



Supplement to
Government Gazette
OF
WESTERN AUSTRALIA.

OF TUESDAY, 11TH FEBRUARY, 1879.

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No. 8.]

PERTH: WEDNESDAY, FEBRUARY 12.

[1879.

No. 285.—C.S.O.

PROCLAMATION

Western Australia, }
to wit. }
By His Excellency Major-General SIR HARRY ST. GEORGE ORD, Knight Commander of the Most Distinguished Order of Saint Michael and Saint George, Companion of Our Most Honorable Order of the Bath, Governor and Commander-in-Chief in and over the territory of Western Australia and its Dependencies, &c., &c., &c.

(L.S.)
H. ST. GEORGE ORD,
Governor.

WHEREAS the Legislative Council now stands prorogued until Wednesday, the twelfth instant, and whereas it is expedient further to prorogue the same; Now THEREFORE I, the said Governor, in exercise of the powers in me vested, do by this my Proclamation further prorogue the said Legislative Council from Wednesday, the twelfth instant, until Wednesday, the twelfth day of March, next ensuing.

Given under my hand, and issued under the Public Seal of the said Colony, this eleventh day of February, One thousand eight hundred and seventy-nine.

By His Excellency's Command,
ROGER TUCKERD. GOLDSWORTHY,
Colonial Secretary.

GOD SAVE THE QUEEN!!!

No. 284.—C.S.O.

TENDERS ACCEPTED for 1879.

Colonial Secretary's Office,
Perth, 10th February, 1879.

Shoeing Police Horses.

Barrington, E. L., New Shoes 5s. per set; Removes 2s. 6d. per set.

Burial of Paupers.

Northampton.

Moore, James, £2 each.

By His Excellency's Command,
ROGER TUCKERD. GOLDSWORTHY,
Colonial Secretary.

No. 286.—C.S.O.

Colonial Secretary's Office,
Perth, 12th February, 1879.

HIS Excellency the Governor directs the publication of the following Notice to Mariners, for general information.

By His Excellency's Command,
ROGER TUCKERD. GOLDSWORTHY,
Colonial Secretary.

NOTICE TO MARINERS.

Hydrographic Notice.

[No. 44.]

PACIFIC OCEAN.

NOTICE No. 44.

WESTERN PART.

The following information is for the most part derived from the remarks and observations of officers of Her Majesty's ships employed on the Australian station, and has been received through Commodore A. H. Hoskins, C.B., Senior Officer, 1877-8.

All bearings are Magnetic. Variation in 1878:

Navigator islands 9° Easterly. | Fiji islands 10° Easterly.
Phoenix islands 9° Easterly. | Marshall islands 9° Easterly.

ISLANDS OF THE SOUTH PACIFIC.

FRIENDLY ISLANDS. *a*

TONGATABU.—The Imperial German corvette *Augusta*, when leaving Nukalofa harbor (Nov. 1877), touched the ground in about 2 fathoms, near the fairway, northward of the Juno shoal, where a depth of about 7 fathoms was indicated upon the chart.

Caution should therefore be observed when navigating in this neighborhood.

An island of volcanic origin, about 200 yards long and 110 feet high, situated in lat. 19° 11' S., long. 174° 49' W., was passed by H.M.S. *Sapphire* 16th April, 1878. It ejected quantities of white smoke and appeared to be covered with sulphur.

This island would seem to be identical with the rock 29 feet high, reported by the *Metis* in 1875, the effects of volcanic action having probably added to its size.

Disney reef, reported 1841 by Mr. Disney of the whaler *Frolic* to lie south-eastward of the Vavu group, could not be seen from the *Hertha* in the position assigned to it upon the chart, viz., lat. 19° 15' S., long. 173° 40' W. At the time of passing this spot, the weather was clear and a high sea running (favorable conditions for observing any break)—this position of Disney reef should therefore be considered doubtful.

Accou Jago islet, formerly placed upon charts in lat. 19° S., long. 173° 52' W., and the existence of which has been considered doubtful, could not be seen from the *Hertha* at a distance of 11 miles. Native reports also stating that the islet does not exist, it has been expunged from the Admiralty charts.

