in Izu Shichito throughout the year.

The four seasons in the Ogasawara Gunto vary only slightly. A warm and a cold season can be distinguished, but neither registers extreme temperatures. On Chichi Shima, the average temperature ranges between 17°C and 20°C during the cold season, December to March. During the warm season, April to November, the hottest period is from July to September, when the average monthly temperature is 27°C.

**Tides—Currents.**—The main current of the Kuroshio generally flows ENE in the vicinity of Miyake Shima. When a cold water mass is present off Enshu Nada, the current flows W of Miyake Shima, otherwise it flows to its N.

Generally, tidal currents flow E and W between the islands. When they are not affected by ocean currents, the tidal currents flow 1 hour after HW and LW. Tidal currents between the islands may actually flow in several directions depending on the topography. In the narrow channels there are places where the maximum velocities may range from 2 to 4 knots.

The ocean current in this area affects the tidal currents; directions, velocities, and the reversing times are irregular. Near Izu Shichito, the NE or E set of the ocean current is so strong that tidal currents are suppressed, and at times there is no W tidal current. In the area between To Shima and Koju Shima, the tidal currents flow E and W from about 1 hour after LW or HW, until 1 hour after the next HW or LW, with maximum velocities reaching 3 to 4 knots in places.

Tidal characteristics of the Nampo Shoto are virtually identical to those along the S coast of Honshu. High water occurs earliest in the N, gradually later moving S. The range is 1m in the N and 0.5m in the S.

Within the area of predominating tidal currents, to the S of the Izu Shichito, conditions in the vicinity of Mukoshima Retto, a subgroup of the Ogasawara Gunto, situated near the S end of the chain, the flood tidal current flows in a direction between NNW and WSW, with a velocity of about 0.5 to 2.3 knots, and the E ebb current has a strength of about 1 to 3.5 knots. Near and between the islands of Chichishima Retto, another sub-group of the Ogasawara Gunto, the flood and ebb current take the usual W and E directions, but they may follow the E and W coasts of the islands in a N to S direction with weakened velocity. The same conditions are found in the vicinity of Hahasshima Retto, the islands about 20 miles farther S that form the outermost subgroup of Ogasawara Gunto.

**Caution.**—When navigating in the vicinity of Nampo Shoto, vessels should bear in mind that this is an active volcano area and even though the area has been surveyed, there may be dangers that have not been reported.

Intense and continuous volcanic activity was reported in 1984 through a stretch of area about 30 miles wide, commencing 65 miles S of Hatizyo Shima and running 480 miles SSE to the vicinity of Minami Io Shima, then SE to Asuncion Island, the N extremity of the Mariana Islands.

### Izu Shichito

**4.2 Izu Shichito** (Izu Shoto) (32°20'N., 130°50'E.) is the N group of the chain of islands known as Nampo Shoto. The group extends SSW from O Shima to Sofu Gan, a distance of 300 miles. Many of the islands reveal continuing volcanic activity, such as the pouring forth of steam and sulfurous fumes, the appearance of new cones, and eruptions and earthquakes of varying intensity.

The islands are generally wooded and there are sand beaches in places. There is also heavy surf and in most anchorages there is difficulty in landing.

**O Shima** (34°44'N., 139°24'E.), the N island in the Izu Shichito group, was previously described with the approach to Tokyo Wan in [paragraph 3.10](#).

**To Shima** (34°31'N., 139°17'E.) has a slightly conical summit which rises to a height of 508m and lies about 11 miles SSW of O Shima and about 22 miles ESE of Iro Saki. The island is covered with vegetation and has many camellia trees. The sides of the island consist of steep cliffs, and huge volcanic rocks cover the coastline. To Shima Light is shown from the N side of the island.

When the sea is calm, vessels of 200 to 300 grt may anchor about 119m off Toshima Ko, on the N coast, in depths of 20 to 25m, rock bottom.

A pier, with depths alongside of 2.6 to 8.2m, extends 183m N of the N side of To Shima.

**Tides—Currents.**—The current sets NE past both sides of To Shima at rate of 2 to 3.75 knots. Off the N point of the island it forms eddies and sets E at a rate of 4 knots.

Udone Shima is a wooded, cliffy island, 210m high, located about 2.3 miles SSE of To Shima. There are many rocky islets that lie within the 20m curve that extends from 0.15 mile off the S side to 0.6 mile off the NW extremity.

**Nii Shima** (34°23'N., 139°16'E.) lies about 2.5 miles S of Udone Shima. The island is about 6 miles long in a N to S direction. It rises to a height of 429m in the N part and 301m in the S part; low flat land lies between these hills. Habushi Ura is a sandy beach, 4.5 miles long, located on the E side of the island; other parts of the coast consist mostly of steep cliffs.

Niishima Ko is located on the middle of the W side of Nii Shima. It is a port of call for scheduled ships. It consists of a breakwater with a jetty extending NW from its end. The jetty is unusable in N to W winds. Hommura is situated on shore here. A high sand wall, built onshore to protect the settlement from the W wind, makes it impossible to see most of the settlement from seaward.

The S part of the beach at Niishima Ko is a conspicuous slope of white sand extending to the foot of a hill, 132m high.

Niishima Ko affords anchorage, in depths of 10 to 20m, to vessels with local knowledge over a sandy bottom; the holding ground is not good and the anchorage is only safe during E winds. During winds from the S and W, temporary anchorage can be obtained off the E side of Jinai Shima, an islet lying off the W extremity of Nii Shima. Two pairs of beacons in line indicate the limits of the prohibited anchorage in the vicinity of the landing place of a submarine cable.

