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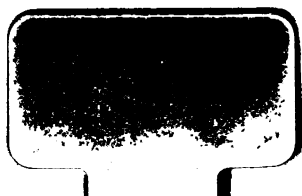
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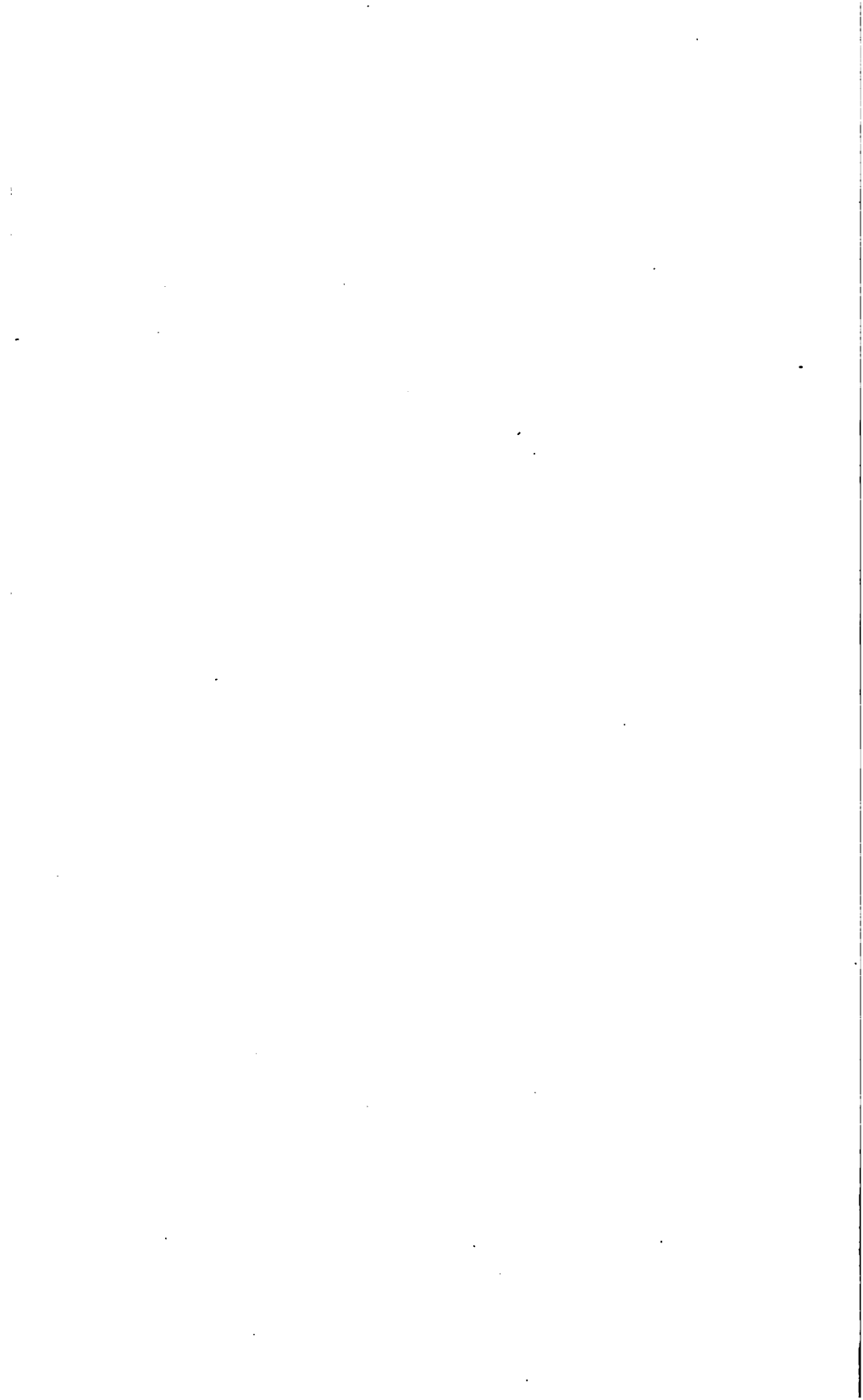
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Barbadoes.
1832

THE
SEAMAN'S PRACTICAL GUIDE,
FOR
BARBADOES AND THE LEEWARD ISLANDS;
WITH
OBSERVATIONS ON THE ISLANDS FROM BLANCO
TO THE ROCAS,
OR THE
COAST OF LA GUAYRA.

