

No. 137.

## GOVERNMENT NOTIFICATION.

The following Hydrographic Notices are published for general information.

By Command,

J. M. PRICE,  
Acting Colonial Secretary.

Colonial Secretary's Office, Hongkong, 6th July, 1878.

The information contained in this notice is to be carefully considered, to be noted in the Sailing Directions, and compared with the chart when the ship is navigating the parts to which it refers.

## HYDROGRAPHIC NOTICE.

(No. 9.)

## EASTERN ARCHIPELAGO.

NOTICE No. 16.

The following information relating to Java, Celebes, Sulu, Flores, and Banda seas, also to Gillolo passage, and Dampier strait, has been received from various sources between the years 1875 and 1878.

[All Bearings are Magnetic. Variation  $1^{\circ} 30'$  Easterly in 1878.]

## JAVA SEA.\*

*Great Solombo or Nusa Lumba island*, 600 feet high, in lat.  $5^{\circ} 34'$  S., long.  $114^{\circ} 27'$  E. (approximate), is 5 miles long north-west and south-east, 4 miles broad, thickly wooded, and surrounded by a reef which extends one to 2 miles from the shore.

*Little Solombo island*, about 100 feet high, 5 miles North of Great Solombo, is 5 miles long north-west and south-east, with an average breadth of one mile, flat topped, thickly wooded, and surrounded by a reef which extends one mile from the shore.

The channel between the reefs of Great and Little Solombo is  $2\frac{3}{4}$  miles wide.

*Arends island*, 220 feet high, 26 miles N. by E.  $\frac{1}{2}$  E. from Little Solombo, is level, thickly wooded,  $3\frac{1}{4}$  miles long North and South, 2 miles broad, and surrounded by a reef which extends one mile from its west, and half a mile from its east side.

A rock, the position of which is doubtful, is said to lie 10 miles W.  $\frac{1}{2}$  S. from Arends island.

## CELEBES SEA.†

*Sibocu or St. Lucia Bay*, situated about 70 miles south-west of Tanjong Unsang the north-eastern extreme of Borneo, has on its north side several mountain ranges, the spurs of which extend to the shores of the bay and to the neighbouring coast; the mountains and valleys are covered with extensive forests.

From mount Andrassy, 2,600 feet high, situated about 7 or 8 miles north-westward of Sibocu bay, a ridge extends 11 miles to the eastward flows Sibocu river. From the highest mountain (1,600 feet) of Sibocu bay, a ridge extends 11 miles to the southward, and terminates over point Delconte, in two peaks each 1,000 feet high. The middle reef,  $1\frac{1}{2}$  miles in extent, dries 8 feet at low water, and is separated from the westernmost by a channel  $1\frac{3}{4}$  miles wide, having near the centre a depth of 12 fathoms; the easternmost and largest reef, portions of which dry at low water, is separated from the middle reef by a narrow impracticable channel.

*Erzherzog Friedrich reefs*, situated about 4 miles from the shore on the north-eastern extreme of Borneo, the middle reef,  $1\frac{1}{2}$  miles in extent, dries 8 feet at low water; the middle reef,  $1\frac{1}{2}$  miles in extent, dries 8 feet at low water, and is separated from the westernmost by a channel  $1\frac{3}{4}$  miles wide, having near the centre a depth of 12 fathoms; the easternmost and largest reef, portions of which dry at low water, is separated from the middle reef by a narrow impracticable channel.

*Caution.*—Care is necessary when approaching Erzherzog Friedrich reefs from the eastward, as the extent of the largest reef is not known.

*Friedrich haven.* The channel between Erzherzog Friedrich reefs and the north-east shore of Sibocu bay forming Friedrich haven, is 18 miles N.E. and W.S.W., and one to 4 miles wide, with depths of 3 to 14 fathoms, mud; in the west entrance of the haven, lie the three Lehnert reefs, which dry 2 feet at low water; the southern reef,  $2\frac{1}{2}$  miles from the shore, bears W.N.W. 5 miles from the westernmost Erzherzog Friedrich reef, the northern reefs are 2 miles apart and lie close to the shore.