Two coral banks, having upon them depths of 13 and 19 fathoms, were found by the *Hertha* about 12 miles northward of Tongatabu. The bank with 13 fathoms upon it, measured about 13 miles east and west by one mile across, and its western extremity was determined to be in lat. 20° 55' S., long. 174° 58' W. The bank, with 17 fathoms upon it, appeared to be of small extent, and is situated in lat. 20° 52' S., long. 175° 6' W.

Hakau-fiss reef is the native name for the reef situated north-westward of Namuka island in lat. 20° 9' S., long. 174° 52' W. It is of semi-circular shape, about 3 miles long, by from one to 5 cables in breadth, steep to, partly dry at low water, and open on its north-east side.

St. Michael shoal, in lat. 19° 20' S., long. 174° 38' W. (position doubtful), was not seen from the *Hertha* in passing over this position.

Fatou-manga islet, south-west of the Vavu group, has two shoals situated to the northward of it, at distances of 7 cables, and 1½ miles, having over them from 5 to 6 fathoms of water.

Reported shoals.—Westward of Lefuka and Holeva the space is stated to be full of detached shoals.

Smoke had been seen issuing from the sea about 6 miles northward of Honga Tonga, and shoal water is suspected in this vicinity. *c*

DANGERS between NEW ZEALAND and FIJI ISLANDS.—**Olozena rock.**—Captain Ranzon of the German schooner *Olozena* reports having passed a rock with apparently little water over it in about lat. 29° 48' S., long. 176° 45' E. (December 1876.) No sounding was however recorded. *d*

Edith rock, reported by the master of the trading schooner *Edith*, in lat. 30° 50' S., long. 178° 23' E., was searched for in vain in that position by Lieutenant W. U. Moore, commanding H.M. schooner *Atacery* (April 1878). No bottom could be obtained with 380 fathoms of line; the weather at the time was bright, observations good, and considerable swell running, but no sign of shoal water could be seen from the masthead.

It therefore seems probable, that Edith rock may be identical with the Somme bank, reported westward of Edith rock, in lat. 30° 55' S., long. 178° 7' E.

Soundings were obtained in H.M.S. *Wolverene* between lat. 25° 24' and 25° 37' S., and in about long. 179° 4' W., in 27 and 40 fathoms, black sand.

Shoal water may exist in this neighborhood.

KERMADEC ISLANDS.

Raoul or Sunday Islands.—**Wolverene rock**, having upon it about 9 feet at low water, was found by H.M.S. *Wolverene* near the centre of Denham bay, 1877. From its approximate position

Hutchison bluff bears	N.W.
South end of Sand beach	E. ½ E.
Smith bluff	S. by E. ½ E.

Depths of 4 and 7 fathoms were found at from 1½ to 2 cables W.S.W. of Wolverene rock, and, judging from the appearance of broken water in the bay, it was concluded that more foul ground might exist. *f*

FIJI ISLANDS. *g*

VITI LEVU, WEST COAST.

Tartar reef is composed of coral, a few feet below low water, lying in a N.N.W. and S.S.E. direction, 2½ miles in length, by one mile in breadth; its north point bears N. 34° W., distant 13½ miles from the summit of Malolo island, and S. 17° E. 17½ miles from the south point of Viwa reef.

In a line between Tartar reef and the south point of Viwa reef, there are no known dangers, coral banks however exist, having from 9 to 25 fathoms of water upon them. Eastward of the line joining Tartar reef and south point of Viwa reef, and in the vicinity of the Hudson islands, there are numerous reefs, having from 2 to 5 fathoms of water upon them, which break occasionally.

Viwa (Biva) island is about 100 feet high, and is not always distinguishable at night. On the south point of its reef there is a heavy break at all times.

Malolo reef: the barrier reef, west of Malolo island, ends abruptly in a horn bearing S. 81° W., distant 6½ miles from the summit of that island.

Coral reefs.—Westward of the Hudson group, between Malolo, and Tartar reefs, there is a chain of coral reefs, having on them from half a fathom to 5 fathoms of water. There are blind rollers on these reefs, but they only break continuously in strong winds.

The safest passages will be found through the following openings:—

Malolo summit bearing N. 84° E., distant 10 miles.

Malolo summit bearing S. 78° E., distant 7 miles.

Good light is necessary for entering, as the edges of the reefs are not clearly defined.