Asa Ne, which dries at 1.5m, is an isolated rock lying 2.5 miles N of Honmura. It is steep-to on its NW side, but reefs extend from its E side.

**4.3 Shikine Shima** (Sikine Shima) (34°19'N., 139°13'E.), the only flat-topped island in the Izu Shichito, is located 1.5 miles SW of Nii Shima. Shikine Shima is about 105m high. The coastline is well-indented with a number of coves which afford shelter for small vessels from various winds. The coast is mostly rocky beach and is cliffy on the W side. Taibusu Iwa, close S of the SW extremity of the island, is a steep pointed rock 53m high.

Small vessels with local knowledge can obtain shelter from all winds by selecting whichever anchorage around the island gives a lee.

A submarine pipeline is laid between Shikina Shima and Nii Shima.

**Kozu Shima** (34°12'N., 139°09'E.), 5 miles SSW of Shikine Shima, rises to a height of 574m near its center; this summit is the W edge of an extinct volcano.

Two islets lie about 0.8 mile off the E extremity of the island. The S islet, which rises to a height of 87m, is conspicuous.

Onbase Shima is a group of rocks lying about 2.3 miles W of the SW extremity of the island; the largest rock in this group is 65m high. All except the S edge of these rocks are covered by the red sector of Ichinokubi Saki Light, situated on the SW side of Kozu Shima.

A light is shown on the SE side of the island by Tako Wan, a small bay with a sandy beach and bottom.

**Tides—Currents.**—In a position 2 miles W of Kozu Shima the tidal current is NW on the rising tide and S on the falling tide. Between Kozu Shima and Shikine Shima the tidal current is N on the rising tide and E on the falling tide. The E current is the stronger and has a rate of 3.75 knots off the N end of Shikine Shima.

**Kozushima Ko** (34°12'N., 139°08'E.) is situated near the center part of the W coast of Kozu Shima. There is a small harbor protected by breakwaters. There is an entrance, 35m wide, on its N side. A quay, with depths of 4.8 to 7.9m alongside, lies on the N side of the W breakwater. A light stands on the quay near its center. The six chimneys of the power company may be seen to the NE of the boat harbor entrance.

**4.4 Miyake Shima** (34°05'N., 139°32'E.) is a roughly circular dormant volcano located 17 miles SE of Kozu Shima. The summit of the island, 814m high, is frequently obscured by clouds from May to July.

Ha Hana is the SW extremity of the island; a conspicuous hill covered with trees rises to a height of 117m, about 0.6 mile N of the point.

Onohara Shima, a small group of pinnacle rocks, lie about 5 miles W of Ha Hanna. When seen from the NNW the group appears as a small sailing vessel, and when viewed from the SW they appear as one rock. On a clear day, the rocks may be sighted from a distance of more than 20 miles.

Vessels can anchor off the SE side of Miyake Shima, in 30m, or, in 14 to 16m, with the light on the breakwater at Tsubota Gyoko bearing 315°, distant about 0.5 to 0.3 mile, respectively. The bottom is unsuitable for anchorage between Yoko Ne and Tsurune Misaki to the SE. During S winds, vessels can anchor on the N side of the island, in 15m, sand, about 1.3 miles ENE of the NW extremity of the island.

A light is shown on the coast close W of Akron Saki on the N coast.

The depths for a distance of almost 1.3 miles off the NE side of Miyake Shima are irregular; this vicinity should be avoided.

Reference should be made to the chart for exact location of the submarine cables in this area.

**Mikura Shima** (33°53'N., 139°36'E.), the summit of which is 853m high, is located 9.5 miles SSE of Miyake Shima. From a distance the top of the island appears to be rounded, but it is frequently obscured by clouds.

Shoji Ne, close off the N extremity of Mikura Shima, is 16m high, and Moto Ne, close off the S extremity, is 67m high. Numuri Ne, 19m high, lies close offshore on the SW side of the island. About 0.5 mile N of Numuri Ne, on Mikura Shima, there is a waterfall visible from seaward.

The village of Sato is situated on the NW side of the island; there is a jetty, used by the ferry, at Mikurashima Ko, at the foot of the cliff below the village.

**Tides—Currents.**—An ENE current with a rate of 3.5 knots has been observed off Mikura Shima.

**Caution.**—**Zeni Su** (33°57'N., 138°49'E.) are two groups of rocky islets located in the middle of a shoal area, about 20 miles SW of Kozu Shima. The two groups of rocks are about 1.5 miles apart in a NE to SW direction. The tallest rock in the

N group is 6.5m, and in the S group the tallest rock is 13m. A shoal depth of 21m lies about 3.5 miles SSW of Zeni Su.

These rocks are the most dangerous of the islands and rocks lying S of Sagami Nada.

**Inamba Shima** (33°39'N., 139°18'E.) is an uninhabited rocky islet lying 19.5 miles SW of Mikura Shima. Its E side is a steep cliff and its W side is a gentle slope. The water around the islet deepens rapidly. The islet, 75m high, is reported to be radar conspicuous at 14 miles.

**4.5 Hachijo Shima** (Hatizyo Shima) (33°06'N., 139°48'E.), located 42 miles SSE of Mikura Shima, is 8 miles long in a NW to SE direction. Nishi Yama, 854m high, is located in its NW section and Higashi Yama, 701m high, is in its SE section, with a flat area about 90m above sea level lying between the two mountains. The coastline is fairly even and mountains come down to the coast, making it cliffy in most parts. A light is shown close SE of Kanado within Yaene Ko. The cliffs on the SE side are particularly steep, with maximum heights of 200m. Mihara Yama is 70m high with a flat top on the SE side.

