

Sailing directions for the Arafura Sea

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SAILING DIRECTIONS

FOR THE

ARAFURA SEA;

COMPILED

FROM THE NARRATIVES OF LIEUTS. KOLFF AND MODERA,

OF THE DUTCH NAVY,

BY

GEORGE WINDSOR EARL.

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SAILING DIRECTIONS
FOR THE
A R A F U R A S E A .

INTRODUCTION.

Lieutenant Koff, of the Dutch Navy, was employed during the years 1825 and 1826 in examining the several groups of Islands which lie to the eastward of Timor; and in 1828 the *Triton* corvette, commanded by Captain Steenboom, proceeded to the western coast of New Guinea, in order to establish a colony at Fort Dubus, in Triton Bay. Narratives of these expeditions have been published in Holland; the former by its commander, M. Koff, and the latter by M. Modera, who had been a lieutenant on board the *Triton*. They both contain much interesting matter, which, if translated into English, would be not only a valuable addition to our geographic knowledge, but exceedingly useful to all those whose commercial activity leads them amongst the numerous islands of that hitherto unfrequented regions.

The following tract consists of such parts of those two works as are more especially nautical. They have been selected and put together by Mr G. W. Earl, who was well qualified for the task by the experience he had obtained in his former intercourse with the Malay ports and islands, and by his acquaintance with the Bughis, who are the principal native mariners of the Indian Archipelago.

Much pains appear to have been taken by the Dutch officers in determining the latitudes and longitudes of the various places at which they touched, and they have thus been able to introduce several important corrections in the relative positions of the islands. They have also marked many new channels between the islands, as well as anchoring roads and dangers; and they have laid down a con-

INTRODUCTION.

siderable part of the New Guinea coast, which was previously unknown. From these and other materials Mr Earl has also prepared a chart which cannot fail to be a valuable acquisition to the navigator, and which, therefore, has been published by this office. Extending from Timor to New Guinea, and from Ceram to North Australia, it includes all the places mentioned in these Directions, and, as the major part of the natives within those limits appear from their language and customs to belong to the great parent tribe of the Arafuras in New Guinea, he has thought it advisable to distinguish this portion of the vast Eastern Archipelago by the name of the Arafura Sea.

Hydrographic Office, Nov. 22, 1837.

All the Bearings are Magnetic; and the Distances are given in Nautical Miles of Sixty to a Degree.

SAILING DIRECTIONS
FOR THE
ARAFURA SEA,

WINDS AND CURRENTS.

In the sea lying between New Guinea and Timor, the easterly monsoon commences in April and continues until the beginning of October, when, after a few weeks of variable winds, the westerly monsoon sets in and continues without intermission until the beginning of March. In the southern part of the Indian Archipelago, generally, the easterly monsoon is attended with fine weather, but on the S. W. coast of New Guinea, and among the islands to the westward, as far as the east coast of Celebes, frequently squalls, with heavy rain, are experienced at this season, often accompanied with considerable swell from the southward, while, during the remainder of the year, the weather is fine. This rule, however, does not extend farther to the westward, for from Celebes to the western extremity of the Archipelago, and also on the north coast of Australia, the westerly is the rainy monsoon.* The monsoons, when at their height, usually blow in an E. S. E. and W. N. W. direction; but towards the change they draw round more to the southward, sometimes continuing several days at S. W.

During the easterly monsoon, the current sets to the N. W. along the western coast of New Guinea and between the Ki and Arru islands, and thence eastward along the south coast of Ceram, at the rate of a mile or a mile and a half an hour, according to the strength of the wind, the velocity being greatest along the coast of

* It is difficult to account for this fact, unless we suppose that the clouds brought from the Indian Ocean by the westerly monsoon are stopped and emptied of their contents by the islands on the western limits of the Archipelago; and that, in like manner, the easterly monsoon brings the clouds from the Pacific, which break over the islands to the eastward. The south part of Timor, and the north coast of Australia, where the seasons are similar to those at the opposite extremity of the eastern seas, lie open to the westerly winds from the Indian Ocean.

New Guinea. At this period an easterly current prevails on the north side of the islands, extending from Timor to Timor-Laut, so that a moderately fast vessel would experience no difficulty there in beating up against that monsoon. In the westerly monsoon the current in these seas usually sets with the wind, but its velocity is not so great as during the other season.

NEW GUINEA.

Frederic Henry Island, on the S. W. coast of New Guinea, was supposed to be part of the main land until 1835, when Lieut. Kool, of the Dutch Navy, passed through the strait which separates it. The island is about 100 miles in length E. and W., and 58 miles in breadth. The land is everywhere low, apparently marshy, and covered with a dense forest. A number of natives were seen on the N. W. side of the island, by Lieut. Koff, in 1826; but they shunned all intercourse with his people.

Cape Valsche, or False Cape, the S. W. extremity of Frederic Henry Island, is, according to Lieut. Koff, in lat. $8^{\circ} 22' S.$, long. $137^{\circ} 41' E.$ The land about the Cape, and the entire south coast of Frederic Henry Island, is fronted by a mud-bank, extending about 8 miles out to sea, having 3 fathoms on its verge, from which the depth rapidly increases to 9, 14, and 27 fathoms. About 50 miles to the N. E. of Cape Valsche the mud-bank begins to decrease in breadth, so that vessels are enabled to approach the shore.