Soundings of between 100 and 200 fathoms, were obtained one-third of a mile westward, of the coral banks just mentioned.

Mamanutha or Hudson islands.—The most westerly of these, named Mondrika (Alden island of Wilkes), lies N. 54° W., distant 11½ miles from the summit of Malolo island.

Nandi waters passages.—There are two good passages into Nandi waters, named the Navula passage and Malolo passage; the latter, half a mile wide, is between Waldron and Spieden islands.

Reported dangers.—The natives of Waia state that several reefs exist between Viwa (Biva of the chart) and Waina, also between Viwa and Baldwin island, which only break in strong gales from the westward.

From the summit of Waia two patches were seen in the channel between Waia kai-lai-i-thake and Knox island, awash at low water.

From the summit of Baldwin island the sea to the westward appeared dotted with shoal patches for a distance of three or four miles from the island. Apparently there would not be less than 2 fathoms over any of these patches at low water.

Ovalau.—Levuka harbour.—In the north entrance the 9 feet rock has been blasted away by H.M.S. *Wolverene*, and now carries 19 feet over it at low water spring tides.

VANUA LEVU.

RABI (RAMBI) ISLAND.—The reef extending from the north point of Rabi or Rambi island is reported to run further northward than the general chart of the Fiji islands shows. This part of the Fiji islands has not been accurately surveyed, and the chart, in consequence, should be regarded as approximate only.

MOALA ISLAND.—Coral patches, two in number, having upon them about 9 feet of water, are reported as being situated almost upon the leading mark through the northern channel to Herald roadstead.

From the northern of these patches Observatory rock bears about S ½ E., distant 1½ miles: from the southern patch, N.E. point bears S. by E. ½ E., distant 1½ miles. *i*

KANDAVU ISLAND.—**Ngaloa harbour.**—An iron beacon has been placed upon the north end of Pearl reef, at the entrance to this harbour, in the place of the black buoy, which formerly marked the northerly limit of the reef.

NEW HEBRIDES.

VATE or SANDWICH ISLAND.—The east coast of this island was found by H.M.S. "*Nymphé*" to extend 10 miles further eastward than was marked upon the chart, and it is generally considered that Sandwich island is about 40 miles in length.

Pano bay, in the south-west part of Sandwich island, is about five miles across. A reef extends some distance from the northern point, which point, should not be rounded closer than half a mile.

MALLICOLLO ISLAND.—**Sans Souci Anchorage**, on the eastern side of Mallicollo island, about 10 miles northward of port Sandwich, affords excellent protection from the south-easterly trade wind, but is open to winds from north and north-east.

"Copra making" is carried on here, and good water may be had from a stream, close to the house of an American resident (1877).

Maskelyne group.—A barrier reef extends for about two miles in a south-easterly direction from the Maskelyne islands.

LOYALTY ISLANDS.

Leper's island.—A rock exists about 2 cables northward of the N.E. point of Leper's island. *k*

NEW CALEDONIA.

NOUMEA^l or PORT OF FRANCE.—In the northern passage is a depth of 15 feet only.

Little passage.—Off Diamond point, the white buoy has been changed for a red one.

A red buoy has been placed on the north end of the 13 feet shoal abreast Bayonnaise cove, which cove is being filled up. The north point of the cove has been extended to the southward, about a cable.

Bulari passage, Sournois rock, in lat. 22° 31' S., long. 166° 28' E., is reported by pilots to extend about ½ a mile north and south; this would make it about twice the size indicated on the Admiralty chart No. 2,907.

Vitce passage, in lat. 22° 10' S., long. 166° 7' E. Pilots report a depth of three fathoms upon the leading mark, with Mboa islet bearing N.E. ½ E., east end of Matthew island N. ½ W. This position is about a quarter of a mile beyond the turning point.