A prominent radio mast stands at the E side of Mihara Yama.

There are no dangerous reefs outside the 20m curve except for an 11m reef, 0.75 mile SSE of the S extremity of the island.

Ko Shima is a small island, 617m high, that lies 2 miles W of the W extremity of Hachijo Shima. The islands are separated by Koshimano Seto, which is deep and free of dangers.

Fishing nets may be laid around Hachijo Shima up to 3 miles offshore at night from February to October.

**Winds—Weather.**—On Hachijo Shima, the W winds prevail throughout the year, especially during winter when they blow on the average of 20 days a month during the monsoon season. The winters are generally warm with the coldest month registering about 10°C. As the summers are fairly cool, the climate is mild throughout the year.

Precipitation is especially high even for Izu Shichito; the annual total being more than 2,920mm, with the month of October having the greatest amount with a maximum of 380mm. Heavy rainfall and W winds in winter are the hallmarks of Izu Shichito.

**Tides—Currents.**—The flood tidal current sets NW following the contour of Hachijo Shima, and the ebb tidal current sets SE. Reversal of flow occurs about the time of HW and LW, although this is affected by both the ocean current and the weather.

On the N side of the island tidal races and overfalls occur during ebb tides. Tidal currents in Kaminato Ko, on the NE coast, have no slacks and are affected in their velocity and direction by the weather and the ocean current. Visually the flood tidal current sets NW along the coast, with reversal occurring at the time of LW and HW. The maximum velocities for both the ebb and flood current is about 2.5 knots.

About 1 mile E of Uro Ne in Borawazawa Hakuchi, the current makes a complete circle in 12 hours, flowing in a counterlockwise direction. The SW setting current reaches its maximum velocity of 1.3 knots 3 hours after LW, while the NE current reaches its highest velocity of 0.5 knot 3 hours after HW.

Overfalls occur during ebb tides off the S extremity of the island, and a rapid SW current occurs during ebb tide near the SW end of the island.

The flood tidal current sets NNW at 2.5 knots and the ebb tidal current sets SSE at 2 knots, 1 mile offshore of Yaene Ko. Reversal occurs at the time of HW and LW.

In Ko Shimano Seto the flood current sets N and the ebb current sets S. At times, the S setting current may be completely overwhelmed by the ocean current.

Abnormal magnetic variation may be experienced in the vicinity of Hachijo Shima.

**4.6 Kaminato Ko** (33°08'N., 139°49'E.), located on the NE coast of Hachijo Shima, is open N and E, and is only protected from S or W winds. Hatsuzo Bana, close SE, is piled up with reddish-colored lava and has numerous dangers extending 0.25 mile offshore from this point.

**Aspect.**—Katto Yama, 200m high, lies 1 mile W of Hatsuzo Bana and is a good mark for approaching Kaminatu Ko, as is a 195m high hill close NW.

The shores of Kaminato Ko consist generally of black, uneven volcanic rocks. A breakwater projects NNW from the E entrance point of the inner harbor and there is a quay, 60m long, on the W side of the breakwater. A light also stands at the head.

A light stands 0.25 mile SSW of the E breakwater head. The boat harbor was dredged to 3m in 1973. There is good anchorage, in 35m, coarse sand, with Katto Yama bearing 237° and Hatsuzo Bana bearing 153°. Another good anchorage, in a depth of 23m, sand and rock, is located on the range line with Tatsunega Bana bearing 307°.

Vessels may drag anchors in these anchorages when a ESE to E wind is accompanied by ocean swells.

A submarine cable runs N for 0.75 mile to a wave measuring instrument off the coast by Katoure Bana. Another submarine cable is laid ENE from Kaminato Ko.

A pier, with depths of 4.9 to 10m off its S side, stands about 0.7 mile SE of Kaminato Ko.

**Borawazawa Hakuchi** (33°04'N., 139°51'E.) is an open roadstead situated on the SE coast of Hachijo Shima. It is protected from W to NW winds, but it is not protected from the heavy swells that set into the bay.

Uro Ne are two black rocks, aligned E to W, that lie 0.5 mile SSE of the boat harbor. The area around the rocks is foul.

**Yaene Ko** (33°06'N., 139°46'E.) ([World Port Index No. 61430](#)) is situated between Nakona Hana (Miko Saki), 3 miles NW of the S extremity of the island, and Funado Hana, 2.5 miles farther NNW. The E side of the bay is deep with a sand bottom, and is protected from E to N winds. A boat harbor has been excavated from the black rock of the shore.

Anchorage can be obtained by vessels with local knowledge, in about 27m, sand, with the meteorological observatory about 0.8 mile inland bearing 042°, and Horikiri Yama, the 215m hill, about 0.9 mile N of Nakona Hana, bearing 126°. Another good anchorage, in 23m, sand, can be found with the breakwater light bearing 072° and Funado Hana bearing 311°.

**4.7 Aoga Shima** (32°27'N., 139°46'E.) is a dormant volcanic island located 35 miles S of Hachijo Shima. The island is about 6 miles in circumference and rises to a height of 423m in the S part of the island; steam discharges in places from this summit. The island is bordered by steep cliffs on all but the SW

side. Scheduled vessels call here once each month, but are often cancelled due to bad weather.

Kuro Saki is located on the N side, where a black pointed rock, 2m high, lies close offshore, enabling the landing place to be identified.

A light is shown in the vicinity of Aoga Shima Ko.