Dourga Strait was first entered by Lieut. Koff, in 1826, who supposed it to be a large river, and in 1828 the *Trion* penetrated about 40 miles from its western entrance; but it was not determined to be a strait until 1835, when two Dutch Government-schooners passed through. The N. W. entrance is about 12 miles wide, the western point being in lat. $7^{\circ} 27' S.$, long. $138^{\circ} 46' E.$, and the eastern point in lat. $7^{\circ} 22' S.$, long. $138^{\circ} 55' E.$ The soundings at this entrance are from 6 to 9 fathoms mud, which increase to 13, 15, and 18 fathoms while

proceeding up the strait, the last being the depth in mid-channel at the part from which the *Triton* returned. The shores may be approached to within a mile, in soundings of from 5 to 8 fathoms. No danger was discovered by the *Triton*, though she beat up the strait against the S. E. monsoon. The position of the south entrance has not yet been determined. This strait is of little importance to seamen at present, except that it leads to the possibility that the portions of land which are seen by vessels passing through Torres Strait, and which were supposed to be parts of New Guinea, are, in fact, a series of islands; and if so, some channel may be discovered, by means of which the dangers attending the navigation of Torres Strait may be avoided.

On the north side of the strait, about 5 miles within the entrance, is a creek, in which the water is fresh at $\frac{1}{2}$ ebb; but a vessel would find difficulty in watering there. The upper part of the creek is inhabited by Papuas, or Oriental Negroes, the aborigines of the coasts of New Guinea, who possess small canoes, and are armed with bows and arrows, and spears. A number of them came down on the beach and communicated with the people of the *Triton*, bartering their arms and ornaments for cloth and empty bottles; but after a friendly intercourse had subsisted for nearly an hour, a difference occurred, in which three of the natives were killed and several of the Dutch wounded.

The coast from the entrance of Dourga Strait extends in a N. N. westerly direction, to the False Utanata River, in lat. $4^{\circ} 48' S.$ The land is low and covered with forest, and a mud-bank, which lines the shore, prevents vessels from approaching nearer than from 4 to 6 miles. This part of the coast is thickly populous, but the natives are inhospitable to strangers.

The Triton Sand Bank, the south side of which is in lat. $6^{\circ} 2' S.$, long. $138^{\circ} 4' E.$, was discovered by the *Triton*. It lies about 18 miles off shore, with 10 fathoms mud immediately to the southward.

Providential Bank, in lat. $5^{\circ} 38' S.$, long. $137^{\circ} 67' E.$, has 4, 6, and 7 fathoms immediately to the south of it, and 12 fathoms about two miles from its western end. It lies 10 miles from the main.

False Utanata River, in lat. $4^{\circ} 48' S.$, long. $136^{\circ} 57' E.$, is of considerable size, but a bar of sand extends across the mouth, on which, during the S. E. monsoon, there is a heavy surf. A vessel may anchor in 13 fathoms to the westward of the bar; but a strong swell from the southward, and the reefs, which lie to the north-west, render this anchorage unsafe during the S. E. monsoon. False Wakia River, 7 or 8 miles to the northward, is of a similar description. The shores of these rivers are thickly peopled, but no intercourse could be obtained with them. The natives of Ceram visit this coast during the N. W. monsoon with a number of *prohus* (proas), and carry on a brisk trade.

The coast to the northward of the False Utanata forms a deep bight, terminating in Cape Steenboom, lat. $4^{\circ} 43' S.$, long. $136^{\circ} 23' E.$, across which, in a line between the Cape and the river, extends a chain of shoals.

Utanata River, lat. $4^{\circ} 32' S.$, long. $136^{\circ} 10' E.$, is about 2 miles wide at its mouth, and is fronted by a bar, on which there is rather more than a fathom at low water. The best anchorage is a little to the westward of the mouth of the river, about 3 miles from the west point, in from 6 to 8 fathoms mud. The *Triton* lay here 11 days, and completed her water, in which the crew were assisted by the natives, who uniformly behaved in a friendly manner; probably having become more civilized than those to the southward, from their having had more communication with the Ceramese and Macassar traders. Plantains, cocoa nuts, limes, papayas, bread-fruit, nutmegs, and turtleshell, were brought off by the natives in their canoes, and exchanged for calico, looking-glasses, chopping knives, and beads, but the former is most in demand; pigs abound, but the natives do not like to dispose of them.

To the northward of the Utanata lies the Wamuka River, in lat. $4^{\circ} 29' S.$, long. $136^{\circ} 6' E.$ It is rather smaller than the former, and, like it, is covered by a bar.

Cape Buro, in lat. $4^{\circ} 7' S.$, long. $135^{\circ} 9' E.$, is a steep promontory, visible at a distance of about 30 miles, with no soundings, 4 miles outside. A range of mountains stretches from thence to the eastward into the interior, with 3 table-hills on it, which are visible from off the False Utanata River.

Lskahia Island, lat. $4^{\circ} 2' S.$, long. $134^{\circ} 53' E.$, is moderately elevated. May, 1826, the brig *Dourga* anchored in 5 fathoms, with the island W. S. W. distant 4 miles, and obtained water and refreshments, but owing to some of the boat's crew having attempted to cut down a cocoa nut tree, the natives attacked them and killed one of the men. There is a bight in the main land to the northward of the island, which has not been examined.

Triton Bay is an inlet, extending 6 miles N. E. into the main land of New Guinea. The coast is here fronted by a chain of small islands, the shores of which are steep to. The best entrance to the bay is by a strait $3\frac{1}{2}$ miles wide, between the island Semieuw, lat. $3^{\circ} 48' S.$, long. $134^{\circ} 12' E.$; and the west point of Aiduma, lat. $3^{\circ} 51' S.$, long. $134^{\circ} 14' E.$ A chain of five small islands stretches 4 miles W. S. W. from the west point of Aiduma, and the fair channel lies between the outermost of these and Semieuw.

Fort Dubus, a settlement of the Dutch, has been placed at the head of a small cove on the north side of Triton Bay, in lat. $3^{\circ} 42' S.$, long. $134^{\circ} 15' 41'' E.$ This cove is 2 miles deep, and 1 mile wide, having at the entrance a depth of 32 fathoms, which decreases to 5 fathoms mud at its head, where a vessel may moor a cable's length from the shore. The channel into the cove is close along the S. W. side, as a mud-bank nearly dry at low water extends from the N. E. side, three quarters of the width of the cove. High water at full and change, 1h 8m, rise and fall 7 feet. This settlement was founded by the Dutch in 1828. The garrison consists of about a dozen European and forty native soldiers. Water and refreshments may be obtained there.