At the entrance of Sibocu river, which empties itself into the western part of Friedrich haven, lies Kiraz island, 100 feet high, thence to abreast Silungan island (100 feet high and thickly wooded), 6 miles in an easterly direction, a shoal having 12 feet water near its outer edge and 4 to 13 fathoms close to, extends nearly  $2\frac{1}{2}$  miles from the shore, narrowing the haven in that part to about one mile.

The east entrance to Friedrich haven, between Erzherzog Friedrich reefs and the Ligitan islands, was not examined by the *Erzherzog Friedrich*. H.M.S. *Samarang*, 1845, Captain Sir E. Belcher, however ran in between these reefs and the islands, anchoring in 10 fathoms within a convenient distance from the shore. (See Hydrographic Notice No. 7 of 1868, page 3).

*Sandy island*, small, and thickly wooded, situated in the east entrance of Friedrich haven, 5 miles east from Silungan island, stands on the north-west part of a shoal about a mile in extent; a portion of this shoal dries at low water in a south-easterly direction from Sandy island.

*Anchorage.*—The *Erzherzog Friedrich* entered the haven between the two westernmost Erzherzog Friedrich reefs, and anchored in 5 fathoms, mud,  $1\frac{1}{2}$  miles north of the western reef.

*Tides.*—It is high water, full and change, in Friedrich haven at 6h. 30m.; springs rise 12 feet. The streams run one to 2 knots an hour.

*Boom-Boom islands*, about 2 miles north-eastward of Sandy island, are three thickly wooded islands situated on Boom-Boom reef, near its western edge; these islands extend  $2\frac{1}{2}$  miles in a north-east and south-west direction; Sipangon the south-westernmost, and Timbu-Mata the north-easternmost, have each one summit 340 feet high; Boom-Boom, the central and largest has two summits about 340 feet high.

*Carr island*,  $2\frac{1}{2}$  miles E.N.E. from Timbu-Mata, is small and thickly wooded; several low, wooded islands lie to the northward of Carr island, separated from the main land by narrow channels.

\* See Admiralty charts:—Australia, general, No. 2759 a; and Eastern archipelago, sheet 2., No. 941 b; also Hydrographic Notice, No. 14 of 1871. Voyage of Austrian corvette *Erzherzog Friedrich*, 1875.

† See Admiralty charts:—China sea, northern portion, No. 2660 b; and Sulu archipelago, No. 2576; also Hydrographic Notice, No. 7 of 1868. Voyage of *Erzherzog Friedrich*, 1875.

*Boom-Boom Haven*, about 5 miles long in a north-east and south-west direction, and one mile broad, with 9 to 12 fathoms, mud bottom, is protected from seaward by Boom-Boom islands and reef, which form the south-east side of the haven. The entrance to Boom-Boom haven is one mile wide, but the navigable channel is contracted to half a mile by the reefs extending from Hornat point (north-west entrance point), which is thickly wooded and of a dark green colour. About 2 miles within the entrance, the haven is narrowed to 6 cables by a small reef with deep water close around, abreast Timbu-Mata.

*Sandakan harbour*.—H.M.S. *Swinger*, 1877, obtained 11 feet at low water on the south-west part of the bank situated one mile E. by S. from Pulo Button, Sandakan harbour, N.E. coast of Borneo; 18 feet was the least water formerly supposed to exist on this bank.\*

## SULU SEA.†

*Reefs and Shoals*.—The Master of the German ship *Minna*, 1877, reports two coral reefs (Minna reefs) with 3 feet water on each, and 9 feet between; these reefs are 3 miles apart S.E.  $\frac{1}{2}$  E. and N.W.  $\frac{1}{2}$  W. from each other. The position of the N.W. reef is given in lat.  $6^{\circ} 58' N.$ , long.  $117^{\circ} 36' E.$ , and the S.E. reef lat.  $6^{\circ} 56' N.$ , long.  $117^{\circ} 38' E.$  Also, that in lat.  $6^{\circ} 49' N.$ , long.  $117^{\circ} 52' E.$ , a reef (Schuck reef) with  $3\frac{1}{2}$  fathoms, and 6 to 7 fathoms around it, was found, extending one mile in an east and west direction.‡

A shoal, with apparently about 12 feet water in lat.  $6^{\circ} 46' N.$ , long.  $117^{\circ} 47' E.$  (approximate), was observed from the *Erzherzog Friedrich*; also discoloured water in lat.  $5^{\circ} 37' N.$ , long.  $119^{\circ} 15' E.$  (approximate).