Anchorage can be obtained by vessels with local knowledge, in a depth of about 27m, rock, with Kuro Saki bearing 266°. The holding ground is not good, but vessels can remain at anchor with a wind force of 5 from between SSW and SW. If the wind veers to WSW, a berth about 0.8 mile S in a depth of 46m is recommended. The sea bed is foul off Aogashima Ko.

**Beyoneisu Retsugan** (31°55'N., 139°54'E.) is a group of rocks 32 miles SSE of Aoga Shima. The highest of these rocks lies in the N part, 9.9m high, and can be identified at 10 miles on a clear day. When the swells are high, they are easily seen because of breakers in this area.

**Caution.**—It is dangerous to navigate in an area with a diameter of 21 miles that is centered 5 miles ENE of Beyoneisu Retsugan. Extensive submarine volcanic action has occurred in this area, with islands appearing and disappearing at irregular intervals. Vessels navigating in the area of a volcano should keep at least 10 miles from the area, leaving the area immediately if there is any indication of an impending eruption.

Generally, just prior to an eruption the surface immediately above the volcano forms a waterdome with white smoke rising from the center. However, in many cases eruptions have taken place without such a sign, and the area can be completely calm after an eruption, leaving no indication that it ever took place.

**4.8 Sumisu Shima** (31°27'N., 140°02'E.) is a large pointed rock, 136m high, located 30 miles SSE of Beyoneisu Retsugan. Vessels have reported sighting the rock from 23 miles to the SE, 2 hours before sunrise. It has been sighted at 6 to 7 miles on a clear moonless night and at 15 miles in moonlight.

Several rocks are found in the vicinity of Sumisu Shima, and Shira Ne, with deep water around it, lies about 4 miles NNE of Sumisu Shima; Shira Ne is steep-to and in calm weather shows a white color. When tidal currents are strong there are tide rips in the vicinity and the sea breaks over the rock.

**Caution.**—South and SW of Sumisu Shima, islets and rocks, which subsequently disappeared, have been reported at various times. The ocean floor probably changes considerably in the area under the influence of volcanic activity. The area should be avoided.

It was reported (1972) that discolored waters exist in position 31°29'N, 141°14'E, a position about 61 miles E of Sumisu Shima.

**4.9 Tori Shima** (30°29'N., 140°19'E.), an active volcanic island 60 miles SSE of Sumisu Shima, can be distinguished from 40 miles on a clear day. The central crater of the island is 403m high; it emits steam. The periphery of the island is mostly crumbled cliffs, except for a small portion in the NW, and rocks are scattered along the coast, which is extremely sheer. The white electric cables, which extend from the disused meteorological station on the W coast to the high altitude observation tower, are conspicuous.

The island has been set aside as a natural wild bird preserve.

Several shoal areas are charted in the vicinity of Tori Shima.

**Sofu Gan** (29°48'N., 140°21'E.) is a solitary, conspicuous black rock 100m high, located 40 miles S of Tori Shima. There are patches of guano on the rock. Sofu Gan can be seen from 25 miles on a clear day.

## Ogasawara Gunto

**4.10 Ogasawara Gunto** (Bonin Islands) (27°09'N., 142°05'E.) consists of numerous islands and islets lying SSE of Izu Shichito, extending from 27°45'N., to Latitude 26°30'N. This group is divided into three main groups; from N to S they are Mukoshima Retto, Chichishima Retto, and Haha Retto. Nishino Shima, an isolated island, lies about 70 miles W of Chichi Shima.

Ogasawara Gunto is volcanic and has many hills and peaks. The valleys are steep and deep and there are few flat places. The land is mostly rock, but it is covered by black soil and a number of areas are suitable for agriculture.

A mountain range runs N and S through the islands. Its peaks are barren and are mostly bare rocks, but grass and small trees are found in some places. Tropical vegetation, such as hemp and palm, is found on the mountain sides.

## Mukoshima Retto

**4.11 Mukoshima Retto** (27°37'N., 142°11'E.) is located at the N end of the Ogasawara Gunto, about 156 miles SE of Sofu Gan. The principal islands of this chain include Kitano Shima, Muko Shima, Nakadachi Shima, and Yome Shima, in that order from N to S.

**Tides—Currents.**—In the Mukoshima Retto area the flood tidal current sets, in general, WSW at a rate of 0.5 to 2.3 knots, and the ebb tidal current sets E at a rate of 1 to 3 knots, changing directions at HW and LW.

In the channel between Kitano Shima and Muko Shima, the flood current sets SW at a maximum rate of 2.33 knots. In the E part of this channel the ebb current sets E at a maximum rate of 3.5 knots.

In the channel between Muko Shima and Harino Iwa, 0.7 mile SSE, the ebb sets E and the flood current sets W; both are considerable.

North of Yome Shima the flood current sets N, between 0.11 and 0.12 mile offshore, without reference to the ebb or flood tides when the tide is a maximum. South of the island the ebb current sets mostly E.

**Kitano Shima** (27°43'N., 142°06'E.) is located at the NW end of the Mukoshima Retto. Dangerous rocks are scattered to the NE of Kitano Shima. Ichino Iwa, lying 1.5 miles NNE of Kitano Shima, is the farthest N of the rocks. The tidal currents are strong among these rocks.

**4.12 Muko Shima** (27°41'N., 142°08'E.), the largest island in Mukoshima Retto, lies 2 miles SSE of Kitano Shima. O Yama, the highest point on the island, rises to 88m in the E part of the island. Minamihama, on the SW side of the island, provides good anchorage for small vessels with local knowledge. There are many rocks in the bay that are dangerous when SW winds prevail, due to high swells and waves.