ENTRANCE to NOUMEA.—**Beacons.**—Constructed of iron, surmounted by a cage, have recently been placed at the following positions:—

1. On the centre of Thisbé shoal, about 4 miles northward of the Bulari passage, in 1½ fathoms at low water. This beacon shows 11 feet above high water. Position, lat. 22° 27' S., long. 166° 27' E.
2. On the north-west side of the Amédée shoal, about half a mile westward of Amédée island. This beacon shows 6 feet above high water. Lat. 22° 28' S., long. 164° 7' E.
3. On the south side of the shoalest part of Provident shoal, and showing 12 feet above high water, in lat. 22° 20' S., long. 166° 33' E.
4. In a depth of one fathom, near the north-west patch of the Four Northern banks, and showing 9 feet above high water, in lat. 22° 21' S., long. 166° 30' E., a beacon has been placed. About a cable northward of this beacon, is a coral patch, having 1½ fathoms upon it, and about ½ a cable westward of the same beacon, is a small coral head, 6 feet under water.

5. On the eastern point of the reef extending off Maitre island, in one foot of water, and showing 9 feet above high water, a beacon has been placed in lat 22° 21' S., long. 166° 29' E.

Senez reef, situated 6 miles north-eastward of the Dumbea passage, is of round, not triangular shape, as hitherto depicted, and never dries. The beacon placed upon Senez reef is situated about 100 feet from the southern edge, in a depth of 5 feet of low water, and shows 12 feet above high water.

ST. VINCENT BAY.^m—Marceau reef, in lat. 22° 0' 44" S., long. 166° 5' 37", has a beacon placed upon it, which shows 8 feet above high water.

Ducos island.—On the reef, 2 cables north of the north-east end of Ducos island, and between that island and Parseval island, a beacon has been placed (without a cage) upon the shoalest part of the reef, which is covered at high water. Lat. 21° 59' 40" S., long. 166° 5' E.

Cher reef.—Lieut. Ravel informs the French Government that a reef, having upon it 7 feet at low water, lies about 2½ cables, west of the Des Des Morts; it is not easily seen. Position—lat. 21° 59' S., long. 163° 44' E.

Lebris island, about 3 miles north-eastward of the Uraï passage. Upon the south-west extremity of the reef, which extends southward from Lebris island, a beacon with cage top has been placed (where a provisional beacon formerly stood), in a depth of 7 feet; it shows 9 feet above high water. Lat. 21° 51' S., long. 165° 49' E. The southern buoy is about 4½ cables from the beacon.

Hydrography shoal.ⁿ—situated in lat. 22° 25' S., long. 166° 55' E., has been marked with an iron beacon with cage, and a similar beacon has been placed upon the extremity of the reef which juts out from the point, N.W. ½ W., 2½ miles from Hydrography shoal.

Moziman shoal, lat. 22° 23' S., long. 166° 51' E., in the Woodin passage between Uen island and the mainland, has had an iron beacon placed upon it.

Two reefsⁿ have been found inside the Great Abore reef, off the south coast of New Caledonia; the first, with one fathom water upon it, with Mando island bearing N. by W., and Gôclands island W.N.W.; the second, in the place where 10 fathoms was formerly marked; from it, Croey island bears E. ½ N., distant about 2½ miles.

Directions.—Vessels proceeding from Port Uraï to St. Vincent Bay by the channel inside the reefs, after having passed the beacon on the extremity of reef extending southward from Lebris island, should keep the beacon on with the west point of Teremba islet, which will keep them clear of Kuanduio islet reef, which reef is difficult to see at high water if the sea is calm.

PORT URAÏ.—Two black buoys have been moored near the edge of the reef on the western side of Uraï passage, about 1½ miles apart. The northern of these is situated in lat. 21° 49' S., long. 163° 25' E., or about 1½ miles westward of Lebris island.

Ndigoro island and the two buoys are in line with each other.

Approaching port Uraï from seaward, the two black buoys must be kept on the port side.

Vessels coming to Uraï from the southward, through the channel inside the reef, should pass between the beacon on Lebris island reef and the southern buoy.

BANKS ISLANDS.^o

SANTA MARIA ISLAND.—Losolava anchorage.—H.M. Sch. *Sandfly*, found several shoal patches on the western side of Losolava anchorage, about 3½ cables S. by E. of the north-east horn of the reef, which forms the western side of entrance. This part of the anchorage should therefore be avoided, until further examined.

SOLOMON ISLANDS.