*Pearl Bank*.—The opening leading into the lagoon formed by the coral reef on Pearl bank, has a bar extending across it with 9 to 13 feet water.

*Siassi and Lapac Islands*.—The Imperial German Ship *Elisabeth*, Captain Von Wiekede, obtained good anchorage in 11 fathoms, in the channel between Siassi and Lapac islands, abreast a house almost hidden by trees, on Siassi island. The southern portion of this channel, which lies between the coral reefs extending from these islands, is one cable wide, with depths of 6 to 9 feet on the bar at the south entrance, where it is only half a cable wide; but from an examination by Captain Schick, in the German schooner *Minna*, 1876, there appears to be  $6\frac{1}{2}$  fathoms in the southern entrance of the channel.||

*Coral patches*.§—The *Swinger*, while steering to the eastward, about 2 miles north of Siassi island, obtained soundings of 4 fathoms on a coral patch for a distance of about half a mile, when the following bearings were taken, namely,—East extreme of Manubol island S.  $\frac{3}{4}$  W., and north extreme of Tara island E. by S.  $\frac{1}{2}$  S.

This patch is said to have 18 feet least water, to be one mile long north and south, and three-quarters of a mile broad.

East extreme of Manubol island seen just open east of Lapac island, bearing S.  $\frac{1}{2}$  W., leads to the westward, and north extreme of Bubuan island shut in with Lapac island S.W. by W., leads to the southward of this patch.

A patch, about 3 cables in extent, awash at half tide, with deep water around it, lies  $1\frac{1}{4}$  miles S.  $\frac{3}{4}$  E. from Tara island.

A patch of 3 fathoms, one mile long east and west, and half a mile broad, lies  $1\frac{3}{4}$  miles E.S.E. from Tara island.

*Sulu Island*.—The town of Sulu, mentioned in Hydrographic Notices, No. 7 of 1868, and No. 8 of 1872, has been destroyed (1876).¶

*Anchorage*.—H.M.S. *Egeria* anchored off Sulu in 12 fathoms, sand and mud, with point Daingapic bearing N.E. by N.; flagstaff on fort S.E.; and a pier in course of construction (1876) S. by E.  $\frac{1}{2}$  E., the holding ground in this position was said to be bad.

A Spanish gun boat was anchored in 9 fathoms, good holding ground, 2 cables south of *Egeria*.

*Mainbun* on the south-west side of Sulu island is much used as an anchorage during the north-east monsoons; the bottom, it appears to be studded with loose coral. ||

The reef <sup>the Sulu</sup> ~~is~~ <sup>is</sup> south from point Cabalian (the entrance point of Mainbun bay), is said not to exist. A shoal (Batol) <sup>is</sup> ~~is~~ <sup>is</sup> ash at high water was seen from the *Swinger*, at half a mile E.S.E. from point Cabalian.¶¶

## FLORES SEA.

*Pulo Saleyer*.—The *Soerabaya* of H.N.M.S. *Soerabaya*, 1877, reports that he observed discoloured water at a distance of 4 miles from the east side of Pulo Saleyer, in lat.  $6^{\circ} 1' S.$ , longitude  $120^{\circ} 38' E.$  (approximate).

## BANDA SEA.§§

*Caton island*, discovered by Captain Massicot, commanding the French vessel *Caton*, 1877, is situated about midway between St. Matthew and Velthoen island, west entrance to Banda sea, in lat.  $5^{\circ} 40' S.$ , long.  $124^{\circ} 30' E.$  (approximate). Caton island is about 3 miles in extent, thickly wooded, and apparently surrounded by reef extending 2 miles from the shore.

## CELEBES ISLAND.¶¶

*Mount Sodyolo*, in the north-west part of Celebes island, has three peaks, the northernmost and highest being 7,600 feet high.