Harino Iwa, 0.7 mile SSE of Muko Shima, rises to a height of 136m in the N part and 80m in the S part.

**Nakadachi Shima** (Nakodo Shima) (27°38'N., 142°11'E.), located 2.5 miles SE of Muko Shima, has two peaks, Tsurugi Yama and Byobu Yama, that rise to a height of 121m and 155m, respectively.

Fukuro Minato is a small rock-infested bay that penetrates the island's S side. It will protect small vessels with local knowledge from all except S winds.

**Yome Shima** (27°30'N., 142°12'E.), located 7 miles SSE of Nakadachi Shima, is mostly rocky and precipitous, but there are small beaches on either side of the S extremity of the island. There is a small open bay on the NE side of the island where landing can be affected; this beach is steep and there are numerous above-water and sunken rocks.

Yome Shima rises to a height of 67m and Ushiro Shima, off the E side, and Mae Shima off the SW side, rise to heights of 46m and 127m, respectively. There are several above-water rocks in the vicinity of Yome Shima and a rocky patch, with a depth of 14.6m, lies 0.4 mile W of Mae Shima.

**4.13 Chichishima Retto** (27°06'N., 142°12'E.) is a group of islands lying 18 miles S of Yoma Shima; the three principal islands, from N to S, are Ototo Shima, Ani Shima, and Chichi Shima. These islands fall in line 10 miles long.

These islands, surrounded by several islets, are volcanic and mountainous; their coastlines consist mostly of steep cliffs, except for one section of Chichi Shima. Landing places are few and there are always high waves along the E coast.

**Tides—Currents.**—To the N and S of Chichishima Retto, and between the islands, the flood current sets W and the ebb current sets E with considerable velocity, turning at HW and LW. On the E and W coast of the island chain, the currents flow N and S following the contours of the islands. In the Anishima Seto, the ebb current sets E at a rate of 4.5 knots and the flood sets W at 2.25 knots; rips occur at ebb tide.

Between Chichi Shima and Nishi Shima, the flood current sets SW or NW at a rate of 0.8 knot and the ebb current sets ENE at a rate up to 1 knot. Between Nishi Shima and Hyotan Shima the flood current sets NW and the ebb current sets SE; the rate of each is 1.5 knots.

**Ototo Shima** (27°10'N., 142°11'E.), the farthest N of Chichishima Retto, rises to a height of 229m in the S part. The coast is comprised of steep cliffs, but there are small beaches on the W side. A landing place is situated close S of Kitano Hana, the NW extremity of Ototo Shima.

Mago Shima, 134m high, is precipitous and covered with grass; it lies 0.35 mile NE of Ototo Shima.

Kito Iso, a flat rock 2m high, lies 0.2 mile N of Mago Shima.

**4.14 Ani Shima** (27°07'N., 142°13'E.), a mountainous rocky island 254m high, lies close S of Ototo Shima. The two islands are separated by Otoshima Seto, a shallow channel that is unsafe even for small craft.

Ani Shima has few trees and its landscape is desolate; its shores are steep cliffs. The NE coast has many indentations, but it is deep, beset with waves, and lacks a safe area for anchorage.

Takinoura Wan is located on the SW coast; it lies between Sujiwa Misaki and Hakidashi Hana, 1 mile SE. It is protected

from all except SW winds, which bring in swells and waves. Vessels can anchor in Takinoura Wan, in depths of 10 to 42m, sand. A sunken rock, 10m deep, lies 0.22 mile NW of Hakidashi Hana.

**Chichi Shima** (27°04'N., 142°12'E.) lies S of Ani Shima and is separated from that island by Anishima Seto. Chichi Shima is the largest and farthest S of Chichishima Retto group, and is the principal island of Ogasawara Gunto. The island is 4 miles long in a N to S direction and has a width of 3 miles. The highest peak, 327m high, is located near the center of the island. The W part of the island is lower, but more uneven than the E part. The E and S coast are smooth with steep cliffs, but there are some sandy beaches toward the head of the coves.

Tatsumi Wan indents the SE coast and Maruen Wan and two other bays indent the S coast. However, all of them are open and there is no place for a vessel to land or moor. The SW coast of the island is also indented with several small shallow bays that have many drying rocks.

**4.15 Futami Ko** (27°05'N., 142°12'E.), situated on the NW coast of Chichi Shima, is entered between One Saki and Yayo Saki, 0.85 mile S. The bay extends about 1.3 miles NE of a line between the entrance points. Futami Ko is protected from the S by a breakwater extending W from the shore across Futami Iwa, 11m high, to the edge of the drying reef 0.24 mile NE of Omuga Breakwater; a light stands at its head.

This is a Quarantine Port, a Port of Entry, and a Local Port.

This harbor provides the best anchorage in Ogasawara Gunto. The W and S part of the bay is encumbered with submarine cables, anchorage is confined to the N and E parts of the bay, in depths of 37 to 44m. The quarantine anchorage is centered about 0.5 mile ENE of Yayo Saki.

**Caution.**—Kuchino Se, with a depth of 3.4m, is located near the center of the entrance to Futami Ko. There are other obstructions and dangers in the bay which may best be seen on the chart.

**Nishino Shima** (27°15'N., 140°53'E.), the farthest W of the Ogasawara Gunto group, lies 70 miles WNW of Chichi Shima. It is a flat island, 24m high, covered with grass. There is usually a heavy surf on all sides of the island. When seen from the NW at 10 miles, it appears as two islets. Nishino Shima is reported to be radar conspicuous at 14 miles.