GENERAL INSTRUCTIONS AND OBSERVATIONS ON
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ALSO,

*Observations on the Hurricane and Currents, with numerous Marks
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LONDON:

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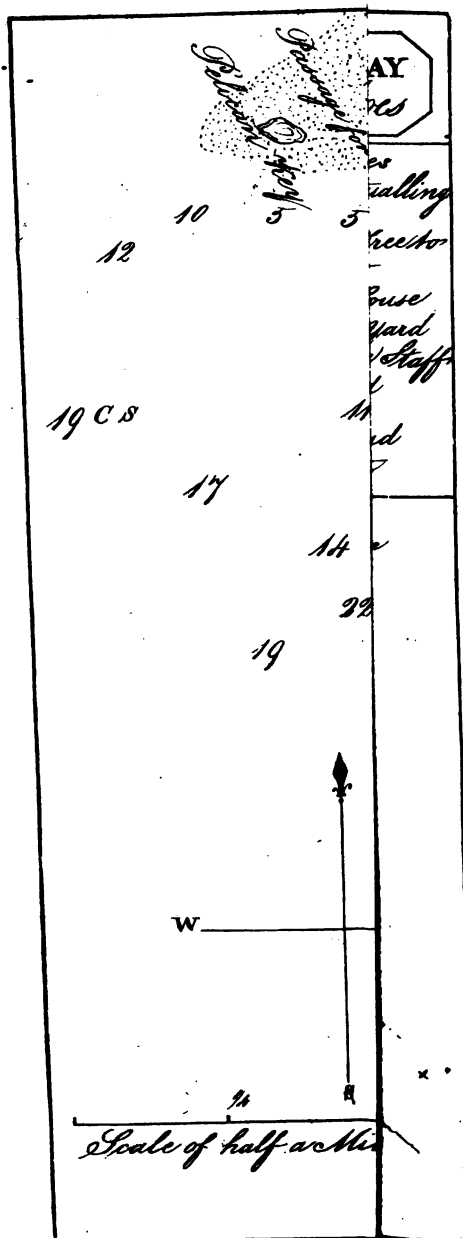
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*The Anchorage & Harbour
of Gustavia on the S.W. side of
St. Bartholomew*

Barth. Lotheg

38° 42'
0

Latitude 17° N.



The Hedge 42
Loaf 84

Explanation

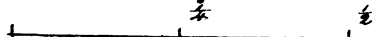
*The figures denote the depth
of water in feet*

The dotted line the best passages

A.B.C.D. Batteries

*Variation of the Compass 3° East only
V The Carcenage*

Scale of one Mile



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ABERDEEN:
PRINTED BY G. CORNWALL,
22, BROAD STREET.



INTRODUCTION.

THESE practical observations were written for the Author's own use, in the event of being sent to the West Indies at any future period.

They are the result of nearly fourteen years' experience, and he was induced to arrange them in their present order, from a conviction that he would have been himself greatly benefited by such directions, when he was first employed in navigating these intricate seas ; and he is persuaded, that they will prove of considerable utility to others, particularly strangers, either in His Majesty's ships or in the mercantile service.

Throughout the West India Sea amongst the Islands, the bottom will be generally found to consist of coral rocks, and the great advantage of having chain cables, both in point of safety and economy, must be obvious to every one ; all vessels traversing these seas should be supplied with them, and these directions will frequently enable them to anchor securely in a proper depth of water.

The bearings are by compass, and the soundings in fathoms, unless where otherwise noted.

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THE
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BARBADOES AND THE LEEWARD ISLANDS.

Observations on making Barbadoes and the Leeward Islands.