TREASURY ISLAND.^p—The central part of this island was found by Captain von Schleinitz of the German war vessel *Gazelle* (1876) to be situated in lat. 7° 20' S., long. 155° 23' E., or several miles north-eastward of what has hitherto been supposed to be its position. The island is from 650 to 1,000 feet high in the middle, without any prominent peaks, and gradually slopes to a low point on its north-west side.

Earthquake.—The British barque *Pacific Slope*, reports having experienced a shock caused by volcanic eruption in the neighborhood of the Lord Howe islands, March 3rd, 1878, and to have been set 110 miles S.S.E. by an unusual current. A great quantity of pumice stone, was afterwards found, floating around the ship.

SAMOAN OR NAVIGATOR ISLANDS.

UPOLU ISLAND.—Safatu harbour.—Shoal places of 2½ fathoms have been found in the eastern channel into Safatu harbour by H.M.S. *Suppho*. Blind rollers were also noticed from the same ship at the entrance of the western channel. Safatu harbour, therefore, requires caution in approaching and entering.

Apia harbour.^q—A shoal, having 7 fathoms of water upon it, is situated about 2½ miles from the shore on a N. ¼ E. bearing from the steeple of the Roman Catholic church, said steeple being seen in the saddle of the mountain southward of it, and clear of Mataoutou point.

A Shoal, having upon it 9 fathoms of water, is also situated off Apia harbour, at a distance of from 2 to 3 miles from the shore. From it—

Mataoutou point bears S.W. by S.
Vaillele ... S. by E. ¼ E.

This shoal is connected with the coast reef.

A shoal, having upon it a depth of 14 fathoms, is situated 12 miles N.E. of Fânataqu island, off the east coast of Upolu island.

Apolima island.^r—Captain Hassenpflug of the Imperial German corvette *Augusta* gives the position of the central part of Apolima island in lat. 13° 48' S., long. 172° 5' W., or about 2 miles N.E. by E. ¼ E. of the position hitherto assigned to it on the chart, and the height at 472 feet above the sea.

PHENIX GROUPE.^s

Enderbury island,^t the western part of which is in lat. 3° 8' 30" S., long. 171° 10' W., extends 3 miles north and south, and is a mile in width, the highest part being about 23 feet above the sea surface. A fringing reef of coral, which is steep to, surrounds the island, extending off-shore, from half a cable to a cable. Two small mangrove thickets and scattered patches

of grass form the only vegetation. Near the centre of the island is a salt-water lagoon, and quantities of drift wood are found on the east side of the island, but in too decayed a state to be fit for fuel.

There is no anchorage at Enderbury island, but a large wooden buoy is moored on the western side, close to the fringing reef, in about 75 fathoms. This is for the convenience of vessels loading with guano, which can be done during easterly winds; it is, however, also necessary to secure by hawser to an anchor, imbedded in the shore. A pier has been built out from the western side of the island, where boats load the guano, which is brought down on trucks drawn by mules, from the main works, situated about two miles distant.

Water.—There is no fresh water at Enderbury island, this necessary as well as fuel being supplied from vessels calling for guano. In spite of this absence of water, rats appear to abound upon the island.

A schooner, belonging to the company working the guano, calls every three months from Honolulu.

Winds prevail almost constantly from the eastward, but squalls accompanied by light rain occur all the year round in the neighborhood; very little rain falls on the island. The wind is variable from January to May, during which period, bad weather is most common.

Tides.—It is high water, at full and change, at Enderbury island, at 3h. Springs rise 6 feet, neaps 3 to 4 feet.

Current.—The prevailing current in the vicinity of Enderbury island is westerly, at about the rate two miles an hour. Vessels in making the island at night, should make full allowance for this set, because if swept past the island it may be found difficult to beat back against it.

At night the island is difficult to distinguish.

UNION GROUP.^u

Oatafu and Nuko-nono islands are said to be placed 10 miles too far east upon the Admiralty chart.

A reef awash is reported to have been seen off the N.W. end of Oatafu island, and appearances of foul ground extending from the west and south-west sides of this island, for 2 or 3 miles. The reef awash, extended about 3 miles E.N.E. and W.S.W., curving towards the south-west extremity, from which the western end of Oatafu island bore S.E. by S., distant about 3 miles.^v

MARSHALL ISLANDS.

Jabwat island.—The French Government give notice that after a recent survey (1877) the position of Jabwat island has been found to be in lat. 8° 27' N., long. 168° 20' E.