Discolored water was reported (1987) 16 miles SSW and 43 miles ESE of Nishino Shima.

## Hahashima Retto

**4.16 Hahashima Retto** (26°38'N., 142°08'E.) is a group of islands lying about 20 miles S of Chichi Shima that cover an area of 11 miles long in a N to S direction. This group consists of the principal island Haha Shima, which lies at the N end of the group, and five smaller islands. The islands' coasts are steep and cliffy. In general, the water is deep near the shore, but ridges are found within 0.5 to 1 mile offshore, in the N and middle parts of the islands. These islands lie at the S extremity of a 0.1 mile bank that encompasses all the islands of Ogasawara Gunto, with the exception of Nishino Shima.

**Tides—Currents.**—The tidal currents in Hahashima Retto set W with rising tide and set E with the falling tide. On the E

and W sides, the currents set S and N with the rising and falling tides, respectively, and generally follow the shape of the land. The current NW of Innui Saki is considerable and wave patterns occur; NW of Sawara Ne, the ebb current sets N at 1.75 knots. Near Okinohae and Jinohae, the tidal currents are especially strong; the ebb current sets NNE at a rate of 1.4 to 3.5 knots and the flood current sets SW to W at a rate of 1 to 2 knots. These currents change at HW and LW. There are tide rips in this area.

One mile off Higashi Saki, off the E coast, the flood current sets SE and the ebb current sets SW, both at a rate of 1 knot.

At the center of Aneshima Seto the flood current sets WSW at a maximum rate of 3.5 knots and the ebb current sets SE. Between Ane Shima and Imoto Shima the current always flows S or W at a maximum rate of 1 knot.

**4.17 Haha Shima** (26°39'N., 142°09'E.) is the largest and N island in Hahashima Retto; it is 7 miles long in a N to S direction and has a maximum width of 2.25 miles. Chibusa Yama, 462m high near the center of the island, is the highest peak of the mountain range which extends N and S.

Inui Saki, the N extremity of the island, is a cliffy point 190m high. Jinohae, 2.1m high, and Okinohae, 1.8m high, lie 0.58 mile and 0.65 mile NNW, respectively, of Inui Saki; Oni Iwa, 91m high, lies 0.18 mile NNW of the same point.

Kita Minato is entered between Inui Saki and Kita Misaki, a point 1 mile SE. A vessel of 2,734 grt has anchored in the bay, with Kita Misaki bearing 068°, 0.28 mile distant, in a depth of 29m, sand. However, tidal currents are strong and during W winds, swells and waves are heavy and it is occasionally unsuitable for anchorage; at times strong winds blow off the mountains. A sunken rock, 12.8m deep, is located 0.33 mile NW of Kita Misaki.

Gagyū Kaku, a steep cliffy point 136m high, located 1.25 miles ESE of Kita Misaki, is the N entrance point of Higashi Minato. Sekimon Saki, the S entrance point of the bay, is a rocky cliff 130m high; it lies 0.75 mile SSE of Gagyū Kaku.

Higashi Minato is protected against winds, except from the E, by the high cliffs of the shore. A good anchorage, in 22m, sand, is situated with Higashi Yama bearing 354° and Gagyū Kaku bearing 054°. Anchorage can be taken farther out, in 29m, with Higashi Yama bearing 347°.

Okuzure Wan is an open bay entered between Sekimon Saki and Higashi Saki, a rocky point that rises to a height of 128m close inland, located 2 miles SE.

This bay is protected from SW to NW winds, but swells will enter from the E.

**Anchorage.**—A temporary anchorage is situated 0.4 mile off the SW section of the bay, in a depth of 27m, sand.

Higashisaki Wan is an open bay penetrating 0.5 mile to the W on the S side of Higashi Saki; the general depths in the bay are from 20 to 40m. The coast from Higashi Saki to Minami Saki, 3.25 miles SSW, consists of steep cliffs with no landing areas.

Okī Minato (Okī Ko), situated on the SW coast of Haha Shima, lies between Minami Saki and Samega Saki, 2 miles NNW. The bay is open to the W, but is protected against winds and waves from the SW.

Okī Minato is divided into two harbors. The inner harbor is situated between Samega Saki and Okī Misaki, 0.5 mile SE.

Okimura Asane extends 0.45 mile WSW from Okī Misaki and blocks the entrance to the inner harbor. The inner harbor is shoal but a channel that leads to Okimura was being dredged to a depth of 4.5m. A directional light on Okī Misaki marks the fairway to avoid Okimura Asane.

Large vessels may anchor temporarily in Okī Minato with Maru Shima bearing 171° and Kita Ne, close off the N end of Muko Shima bearing 254°, in a depth of 18.3m, sand. The anchorage is calm in NE winds; however, in SE to NW winds, swells enter and cause a vessel to drag.

From Samega Saki to Inui Saki, 5 miles NNW there are several indentations in the coast, but none provide protection. Megane Iwa, 1 mile NW of Samega Saki, and Sawara Ne, 1 mile SW of Inui Saki, are two of the many rocks and islets that are charted off the W coast of Haha Shima.

Hira Shima is located 1.5 miles SSW of the S extremity of Haha Shima. There are several islets and straits charted between these two islands; these straits are narrow, with many rocks and reefs and are only navigable by small craft.

**4.18 Muko Shima** (26°36'N., 142°08'E.) is located 1 mile NW of Hira Shima; it is a wooded island mostly bordered by steep cliffs, and on its E and W sides there are occasional beaches of sand and rock.