## GILLOLO PASSAGE.\*\*\*

*Boe Islands*.—The rock on which the American barque *Agate* is said to have struck in January 1877, at  $4\frac{1}{2}$  miles south-east of the easternmost Boe island (east side of Gillolo passage), was unsuccessfully searched for by Commander A. S. Barker, U.S.S. *Alert*, 1877. Several lines of soundings were run over the reported position of this rock, and although the weather was particularly favourable no indication of a rock could be seen. Strong tide rips however, giving the water the appearance of being broken by dangerous shoals, were seen over and near the spot; these were examined, the vessel steaming through them.

A coral reef, having 6 feet to 5 fathoms water, was found to extend  $1\frac{1}{2}$  miles in a westerly direction from the south-east point of the easternmost Boe island; near the extremity of the reef in 12 and 14 fathoms, a strong tide rip was observed; on the north side of the reef anchorage can be obtained in 12 or 13 fathoms water, but exposed to north-easterly winds.

Approaching this anchorage, when within 2 miles of it, the S.E. point of the island must not be brought to bear westward of W.S.W.

\* See Admiralty plan:—Sandakin harbour, No. 950: and Hydrographic Notice, No. 28 of 1875.

† See Admiralty charts:—Sulu archipelago, No. 2576; Palawan island, No. 967; Siboyé and Sibutu passages, No. 928; and Philippine islands, No. 943: also, Hydrographic Notices, Nos. 7 of 1868; 8 of 1872: 4 of 1873; and 26 of 1875.

‡ Nachrichten für Seefahrer, No. 7 of 1878.

§ United States Hydrographic Notice No. 48 of 1877.

¶ Navigating Sub-Lieutenant H. B. Hawkshaw, H.M.S. *Swinger*, 1877.

¶¶ Navigating Lieutenant W. H. Stephens, H.M.S. *Egeria*, 1876.

\*\* Adapted to a Spanish Government survey, 1874.

‡‡ Navigating Sub-Lieutenant Hawkshaw, 1877.

§§ See Admiralty chart:—Eastern archipelago, western portion, No. 941 b. Bericht aan Zeevaranden, No. 15 of 1877.

¶ See Admiralty chart:—Eastern archipelago, eastern portion, No. 942 a. Annales Hydrographiques, No. 567 of 1876.

¶¶ See Admiralty charts:—Eastern archipelago, sheet 3, No. 942 a; and Strait of Macassar, north part, No. 2636. Voyage of *Erzherzog Friedrich*, 1875.

\*\*\* See Admiralty chart:—Eastern archipelago, No. 942 b.

Coral reefs, with apparently deep water between, extend  $1\frac{1}{2}$  to 2 miles from the south side of Boe islands. Anchorage may be obtained in 7 to 8 fathoms in a small bay between the two westernmost islands, it is however somewhat obstructed by coral reefs, and is exposed to southerly and south-easterly winds; this anchorage cannot be recommended except in cases of emergency.

Among these islands strong tide rips and overfalls were frequently met with, but on being examined deep water was always found to exist.\*

The British barque *Sea Star*, July 1877, struck and was wrecked on a reef said to extend from the south side of Boe islands. The master states that at the time there was a depth of 12 feet forward, 15 feet amidships, 12 feet abaft, and at a distance of  $2\frac{1}{2}$  cables from the vessel (in the direction of the island), a depth of 12 fathoms was obtained; also that the following bearings were taken, namely,—S.E. extreme of the easternmost Boe island N. by E., about  $2\frac{1}{2}$  miles, and the west extreme W.S.W. about 3 miles.†

The wreck of the *Sea Star* occurring at night, the position given must be regarded as uncertain, and considering the nature of the examination by *Alert* in quest of the rock reported by *Agate*, it seems probable that both *Sea Star* and *Agate* struck on the reef defined by *Alert*.

*Caution.*—Vessels sailing through the passage between Boe islands and Popa should give Boe islands a berth of at least 3 miles; and as the neighbourhood of these islands has been only partially surveyed, great care is necessary when navigating this part of the Eastern archipelago.

*Gebby island.\**—In the channel between Gebby and Fow islands, on the east side of Gillolo passage, depths of 7 to 12 fathoms were obtained, where 10 to 16 fathoms formerly existed; no good landing place for ships' boats could be found in this channel, neither could water be obtained.