CAROLINE ISLANDS.^w

A reef, formerly marked upon the Admiralty charts position doubtful, in lat. 7° 21' N., long. 156° 29' E., and supposed to extend southward from Bordeiaise island, has been reported not to exist by Mr. Hamilton, commanding the British barque *Fire Queen*. This position was passed over by him on three occasions, in the years 1866-71-72, and as no sign of such a reef was seen, it has been expunged from the Admiralty charts.^w

Greenwich islands, situated in lat. 1° 4' N., long. (approx.) 154° 45' E. Beneath is the abridged description of these islands taken from the report of Mr. Powell of the ketch *Star of the East* :—

Consist of a number of islands enclosed in a coral reef of triangular shape, with its base to the northward. The group is about 14 miles in extent from north to south, and 8 or 9 miles from east to west. The islands are on the west side and on the southern elbow of the reef. Only two are inhabited, both at the south-westernmost portion of the group. On one of these is a mound about 80 feet high, formed of dead coral. At the eastern extremity of the reef is a sand-bank. The native name of the group is Kapinga Makany.^y

Tamar reef.—Mr. Eury, master of the whaling barque *Adventure*, of considerable experience in the Pacific, reports that Tamar reef, supposed to be in lat. 20° 21' S., and long. 161° 30' E., and which Captain Denham in H.M.S. *Herald* could not find, does not exist in that position. Also that,

A coral shoal, one mile in diameter, with 7 fathoms of water over it, exists on a N.N.E. bearing from Walpole island, the summit of which island is seen just dipping from the masthead from the position of the shoal.^y And further that,

Two small islands, hitherto not marked on the charts, have been reported on the equator in long. 146° E.; each being about half a mile in extent, connected by a reef, uninhabited, and covered with low trees.

NEW BRITAIN.^z

DUKE OF YORK ISLAND.—This so-called island in reality consists of a cluster of eight small islands, of which Duke of York island is the largest.

Port Hunter, in the northern part of Duke of York island, is well sheltered from all but winds between N.N.E. and N.W. The anchoring ground is inconveniently deep (from 20 to 25 fathoms).

No water can be obtained, and but few fresh provisions.

A Wesleyan missionary station is established at Port Hunter (1877).

Mocoda island is next in size to Duke of York island, and lies to the west of port Hunter. The space between it and Duke of York island affords good anchorage in from 6 to 18 fathoms, but care is necessary in entering, as several shoal patches exist.

Fresh water may be obtained at Mocoda island; but a scarcity generally prevails among the other islands of the cluster.

Southward of Mocoda island, another bay opens out, in which anchorage may be had in from 5 to 10 fathoms, sand and coral bottom, half a mile from the shore. Caution should also be used in entering this bay.

Immediately southward of this bay lie the remaining islands of the cluster, protected from south-west winds by a barrier reef.

Meoka harbour is formed by three of the islands, which, with the mainland of Duke of York island, form a secure harbor, having anchorage in depths of from 7 to 9 fathoms, white sand, and two entrances, one from the east, the other from the west, rendering ingress and egress easy in either monsoon. This harbor is not, however, without dangers, but they can be detected from the masthead.

Winds.—The north-west monsoon prevails from November to April, the south-east for the remainder of the year.

Dangers.—Between Meoka harbor and Mocoda island, several shoal patches exist, and great caution is requisite in the navigation.

Currents in St. George's channel, (between New Britain and New Ireland,) run in the direction of the wind. During the south-east monsoon, in the months of August and September, the *Conflict* found the speed 1.5 to 2 knots an hour. Within two miles of the shore, the streams appeared tidal. *aa*

Anchorage may be obtained off the north coast of the Gazelle peninsula (south-eastward of Blanche bay) in 10 fathoms, sand, with the South Daughter bearing N. 47° W., but this position is safe only during winds from the southward.

A river disembogues in a small bight about a mile eastward of the anchorage just described. Off the point which forms the eastern side of this bight, are two remarkable rocks, with bushes upon them.

Man island.—The channel between Man island and the north coast of New Britain is about 7 miles wide, and apparently clear of danger.

From cape Stephens westward, the coast of New Britain recedes, forming a bay about three miles deep, clear of dangers, with the exception of a fringing reef.