Iris Strait, the channel by which the *Triton* entered Triton Bay, is formed by the Island Aiduma to the S, and by Dramaai Island and the main land of New Guinea to the N. and east. The south entrance of the strait, which is 2 miles wide, is in lat. $3^{\circ} 54' S.$, long. $134^{\circ} 22' E.$ From thence the strait stretches N. W. by W., about 6 miles, having a breadth of from 1 to 2 miles throughout, but having no soundings in mid-channel with 90 fathoms of line. A vessel may anchor in a bight on the N. E. side of Aiduma in 25 fathoms, at a cable's length from the shore, and opposite to a fertile valley, in which there is a native village, where refreshments may be obtained.

Namatotts Island, lat. $3^{\circ} 44' S.$, long. $134^{\circ} 1' E.$, was the western limit of the *Triton's* survey. A group of high islands extend from this westward, the extremity of which is Cape Katmun, about lat. $4^{\circ} 00' S.$, long. $133^{\circ} 3' E.$ This Cape rises into a high mountain, and there is no ground with 100 fathoms, 4 miles to the westward of it.

Pulo Adi, or Wessel Island, which extends N. W. and S. E., about 25 miles, lies 30 miles to the S. W. of the entrance of Triton Bay. The S. E. point of the island is in lat. $4^{\circ} 19' S.$, long. $133^{\circ} 57' E.$; and W. S. W. of this point, about 9 miles distance, lies Bird Island, which is encompassed by a reef. Bottom cannot be found with 100 fathoms to the westward of the reef, though between the island and Pulo Adi there are soundings of 14 to 25 fathoms. To the S. E. of the west point there is a small bay, in which anchorage may be had in 10 fathoms.

THE ARRU ISLANDS.

The northern islands of this extensive group are most frequented by the native traders of the Indian Archipelago, and are better known to them than the southern portion, which have not yet been explored by Europeans, and the natives of which are believed to be much less civilized. On their eastern side they are enclosed by a great coral reef, which reaches to several miles from the shore, and the outer limit of which has not yet been ascertained. The whole chain of these islands extends more than 100 miles from its southern extreme, in lat. $7^{\circ} 6' S.$, long. about $134^{\circ} 20' E.$,* and terminates in $5^{\circ} 30' S.$, long. $134^{\circ} 10'$ to $135^{\circ} E.$

A ship bound to the Arru Islands, if coming from the southward, should pass to the westward the S. W. part of the group, at a distance of 5 or 6 leagues from the land, as the soundings from thence in shore are very irregular, and it is possible that reefs may exist there. When in

* This is the position assigned to it by Lieut. Kolff, though Captain Barnes of the *Minstrel*, who saw the south extreme of the Arrus in 1822, places it in lat. $7^{\circ} 0' S.$, long. $133^{\circ} 56' E.$ Horsburgh, on the authority of Mr Barnes, lays down a town, which he calls Niagona, near the S. W. extremity of Arrus, in lat. $6^{\circ} 38' S.$ long. $134^{\circ} 4' E.$; but by the *Triton's* observations, she sailed over that spot without even seeing the land, when passing to the southward between the Ki and the Arru Islands.

the parallel of $6^{\circ} S.$, she may haul up to the north-eastward, and, passing round the east point of Babi (lat. $5^{\circ} 57' S.$, long. $134^{\circ} 8' E.$) should run to the E. N. eastwards, towards the village of Wanla, on the N. W. point of Wama island, which is about 10 miles distant from the east point of Babi, and off which she may come to an anchor, about a cannon shot from the shore. Should it be intended to remain at the islands any time, a native pilot may be obtained there to take the vessel into Dobbo Harbour. As the north-western part of the group is better known, a vessel coming from the northward may proceed with more confidence. She should make the N. W. end of Wassia, the north-westernmost of the group, and passing along the west coast, might haul in and come to an anchor in the strait between that island and Wadia, or proceed to the southward along the west coast of Wokan to Dobbo. If a vessel comes here to trade, it would be advisable to have a native pilot on board, who will be found of great assistance in communicating with the natives. Bughis, and other natives, who are well acquainted with these islands, may always be obtained at Singapore, Macassar, or the Moluccas.

Dobbo Harbour lies on the west side of the Arru Islands, and affords good anchorage, in which a vessel may lie securely in both monsoons. It is formed by the Island Wokan on the north, and Wama on the south, the entrance, which is about 2 miles wide, being in lat. $5^{\circ} 49' S.$, long. $134^{\circ} 26' E.$ Both sides of the entrance are lined by coral banks, steep to, and dry at low water, which leave a narrow channel of 8 to 10 fathoms into the harbour. The reef extends farther from Wokan than from Wama, so that the fair way is rather to the southward of a mid-channel line. A ship wishing to enter the harbour should take a pilot on board from Wanla, and it would, perhaps, be necessary to warp in during the S. E. monsoon.

The town of Dobbo, which is the chief resort of the traders, stands about 5 miles within the harbour, on a tongue of land which stretches out N. E. from the Island of Wama, to within 1 mile of Wokan. In the S. E. monsoon vessels anchor to the westward of this tongue, and on the opposite side during the other monsoon. The trade appears to be considerable; for when Lieut. Kolff was there in April 1826, a brig from Sourabaya and between 30 and 40 large Bughi prahus were lying in this harbour, while a number of others were trading among the islands. The chief products are pearls, pearl shell, tortoiseshell, trepsang, nutmegs, and various other valuable articles; and the goods given in exchange are European and Indian calicoes, coarse cutlery, chopping knives, muskets, gunpowder, chinaware, elephants' teeth &c. &c. Tobacco and aniseed should always be taken as presents to the chiefs, and it will be prudent to offer some stationery to the schoomasters, as, from the influence they possess, they should be conciliated. Fowls, hogs, and all sorts of tropical fruits may be obtained there, but no cattle.