The shoals on the east side of Fow island are more extensive than was formerly supposed.‡

*Ketchepi harbour,\** on the north side of Gebby island, is sheltered from winds between S.E. and West, by the south; the anchorage is in 25 to 30 fathoms, decreasing to 6 and 8 fathoms within a few yards of the beach.

*Iyoi island\** lies 5 miles from the north-east shore of Gebby island.

#### DAMPIER STRAIT.\*

*Tameay islands* in the west entrance to Dampier strait, have, at a distance of  $2\frac{1}{2}$  to 3 miles to the south-east a line of coral reefs lying parallel to them (in a N.E. and S.W. direction), with apparently deep water between. These islands should be given a berth of at least 4 miles when passing south-east of them.

*Foul island (Vuil).*—The *Alert* anchored on the 8-fathom patch near Foul island, south side of Dampier strait, and found it to be a shoal of considerable extent, having depths of 4 to 9 fathoms; from the centre of this shoal the west end of King William island bore W. by N.  $\frac{1}{2}$  N.; opening between Pigeon and Augusta islands, W. by S.; and Foul island S.  $\frac{3}{4}$  E.

*Augusta island.*—The depths along the south and west shores of Augusta island, south side of Dampier strait, vary from 5 to 10 fathoms, and to the northward and westward 4 to 10 fathoms; a 4-fathom patch lies N.N.W.,  $1\frac{1}{2}$  miles from the west point of the island.

*Anchorage.*—The *Alert* anchored in  $10\frac{1}{2}$  fathoms coral bottom, with 6 to 10 fathoms close around, to the southward of the opening between Augusta and Pigeon islands.

*King William, and Gamen islands.*—The passage between King William island (near the centre of Dampier strait) and Gamen island on the north side of Dampier strait, has numerous coral reefs with depths of 30 to 50 fathoms between. The shores of King William island are steep and in many parts covered with trees, the north side in deep water at a quarter to half a mile from the shore, while along the south side of Gamen island there is a small anchorage.

*Anchorage.*—The *Alert* anchored in 20 fathoms, in lat.  $0^{\circ} 24' S.$ , long.  $15^{\circ} 15' E.$  in a large bay on the south side of Gamen island; from the entrance of the bay, a small anchorage on it, the west end of Battanta island is seen well open west of King William island.

From a partial examination of this bay 4 to 10 fathoms water were found in the entrance, which there are several coral reefs having deep water between. Numerous villages were seen on the shores of the bay.

*Waygiou island.*—The *Alert* when entering Offak harbour on the north side of Waygiou island, north side of Dampier strait, passed over a small shoal of 9 fathoms lying a short distance west of the middle of the entrance, on a line joining Forrest and Sugar-loaf points; there are depths of about 27 fathoms in the vicinity of this shoal.

The east side of Waygiou island lies in a S. by E. and N. by W. direction.

The passage between Waygiou island, and Buccleugh shoal, at 6 miles to the eastward of it, has several rocky heads nearly awash, 8 fathoms however was the least water obtained by the *Alert* when passing through.

The following is a consecutive list of Hydrographic Notices relating to the Eastern archipelago published since the year 1866:—

No.	1 of the series is	No.	1 of the year	1866.
" 2	" "	" 7	"	1868.
" 3	" "	" 12	"	1869.
" 4	" "	" 2	"	1870.
" 5	" "	" 11	"	1870.
" 6	" "	" 34	"	1870.
" 7	" "	" 14	"	1871.
" 8	" "	" 8	"	1872.
" 9	" "	" 4	"	1873.
" 10	" "	" 20	"	1874.
" 11	" "	" 7	"	1875.
" 12	" "	" 24	"	1875.
" 13	" "	" 26	"	1875.
" 14	" "	" 27	"	1875.
" 15	" "	" 20	"	1876.

Hydrographic Office, Admiralty, London, 16th March 1878.

\* United States Hydrographic Notice, No. 54 of 1877.

† Board of Trade letter, M 13151, dated 16th October 1877.

‡ See Admiralty sheet of plans:—Anchorages in the Moluccas, No. 915.

§ See Admiralty sheet of plans:—Anchorages in the Waygiou island, No. 914.