Ane Shima is located 1 mile S of Hira Shima. A chain of mountains run from the N to the S along the E and W coasts. The periphery of the island consists of steep cliffs and there is no place to land. Dobu Iso, which uncovers 0.3m, lies 0.85 mile ESE of the S extremity of the island.

Aneshima Seto, between the islands Ane Shima and Hira Shima, is about 0.28 mile wide between the 20m curves. Passage through this channel is difficult for small vessels because of strong tidal currents.

**Imoto Shima** (26°33'N., 142°12'E.) about 2.25 miles E of Ane Shima, is densely covered with trees. The coast consists of rocks and steep cliffs, but landings can be made on the W coast.

Mei Shima about 0.5 mile ENE of Imoto Shima is ringed by steep cliffs, but small boats can reach the beach on the W side.

Sukezo Asane, two detached rocks, lie 0.25 mile off the S coast; the sea frequently breaks over them.

**Caution.**—The approach to the islands of this group and the passages between the islands are encumbered with reefs, rocks and islets, whose positions may be seen on the charts.

## Kazan Retto

**4.19 Kazan Retto** (24°52'N., 141°20'E.), also known as the Volcano Islands and Iō Retto, extend along a line about 70 miles long from N to S. Kita-Iō Shima, the farthest N of the group, lies 85 miles SSW of Haha Shima. There are three islands comprising the group; from N to S they are Kita-Iō Shima, Iō Shima (Iwō Shima), and Minami-Iō Shima.

These islands are of volcanic origin, and gas continues to escape from them, especially on Iwō Shima, and from the sea that surrounds them. It has been reported (1992) that sulphurous smoke has been erupting from the sea about 55 miles SSE of Minami Iō Shima in the vicinity of Minami Hiyōsi Seamount.

**Kita-Iō Shima** (25°26'N., 141°17'E.) contains a chain of mountain peaks running N to S through its middle. Sakakiga

Mine, the highest peak, 804m high, is located in the S part of the island. The coast is precipitous cliffs except for sections on the E and W coasts. The 20m curve lies about 0.2 mile offshore and the 20m curve lies from 0.75 mile to 1.25 miles offshore.

Maguro Asane, with a depth of 14.6m and Funka Asane, with a depth of 13.7m, lie 0.6 mile WSW and 2.5 miles WNW, respectively, from the island's N extremity.

Kaitoku Kaizan (Kaitoku Seamount), a submarine volcano, lies approximately 48 miles NNW of Kita-Io Shima. In 1984, a bank with a depth of 10m, was reported in position 26°11.5'N, 141°00.9'E, about 6 miles NW of Kaitoku Kaizan.

**Winds—Weather.**—During the spring and summer, the SW winds are dominant; NE winds prevail during autumn, and W winds prevail in January and February. There is considerable rain from April to June, and frequent fogs. Strong winds often blow from August to October, and the sea is fairly calm in June and July.

**Tides—Currents.**—The flood current flows NW and strikes the SE end of the island. Part of the flood flows N along the E coast while the other part flows W at 1 knot S of the island. At the N extremity of the island, the flood current that flows along the E coast joins a current from the W and makes an E current, whose velocity reaches 1.8 knots. Between Funka Asane and the island, flood currents set NNW at a maximum velocity of 1.5 knots; ebb currents set SSE at a maximum velocity of 1 knot. Off the N coast of Kita-Io Shima, the ebb current flows E at a rate of 1.75 knots. Elsewhere on the ebb tide the directions are reversed and the velocity increased by 50 per cent.

**Anchorage.**—Kita-Io Shima has no good anchorage, but an unprotected berth can be obtained 0.4 mile SE of the village Ishino, on the E side of the island.

The interisland steamer usually anchors, in 24m, with warehouses on the shore bearing 276° and the SE extremity of the island bearing 200°. The rocky holding ground is poor.

**4.20 Io Shima** (Iwo Shima) (24°47'N., 141°19'E.) is located at the mid-point of Kazan Retto, about 36 miles S of Kita-Io Shima. The island, which is about 4.5 miles long in a NE to SW direction, consists of two volcanoes, Moto Yama in the NE and Suribachi Yama at the SW end with a narrow strip of land, Chidoriga Hara, between them.

Moto Yama, 112m high, is a domed hill with a flat peak located near the airstrip. Steam and sulfur gas, visible from offshore, escape from the fissures, or vents, in the hill.

Chidoriga Hara is a volcanic dune, with sandy beaches at its E and W ends.

Suribachi Yama (Mount Suribachi), 161m high, an extinct volcano in the form of a truncated cone, rises at the SW end of the island.

Io Shima is reported to be radar conspicuous at 17 miles.

**Tides—Currents.**—North of Kitano Hana, the N extremity of the island, the ebb current sets E at 1.5 knots; SW of Tobiishi Hana, the S extremity of the island, the flood tide sets NW at 1.75 knots; W of Kama Iwa the flood current sets SW at 1.3 knots; and NW of Kangoku Iwa the flood current sets W at 2.5 knots.

**Anchorage.**—Anchorage can be obtained about 2.8 miles NE of Tobiishi Hana, close S of a line connecting Suribachi Yama and Higashi Iwa, off the village of Minami. The depth at the anchorage is 12m, sand, good holding ground.

**Caution.**—Higashi Iwa are a group of uncovered rocks, 6m high, located about 2 miles E of the E extremity of Iwo Shima. Kama Iwa lies 0.55 mile off the W coast and Kangoku Iwa, 8.2m high, lies 0.75 miles N of Kama Iwa. There are two rocks located on the shoal area 0.35 mile W of Kangoku Iwa that uncover at LW.