The natives of Dobbo, together with nearly all the population of Wama, and of the more extensive islands of Wokan and Maykor, are

Christians, and many are also scattered through the remainder of the group, where they have been converted by native Missionaries and schoolmasters from Amboyna. The inhabitants of Wadia and Wassia are Mahomedans, but the remainder of the population of the group, especially those of the southern parts, are Pagans, and are both far more savage than the Christians. The people of Dobbo are hospitable to strangers, enterprising, and well accustomed to commerce, but they must not be treated with indignity, for like all the natives of the Archipelago, they deeply feel and will long resent a premeditated insult.

Ceramese pirate prahus may sometimes be met with near these islands, as well as in other parts of the Archipelago; but vessels are secure from their attacks while at anchor in any of the harbours.

Wassia Island, the N.W. point of which is in lat. $5^{\circ} 26' S.$, long. $134^{\circ} 21' E.$, is the north-westernmost of the group. There is good anchorage in the strait, which separates it from Wadia.

The town of Wadia, which is the chief resort of the traders from Ceram, is on the north side of the island of that name, a short distance within the above-mentioned strait. The natives, who are Mohammedan converts of the Ceramese, are very inferior in moral character to the other natives, and are the chief peace-disturbers of this little Archipelago, frequently making predatory attacks on their neighbours, and being protected in their aggressions by the Ceramese. Their numbers, however, are not very considerable.

Wokan, lying between Wadia and Wama, is a large island, and numerous villages are scattered over it. The western coast must not be made free with, as it is fronted by a coral reef. It will be unnecessary to enumerate the other islands. Vorkay, at the southern extremity of the group, may hereafter be of importance, from the extensive pearl and trepang banks which lie in its vicinity; but it is not known whether there is good anchorage near it for large vessels.

KI ISLANDS.

The Ki Islands lie to the westward of the Arrus, the N.E. point of the Great Ki bearing $W. \frac{1}{2} N.$ from the N.W. point of Wassia, distant 50 miles. It is in lat. $5^{\circ} 22' S.$, long. $133^{\circ} 33' E.$ The channel between the two groups is deep, and is supposed to be clear of all danger; but neither it nor the islands have been well explored. The natives are remarkable for their peaceable disposition and their industry. Ili, a village near the N. E. point of the Great Ki, is famous for its potteries, the earthenware manufactured there being highly valued all over this part of the Archipelago. Dala, a town situated in a bay on the north side of the southernmost Ki, is the chief trading place, and prahus from Macassar and Banda frequently visit it for commercial purposes. Many prahus are built there by the natives out of the excellent timber with which parts of the islands are covered, a quantity of which is also exported. These prahus are sold to the natives of the other

islands, and scarcely any others are used by the Banda traders.

An irregular chain of islands, which are called the Nusa Tello, and are all imperfectly known, extends to the westward from the Ki islands about 13 leagues; and from thence they turn N. and N. W. towards the S. E. extremity of Ceram, where two islands, called Great and Little Keffing, are almost united to it by a coral reef. Lieut. Kolff places the east point of the Keffing Islands in lat. $3^{\circ} 50' S.$, long. $130^{\circ} 45' E.$, which differs only 5 miles from the position assigned to it in the first edition of Horsburgh's Directory, while in the later editions, and also in his chart of the Eastern passages to China, it is placed 25 miles farther to the eastward. Yet it is also stated in those later editions (II., p. 636) that Banda bears from that point $S. 47^{\circ} W.$, distant 18 leagues, which agrees with the position of M. Kolff; and as the latter arrived here direct from Banda, and remained in the neighbourhood several days, it is not probable that his observations should be far wrong.

The Keffing Islands must not be made free with, as the coral bank, which stretches from the south side of Ceram, surrounds them, and projects from the south side about 5, and from the east about 2 miles.

There is a channel between the Keffings and Ghissa, an island about 6 miles east of them, or half-way towards Ceram-Laut; there are from 30 to 50 fathoms in the mid-channel, in which care must be taken to keep, as reefs run out from both islands.

The Ceram-Laut Islands, the largest of which is in lat. $3^{\circ} 50' S.$, long. $130^{\circ} 59' E.$, are also inclosed by a coral reef, which is steep to on the north side. The large island is hilly, but the others are low. There is anchorage on the N.W. side of Kilwari, the westernmost of this group, about gun-shot from the shore, but the bottom is bad; and there is said to be a safe but narrow channel between this island and Ghissa. The natives of these islands, and also those of Goram, carry on a considerable trade with New Guinea, where they obtain slaves, turtleshell, edible birds' nests, &c., in exchange for calicoes and fire-arms, which are brought from Singapore by the Bughi prahus. The slaves are carried to Bali and Lombok, where they are sold to the native inhabitants. English whalers occasionally stop at these islands to trade; but the natives, like the Mohammedan inhabitants of Ceram, are a bad set, and must not be trusted.

To the S. E. of the Ceram-Laut Islands, lie three others of considerable size, Salavako, Manovoko, and Goram, the channel between the two groups being probably safe. Goram, the chief of them, lies nearly west, distant more than 20 leagues from Cape Katoman on New Guinea, the eastern point being in lat. $4^{\circ} 3' S.$, long. $131^{\circ} 50' E.$ Anchorage is laid down in Horsburgh's charts, off the east side of the island. This island carries on a considerable trade with the western parts of New Guinea, and a ship going there on a trading voyage should call at Goram, to take a native on board acquainted with the coast, and with the various Papua chiefs.