Anchorage may be had at the head of this bay in 8 fathoms, sand. Also, off the western point of the bay there is good anchorage in from 5 to 7 fathoms, sand, about a mile from the shore.

Proceeding to the westward towards cape Luen from the last-named point, is a detached reef, which dries at half tide: between it and the coast there is a clear passage about 2 miles wide.

Cape Luen.—Off this cape, a dangerous reef extends to the north-west for about half a mile.

Urare island lies westward of cape Luen, and between it and the reef extending from cape Luen are three shoal patches, discernible from the masthead: between these patches and Urare island, there is a clear passage about 3 miles wide.

Port Weber, the first bay south-westward of cape Luen, is commodious and free from danger, with anchorage at the head, also on the south side. Two rivers flow into the port.

From port Weber the coast of New Britain trends in a W. by N. direction, and off it are several shoals.

About two miles westward of cape Lambert, there is a sand islet with a few trees on it.

Kaan islands, off the east coast of New Britain, are ten in number, the centre of the groupe being situated in about lat. 3° 32' S., long. 153° 30' E. The natives are described as being ferocious, naked, and armed with spears.

a See Admiralty charts: Pacific ocean, general, No. 2633; Pacific, south-west sheet, No. 780; Tonga or Friendly islands, No. 2421; Tongatabu, No. 2363; Also, Hydrographic Notices, Islands in the Pacific ocean, 1856-1873, page 77, and Nos. 21, 35, and 37.

b Breakers have been reported near this position. Remark Book, Staff Commander H. Hosken, 1876.

c Although in west longitude, the same day of the week is observed at the Friendly islands and Samoas in Australia—the principal trade being carried on with the Australian colonies. (H.M.S. *Sappho*, 1877.)

d Nachrichten für Seefahrer, No. 38 of 1877.

e See Admiralty plan of Raoul or Sunday island, No. 563.

f Nav. Lieut. W. J. Symons, H.M.S. *Wolverene*, Jan. 1878.

g See Admiralty chart of Fiji islands; No. 2631.

h See Admiralty plan, No. 1,252, of Moola island.

i Nav. Lieut. A. E. Stanley, H.M.S. *Nymphé*, 1876.

j Remark book of Lieut. C. Caffin, H.M.S. *Beagle*, 1877.

k Lieut. J. G. Musters, H.M.S. *Conflict*, June 1877.

l See Admiralty chart of Noumea, No. 480.

m See Admiralty chart, No. 2,907; Ven island to port St. Vincent; also Nos. 2,206 and 936b.

n Nav. Lieut. A. E. Stanley, H.M.S. *Nymphé*, January 1878.

o See plans of New Hebrides and Banks groups on Admiralty chart, No. 134.

p See Admiralty chart, No. 214 of Solomon islands.

q Captain Knorr, of the German war vessel *Hertha*, 1877. A good mark for approaching Apia from the northward is the Roman Catholic church on with the college about S. $\frac{1}{2}$ W. (Nav. Lieut. A. C. Denny, H.M.S. *Sapphire*, 1876.)

r Nachrichten für Seefahrer, No. 39 of 1877.

s See Admiralty chart, No. 780 of Pacific Ocean, S.W. sheet.

t From report of Captain Schorf, published in *Annalen der Hydrographie*, Heft I., 1878.

u See Admiralty charts, Nos. 780 and 765.

v Mr. Ghent, of P.M.S. *Zealandia*, May 1877.

w See Admiralty chart, No. 980 of Caroline islands.

x Commander P. Aldrich, H.M.S. *Sylvia*, 1878.

y Walpole island is 229 feet high, so that the distance of this shoal from the island, may be considered to be about 20 miles.

z See Admiralty chart, No. 764, of anchorages in New Hanover, New Ireland, and New Britain.

aa The visit of Lieut. Musters in the *Conflict* to New Britain and New Ireland, was prior to the earthquake and volcanic eruption of February, 1878, since which, St. George's channel between these islands has been reported as being obstructed with fields of pumice-stone. See Hydrographic Notice, No. 29 of 1878, South Pacific Ocean, No. 43.

Hydrographic Office, Admiralty, London,
18th November, 1878.