There are numerous wrecks on the W coast of Io Shima, N of Tobiishi Hana and close off the beach, as indicated on the chart.

Due to volcanic action, the contour of the shoreline and the depths in the approach to Io Shima are constantly changing. Great care should be exercised when approaching or anchoring in these waters.

**4.21 Minami-Io Shima** (24°14'N., 141°28'E.) is a volcanic island located 33 miles SSE of Io Shima. The island is about 1 mile long in a N to S direction and has a height of 918m; this peak is often covered by fog and clouds. The island is bordered by cliffs and rocky beaches. The 20m curve lies from 0.1 mile off the W coast to 0.6 mile off the E coast.

In 1974, an islet was reported to lie 1.75 miles NE of the NE extremity of the island. In 1982, discolored water was observed in the vicinity of position 24°16.6'N, 141°29.2'E.

Fukutuku-Okano-Ba, a submarine volcano, lies 2.5 miles NE of Minami-Io Shima, and a reef, with a depth of 18.3m, lies 0.5 mile farther NW. In 1904 and in 1914, an island was reported in this area, which has subsequently subsided below the surface. In 1986, the volcano erupted and an islet was formed, but three months later the islet had disappeared, leaving a least depth of about 1m in the area.

Kita-Hukutoku Tai, a submarine volcano, lies about 11 miles NNW of Minami-Io Shima.

Discolored water was reported (1987) about 5 miles W of Fukutuku-Okano-Ba. Discolored water and a suspected volcanic eruption was reported (1987) in the vicinity of Fukutuku-Okano-Ba.

Caution is necessary when navigating in this area.

## Okino-tori Shima

**4.22 Okino-tori Shima** (20°25'N., 136°05'E.) is located about 375 miles SW of Minami-Io Shima. It was formerly known as Parece Vela or Douglas Reef. This coral reef extends about 2.8 miles in an E to W direction, is about 0.8 mile wide, and encloses a reef-encumbered lagoon. A number of small islets and above-water coral heads, 1 to 3m high, lie on the reef. Two small towers stand near the W extremity of the reef. It is a Japanese possession.

**Caution.**—A below-water reef, with estimated depths from 2 to 3m, has been reported to extend about 3 miles NW from the W part of Okino-tori Shima. Numerous tide rips were observed in the vicinity.

Breakers extend 0.5 mile off the E and W ends of Okino-tori Shima. It has been reported that breaking seas have been observed about 1 mile N of the W extremity of Okino-tori Shima, but were not observed in 1997.

Okino-tori Shima and the reported reefs should be given a wide berth, as there has been no recent survey.

Boat passages have been reported on the SE and NE sides of the reef, but they have not been examined.

A large platform, about 20m high and supported by six rows of supporting pillars oriented approximately E and W, stands close E of the small towers. This platform, which appears abandoned, was reported (1997) visible on radar at a distance of 20 miles.

Another off-lying danger was reported in 1971. It appeared to be a coral-like shoal breaking in position 20°18'N, 135°28'E, bearing 259°, 36 miles from Okino-tori Shima. In 1988, it was reported that a vessel transiting the area failed to see this danger. Vessels are urged to exercise caution when navigating within the vicinity.

### Minami-tori Shima (Marcus)

**4.23 Minami-tori Shima (Marcus)** (24°17'N., 153°59'E.) is an isolated triangular-shaped island lying 695 miles E of Minami-Io Shima. The island has sides about 1 mile long, and rises to a flat surface 18m high. It is bordered by a wide beach consisting of white coral stones and shells with some sand. The beach is strewn with large boulders and debris consisting of scrap metal and broken concrete. The island is covered with sparse vegetation; there are a few buildings.

Minami-tori Shima is a good radar target from 21 miles. It was reported that a radar fix obtained from 13 miles was accurate.

**Winds—Weather.**—An E wind is dominant all year, averaging 14 knots from October to April, but is slightly less during the summer. The temperatures are high with a yearly average of 26°C. The highest temperature recorded was 36°C and the lowest was 16°C. Rain is frequent all year round but precipitation amounts are

relatively low, about 1,000mm per year. Mild fog occasionally forms during September and October.

**Tides—Currents.**—The current in the vicinity of Minami-tori Shima is variable, with rates up to about 1 knot. During most of the year the predominant set is E, but in September to November it may be W.

**Aspect.**—The Loran tower mast, with an elevation of 411m, and some radio masts about 0.3 mile NW of East Point, the E extremity of the island, are prominent.

A stone tower, a building with a red roof and a concrete building are all situated within 0.5 mile of the Loran mast.

An aero radiobeacon transmits from the middle of the E side of the island.

Both the shore line and surf line give good radar responses and care must be taken to distinguish between them when closing the island, particularly from NW.

**Anchorage.**—The best anchorage area lies about 0.25 mile off the S side of the island, in depths of 70 to 80m.

**Caution.**—Because of its low elevation, small size, and lack of off-lying reef structure, Minami-tori Shima offers no lee in any weather. The bottom is of volcanic rock, dead coral, boulders and some sand; it has a steep incline and affords poor holding ground. In the face of the slightest weather, a vessel should stand clear of the island.

There is a pier 20m long in a boat basin formed by the opening in the reef on the S side of the island.

A dangerous pinnacle rock lies in deep water nearly 0.3 mile W of West Point.

There is a dangerous rock 0.2 mile ESE of West Point, about 0.1 mile offshore.