The Matabella Islands lie 20 miles S. E. from the Goram group, the channel between being safe and spacious; and 6 miles farther to the southward lie three more, but smaller islands. When the *Triton* corvette returned from New Guinea in 1828, she found a safe and wide channel between the two groups; which may be easily distinguished from each other, as the southern extreme of the Matabellas is a small table-hill, and the whole of that group is hilly, while these islets are small and low. The north-easternmost of them is in lat. $4^{\circ} 32'$ S., long. $132^{\circ} 5'$ E., but hitherto they have not been noticed in any chart, which shows the necessity of vessels keeping a good look out when passing through these long chains of islands. Next comes the island of Tehor or Taw, and then 5 or 6 islands extending upwards of 20 miles to the southward; but none of these are well known. The channels between them are, however, said to be safe, and the *Triton* passed through them on her voyage to New Guinea. The natives, who resemble those of the Ki islands, are simple and industrious, and they produce rice and Indian corn, which are sold to the people of Banda and New Guinea.

The Timor Laut or Tenimber Islands form the largest group in this sea, and lie nearest to the north coast of Australia. The north-easternmost of them, Vordate and Larrat, the inhabitants of which are more civilized and industrious than the others, are the chief resort of traders. A cluster of numerous small low islands fronts the N. W. side of the Great Island, extending from Mulo to within 15 miles of Serra, and as an extensive coral reef lies outside of them, the limits of which are not well known, they should not be approached without the greatest care. There is no channel for large vessels within this cluster. The Great Island is moderately elevated and covered with forests, abounding in wild cattle; and its inhabitants, particularly those of the southern part, are very barbarous, and ill-disposed to strangers. In 1823, an English brig, supposed to be the *Lady Nelson*, anchored off Luora, on the east coast, to obtain refreshments, and while half the crew were ashore, the natives boarded the vessel, and killed the remainder, with the exception of two youths, who were still there when Lieutenant Kolf visited Vordate in 1825 and 1826. The south point of Timor-Laut is placed by Kolf in lat. $8^{\circ} 17'$ S., long. $131^{\circ} 7'$ E.; but Captain Cook, when passing in the *Endeavour*, gave it in the same latitude, though $43'$ greater easting; and Captain Barnes, of the *Minerva*, who saw it in 1822, assumes its lat. $8^{\circ} 27'$ S., and its long. $130^{\circ} 50'$ E.*

Some small islands lie off the south point of Timor-Laut, which should not be approached nearer than 5 or 6 miles, as the edge of the great coral bank which girts the eastern side of the island has not been well ascertained.

* There appears to have been an error in his chronometers of about 1 minute and 20 seconds, for the N. E. point of the Great Ki is given by him more than a third of a degree farther west than it was found to be by the *Triton*, and the same error appears in his longitude of the south point of the Arrus.

Vordate Island extends about 15 miles to the north-east point, which is in lat. $7^{\circ} 50'$ S., long. $132^{\circ} 18'$ E.; and is separated from Larrat Island by a narrow strait, which is supposed to be unnavigable, owing to coral reefs, as is also the strait between Larrat and Timor-Laut. A ship bound to these islands during the eastern monsoon, if coming from the eastward, should make the N. E. point of Vordate, which may easily be distinguished from the others, as the hills are jagged like a cock's comb, while Larrat and Timor-Laut, though high, have a more level appearance. After hauling round the point, and giving a berth to a rock, which lies about a mile out from the point, she may run along the edge of the reef, which lines the west coast of Vordate a short distance from the shore, and an hour in from 10 to 30 fathoms sand, close under the land, between the town of Sebeano and a reef extending from the S. W. point of the island. She will lie there secure during the S. E. monsoon, as the wind blows off the land, but the anchorage would probably be unsafe during the other monsoon. The trading prahus, which only visit the island during the westerly or fine weather monsoon, lie within the north-western entrance of the strait, which divides Larrat from Vordate, where they are well sheltered. The entrance is narrow, even for a small vessel, and she would require a leading wind and a person on board acquainted with the channel; but too much confidence must not be placed in the native pilots, here or elsewhere, among these islands, as they are accustomed to prahus only.

A vessel bound to the northern parts of Timor-Laut, coming from the westward, must not attempt to pass through the Mulo Islands, but should pass round its north end, and then steer to the south-eastward for Vordate. If obliged to beat up, she must not bring Mulo to the eastward of north, on account of the reef stretching between that island and the north point of Timor-Laut.

The inhabitants of Vordate and Larrat appear, from Lieutenant Kolf's account, to be a superior race of people; he was received there, as indeed at most of the islands which he visited in those seas, in the most friendly manner. Both of those islands are well cultivated, and rice, Indian corn, cattle, and other refreshments may be obtained in abundance. The trade carried on by prahus from Banda, Macassar, Goram, and many of the neighbouring islands, is considerable, the productions, and the articles given in exchange, being similar to those of the Arru Islands. Gold coin will pass there, which the natives work up into ornaments, but cotton manufactures and iron-ware are more desired, and the people spare no efforts to purchase them.

Serra, an island in lat. $7^{\circ} 35'$ S., and 7 miles distant from the west coast of Timor-Laut, is almost entirely under cultivation, and is another good trading station. There is probably good anchorage round the S. E. point of the island, between it and Timor-Laut, but the north part of the strait is supposed to be shallow.

Between Timor-Laut and Banda lie Serua and Bird Islands. Serua is in lat. $6^{\circ} 20'$ S., long. $130^{\circ} 38'$ E. The natives are few in

number; but at the change of the monsoons they carry hogs and goats to Banda for sale.

Bird Island is in lat. $5^{\circ} 29' S.$, long. $130^{\circ} 1' E.$, according to the observations of the *Triton*. Both this island and Serua are placed very much out of their true position in most of the charts, even Horsburgh laying the former down 13 miles too far to the northward, and 14 miles too far east. Bird Island is high, and uninhabited, but in the westerly monsoon, the natives of the Ceram and other islands visit it to obtain sulphur, with which it abounds.

SERWATTY ISLANDS.

The Serwatty Islands form a very numerous chain which stretches from the east end of Timor to Baba, near Timor-Laut, and do not appear to be inferior to the Arrus in the richness of their products, while the inhabitants are generally more civilized than those of Timor-Laut. To the southern islands of this chain the above name has been usually applied, though for what reason does not appear; yet, as it is given in previous charts, it will be as well to retain and extend it to them all.

Kissa, the westernmost, and one of the smallest, but the most important of this group, lies E. by S. from Sau, a town in the island of Wetta, and 55 miles distant. It appears low from a distance, owing to the top being flat, but it is considerably elevated, and the sides are very steep. There are two anchoring places in the island, one on the west, and the other on the south side. A vessel intending to call at the western port, during the S. E. monsoons, should stand close in to the S. W. end of the island, and then run along the shore to the northward. She may haul in and come to an anchor on a patch of rocks and sand, with very irregular depths, close round the S. W. point of the bay; but it would be prudent to send a boat ahead to pick out a sandy spot, and a chain cable should only be used. Kissa is the chief emporium of the Serwatty Islands; the inhabitants are mostly protestant Christians, and carry on a considerable commerce. The chief articles of trade are sandalwood, bees'-wax, tortoiseshell, and trepang; and tame cattle, rice, Indian corn, yams, and cabbages, with a great variety of fruits, may be obtained at a very cheap rate. There is a small village on the shore of this West bay, but about 2 miles inland, there is a small walled town, containing a capacious and well built church. West Bay is in lat. $8^{\circ} 14' S.$, long. $127^{\circ} 8' E.$

Roma, which lies N. N. E. of Kissa, about 23 miles, is high and hilly, with several small islands round it. It is less thickly inhabited than Kissa, and the natives are less civilized. There is good anchorage, during the S. E. monsoon, in 7 fathoms, on a bank of sand, extending half a mile towards Roma from the north side of a little island called Nusa Midta; but in the N. W. monsoon, the best anchorage is under the lee of Roma, opposite to Nusa Midta, where there is a small river, at which wood and water may be obtained with facility. There is also said to be good anchorage in a bay on the

N. W. side of Roma, but the coast there is very thinly peopled.

Letti, E. S. E. of Kissa, about 28 miles, is hilly, but with level land near the sea, and reefs of rocks line the north and west sides of the island, at a distance of half a mile from the shore. The best anchorage during the S. E. monsoon is off the village of Tombra on the N. W. side of the island, in lat. $8^{\circ} 20' S.$, long. $127^{\circ} 46' E.$; there being immediately opposite the village an opening in the reef 500 feet wide, with from 6 to 9 fathoms sand, but bounded on each side by reefs, which are exposed at low water. A ship intending to put in there should anchor off the mouth of that opening, in order to warp in, and she should then moor head and stern. The landing place is at the head of the opening, on a fine sandy beach, covered with cocoa-nut trees. During the westerly monsoon, the best anchorage is on the east side of the island, off the village of Batu Meau, in the strait between Letti and Moa, which is said to be perfectly safe, though it is not known that any ship has passed through it. As at Kissa and Moa, many of the natives are Christians, and hospitable to strangers. The produce of these islands resembles that of Kissa and Wetta.

Moa, the next island to the eastward of Letti, is of considerable size, with a high mountain called Buffalo Peak, near its N. E. cape, which bears some resemblance to the Peak of Teneriffe, but its elevation is not more than half as great. The cattle with which this island abounds are considered the best in this part of the Indian Archipelago. Vessels trading with Moa, anchor in the strait between it and Letti, off the village of Batu Meau.

Lakor, between which and Moa there is a narrow unexplored strait, is low, having the appearance of a coral bank, about 20 feet above the level of the sea. It is neither so populous nor so productive as the former islands, and derives its chief importance from its trepang and tortoiseshell. There is anchorage during the S. E. monsoon opposite to the westernmost of two villages, which lie on the north side of the island, in 7 fathoms sand and stones. It would be advisable to carry a warp to the shore, to render the vessel more secure, as the bank deepens suddenly, so that if she drives she will be in deep water before there is time to let go another anchor. There is said to be good anchorage during the westerly monsoon in the strait between Lakor and Moa, off the village of Mowai. There are no wells on Lakor, so that it is not adapted for a vessel in want of water. There is a deep bay on the south side of the island, which has not been explored, but there is probably no good anchorage on any part of the south side of this southern chain of islands, as in both monsoons the wind often hangs far to the southward.

Luan, in lat. $8^{\circ} 16' S.$, long. $128^{\circ} 50' E.$, is a high island visible at a long distance, with a number of smaller islands round it, at a distance of from 4 to 12 miles, and the entire group is encircled by a coral reef, which can only be crossed by small vessels. It is not known whe-

ther there is any anchorage for large vessels in the vicinity, but a ship trading among these islands should not pass without endeavouring to find one, as trepsng, turtle, and edible birds'-nests can be obtained here in greater quantities than at any other of the islands, and the inhabitants are a kind and friendly people.

Sermatta, the extremity of this southern chain, is about 15 miles in length, with a range of mountains extending from east to west. The inhabitants are very much uncivilized, and the island is seldom visited; but its products are sent to Luan. The eastern extreme is about lat. $8^{\circ} 25' S.$, long. $129^{\circ} 37' E.$

N.N.W. from Sermatta, distant about 75 miles, stands the island Damms, with several smaller islands off its S. and S.W. sides. A volcano rises from its north-eastern peninsula, at the foot of which there are some hot springs. Kulewatte Bay, in lat. $7^{\circ} 4' S.$, long. $128^{\circ} 47' E.$, on the eastern side of Damms, is about 4 miles deep, and its shores are so steep to, that no soundings can be had till close to them. A ship, nevertheless, should not enter it during the night, as it contains several rocks, which may be easily avoided during the day. At the head of the bay there is a small cove, within the north point of which there is good anchorage, close to the shore. It is sometimes difficult to get out of this bay in the S.E. monsoon, but there is generally a light air from the land in the early part of the morning. The productions and the inhabitants resemble those of Kissa, but there are comparatively few Christians among them. There is a bay on the north side of the island called Wilhelm Bay, but the anchorage is not secure, as a swell often tumbles in at all seasons of the year, and the bottom is bad. Horsburgh states that some Dutchmen generally reside there, which was the case half a century ago, but when Lieutenant Kolf visited the island in 1825, the natives had not seen an European for 30 years. It appears that formerly small parties of Dutch soldiers were stationed on many of the islands in the Arafura Sea, for the purposes of destroying the spice-trees, and of preventing any traffic with the natives, but they were withdrawn when the Dutch empire in the Moluccs began to decay, and when it was found that spices could be elsewhere obtained. For several years previous to M. Kolf's voyages, a worthy Dutch missionary, the late M. Le Bruin, occasionally visited Wetta, Kissa, and some others of the southern islands, and the effects of his labours are apparent, in the superior intelligence and comfort of the natives.

Teon, or Tauw Island, E. by N. of Damms, distant 35 miles, is moderately high and uninhabited, but it is visited by the inhabitants of Damms, by whom a vast quantity of the shells of turtles is collected there annually.

Twenty miles N.E. by E. from Teon will be seen the high island of Nila, inhabited by a few poor natives, who carry provisions to Banda, at the change of the monsoons. There is said to be anchorage on the north side.

Between Teon and Nila it is believed that there are several reefs, for which reason that channel should not be attempted, except in the

day time, and with a leading wind; and two other extensive shoals are laid down in the old Dutch charts, about 10 miles to the northward of Nila.

Baba, about 60 miles west of Timor-Laut, is high and covered with forest. The best anchoring place during the south-easterly monsoon is opposite to the town of Teps, in lat. $7^{\circ} 52' S.$, long. $129^{\circ} 58' E.$, where a vessel may lie securely in 16 fathoms, though great caution will be required in beating up to the anchorage, as the wind frequently comes off the high land in sudden squalls. In the westerly monsoon there is good anchorage under Wetang Island, which is better cultivated, and is inhabited by rather better disposed people than Babs. Refreshments, and many articles of trade, may be obtained there, but still great caution is necessary in all intercourse with the natives, more particularly those on the south-eastern side, who are more barbarous than the generality of their neighbours. When Lieut. Kolf visited Teps, in July, 1825, the inhabitants were very shy, and deserted the village on his landing, which conduct, so different from what he had experienced in most of the other islands, convinced him that something wrong had been done, or was intended. It appeared that, some months previously, an English brig, manned by about a dozen Europeans, had anchored off Aluta, on the S. E. coast of Baba, and had engaged in some barter with the natives, who were on board in great numbers, and who, taking the opportunity of five men being ashore in the boat for water, attacked and killed the people on board, as well as those in the boat when they returned. This case, together with that before-mentioned as having occurred on the S. E. side of Timor, would not, in all probability, have taken place, but for the total want of precaution on the part of the crews, for the inhabitants of all these islands have such a dread of fire-arms, that they would scarcely have attempted those atrocious acts, if any resistance had been expected. English vessels visiting Baba hereafter must be doubly cautious, for it does not appear that the natives received the slightest reproof from Lieut. Kolf for having cut off that English brig.

Four moderately sized islands lie off the north and south-east sides of Baba, at a distance of from 10 to 15 miles. They are thinly inhabited, and are not frequented by traders.

These brief notices of the islands in the Arafura Sea may be concluded with a short account of Wetta, which lies beyond its western limits, and close to the northward of Timor.

Wetta is steep to on all sides, and even at a very few miles distance there is no ground with 100 fathoms; near its N. W. point stands Dog Island, in lat. $7^{\circ} 40' S.$, long. $125^{\circ} 57' E.$, and two other high islands, Babi, or Hog Island, and Cambing, or Goat Island, severally stretch out from its S. W. point, all the channels between them being considered as perfectly safe. The south side only of this great island is frequented, as the inhabitants of the other parts of its coast are said to be wild, and inhospitable to strangers. The town of Sau, the chief resort of traders, is situated in a small bay on the south coast, in

lat. $8^{\circ} 5' S.$, long. $126^{\circ} 13' W.$; where a vessel may anchor off the town in 50 fathoms, at only a cable's length from the shore. She will be tolerably well sheltered there from the S. E. winds by the point of the bay; but in the western monsoon the anchorage is more secure, as the wind is then off the land. The chief productions of this place are sandalwood, bees'-wax, rice, Indian corn, buffaloes, hogs, and fowls, all of which may be obtained at a very cheap rate, in exchange for balicoes, &c., but not in very large quantities. Water can be procured from a small creek to the eastward of the town. The inhabitants of the interior belong to the great Arafura tribe, which has spread from New Guinea through all the islands of this Archipelago; here they are a mild and peaceful people, and are tributary to the town, the population of which is not numerous, though it is said to contain several Christians.

As there is a probability of the British soon taking possession of the north coast of Australia, it should be understood that any settlement there, is likely to become the emporium of the Archipelago of Arafura, while the inexhaustible trepang banks along that coast will nourish a thriving trade with China also. It may not, therefore, be out of place here to give a short notice of the best tracks to be pursued to and from those countries, among which it will be divided. The trade in trepang, or sea-slug, which gives employment to 80 or 100 of the Bugbi prahus, on the north coast of Australia alone, and the entire produce of which is taken to China, far exceeds in value the fur-trade, carried on between the N. W. coast of America and China.

PASSAGES BETWEEN THE NORTH COAST OF AUSTRALIA AND CHINA.

A ship proceeding from the north coast of Australia to China, from April to September, when the S. E. monsoon prevails to the southward, and the S. W. monsoon to the northward of the equator, should pass to the southward of Timor and Sandalwood Island, and through the straits of Allas or Lombok into the Java Sea; and from thence through the Carimata Passage, and up the China Sea to Canton, by which course she will have a stronger monsoon and a clearer sea than by passing to the northward of Timor, and through the Flores Sea; or than by running at once to the northward, through the Molucca passages. By this latter route, instead of a fair and steady wind all the voyage, difficulty would be experienced in passing between Borneo and Palawan into the China Sea, from the variable winds, and from the numerous shoals which lie to the westward of the Balabak passage. The passage by the north of Palawan to China is also often attended with difficulty during the S. W. monsoon; and an additional inconvenience of these routes is, that the navigation of the Molucca Sea will be performed during the bad monsoon.

Ships returning from China to the north coast of Australia during this season, should pursue the track usually adopted by ships bound to Europe—namely by standing to the eastward, round the north end of the Philippines into the

Pacific, and so to the southward towards New Guinea. When past the parallel of $5^{\circ} N.$, S. E. and S. S. E. winds, with a strong current to the westward, will probably be felt, by which she may easily pass through Dampier Strait, or the Jilolo Passage, into the Molucca Sea. She may then pass between Ceram and Buro, and across the Banda Sea to Wetta, when no difficulty will be found in getting to the eastward along the north side of the Serwatty Islands, as the current there sets to the eastward during the S. E. monsoon. When off Baha, she may stand to the southward for the Coast of Australia, and if she should fall to leeward of her port, she may easily gain her easting by taking advantage of the land and sea breezes.

Again, if a vessel is bound from the north coast of Australia to China, from October to March, when the western monsoon prevails to the southward of the equator, and the N. E. monsoon in the China Sea, she should, on leaving the coast, keep close to the wind, and as the monsoon often blows S. W. and even S. S. W. between Australia and Timor, she may be enabled to pass between Timor and the Serwatty Islands and through Pitt Passage into the Pacific, and thus pursue the eastern route to China adopted by ships at this season. If unable to get far enough to windward to pass between Ceram and Buro, she may run at once to the northward, between Ceram and Ceram Laut, and from thence into the Pacific by Pitt or Dampier Straits. The only difficulty that an indifferent ship would be likely to encounter in this route would be on the passage between Ceram Laut and the N. W. end of New Guinea, where the winds would probably be from the N. W., but even then she would have the advantage of fine weather. The route from the north coast of Australia, through the Flores and Java Seas, and up the China Sea to Canton, would be impracticable at this season, even for a fast sailing vessel, as she would have a dead beat and a lee current the whole way.

A ship returning from China during this season, may steer a direct course through the Mindore Sea, and thence by the Molucca Passage, and past the N. E. end of Timor to the north coast of Australia.

PASSAGES BETWEEN THE NORTH COAST OF AUSTRALIA AND SINGAPORE.

A vessel bound to Singapore from April to September, may pursue the route recommended above for ships bound to China at that season—namely, to the southward of Timor, through the straits of Allas and Carimata, and thence through Rhio Strait to Singapore. The return voyage at that season, through the Java Sea, against the S. E. monsoon, would be tedious and difficult, even for a smart ship; it would, therefore, be most advisable to run across the China Sea, and round the north end of Borneo, where she would probably have the advantage of S. W. and S. S. W. winds, to traverse the Sooloo Archipelago. When near the Molucca passage, though the winds will be mostly from the southward, yet but little difficulty will be experienced in passing through it, if the direc-

tions given by Horsburgh be followed; and when through, the route to the north coast of Australia, already recommended for vessels returning from China at this season, should be adopted.

From October to March, the passage to Singapore through the Java Sea, against the N. W. monsoon, would be tedious and difficult; a ship bound there during that season should therefore proceed to the northward by the Molucca or Jilolo passage, where she would have the advantage of fine weather, and, when to the northward of Jilolo, the wind would probably come from the northward and eastward, with a westerly current, which would enable her to proceed round the north end of Borneo, and so with the N. E. monsoon, down the China Sea to Singapore. A ship returning at this season should pass through the Carimata Passage, through the Java and Flores Seas, and then to the southward of Wetta, and between Timor and the Serwatty Islands, to the north coast of Australia. It would be inadvisable to proceed through the strait of Allas, and to the southward of Timor, as light airs and calms, with squalls from the S. and S. S. W., are often encountered to the southward of the islands east of Java, while in the Flores Sea the N. W. monsoon blows steadily.

Our colonies in the southern parts of Australia are also likely to participate in this commerce, and some merchants of Sydney have already engaged in the trepang fishery, though under great disadvantages, foreseeing the benefit they would derive from carrying some saleable goods to China, wherewith to obtain tea and other China produce, which are in such great demand in the colony, and the purchase of which has hitherto acted as a constant drain on its specie. New South Wales produces nothing that is saleable in China, while many articles are manufactured there, which could be advantageously disposed of throughout the Arafura Archipelago in exchange for articles for which there is a constant demand in Canton. The passage from Sydney, Van Diemen's Land, and the Gulf of St. Vincent, to the northern coasts of Australia, may be made with facility at all seasons. From April to September the route through Torres Straits would be pursued, while, during the remainder of the year, ships should run to the westward round Cape Lieuwen, and then across the S. E. trade, to the parallel of about 10° N., when the westerly monsoon would carry them to their destination.