VESSELS making these Islands when coming from the northward, should be very careful not to cross the latitude of the low islands during the night, although their reckoning may be many degrees to the eastward of them. The low islands on which so many vessels have been lost, are Barbuda, Anguilla, Dog and Prickly Pear, Sombrero, Anegada, and its Horse Shoe Reef; of all these the first and last are the most dangerous. Before you see Anegada in clear weather, Virgin Gorda, and perhaps Tortola, will be seen very distinctly; distance is often deceiving at sea, and this land, by people not well acquainted with it, has been frequently mistaken for the east end of Porto Rico; and although directions have been given for avoiding this error, by observing that there is only open sea to the eastward of Virgin Gorda, and that to the eastward of Porto Rico lie several islands, yet it is necessary to observe that these islands, when the high land of Porto Rico is first discovered, cannot be seen, so that if you make the land at the close of day, it is proper to be aware of this circumstance.* It may be also remarked, that Anguilla and the Dog and Prickly Pear Islands cannot be seen until some time after you make St. Martin's, which is high land, and lying to the southward of these low islands. Barbuda is not only dangerous in the night time, but very dangerous in day light to strangers, having reefs under water all round, except at the very extreme S. W. point of the island.

* Probably this was the cause of the loss of a British Frigate on the Anegada Reef, in 1808.

In making the West India Islands, when coming from the Eastward.

If you are bound to Jamaica, or to any of the Ports in the northern range of islands, (except the Bahamas) the safest land to make is the Island of Deseada, for if you should not see the land before night, you may haul to the northward, into the latitude of Montserrat, and have nearly sixty miles to run on during the night. Some people make St. Martin's or St. Bartholomew's, when bound to Tortola, St. Thomas's, St. Croix, and the islands to leeward, but in this case they should be aware of the dangerous Island of Berbuda, and also Anguilla; for a small error in the latitude, perhaps for want of an observation, or irregularity in the current, would place them in a very perilous situation, should they attempt to run on in the night.

Strangers should pass St. Martin's when they make it on the north side, the passage between it and Anguilla being clear; St. Bartholomew, Antigua, Nevis, and St. Kitt's on the south side, and also Barbadoes, that they may be able to fetch into Carlisle Bay; Trinidad on the north side, and Grenada and St. Vincent's on the south side. No particular directions are necessary for the other Islands, but what every seaman ought to know, that is, the danger of running upon the land, and running to leeward, or past it—a very serious occurrence for a dull sailing merchant vessel. This remark of running past the land is particularly applicable to the Island of Barbadoes, for which, see the directions for that Island.

Remarks on passing to leeward of the High Islands which obstruct the course of the Trade-winds.

IN passing these Islands, the only danger (where no other is mentioned) is the strong gusts of wind from the high land dismasting your vessel. Take also the precaution to keep far enough from the land to work your ship, should the wind suddenly shift and blow on the shore, which it often does during the day. When the wind is baffling, you will find it to your advantage to keep your course along shore as long as you have steerage way, notwithstanding all your sails may be aback, for it frequently happens that the wind comes round to its old quarter before you lose your head way, and by this means we have seen one ship get into another current of air, which brought her into a fresh breeze, while another in company, by altering her course to keep the sails full, lost the opportunity of getting into the breeze, and was detained by calms and baffling winds, great part of the day. We have often seen the after sails filled, with the

wind aft, while the head sails were flat aback, with the wind ahead, and which continued so long, that the foresail was hauled up to continue the head way.

Observations on the Currents, and in Navigating amongst the Leeward Islands.

THE uncertainty of the currents amongst the West India Islands, is well known to all who have had any experience in navigating these seas. The most careful and experienced seamen have often been greatly perplexed about them, and have as yet found it impossible to reduce their setting to a general system like the tides about the British Islands, and other coasts. As a warning to strangers, it may at once be remarked, that the current in general sets to the westward, nearly in the direction of the trade-wind, at the rate of from one to two miles an hour. In all our experience, we have never yet found what we could say was an easterly current out of sight of land, but have frequently felt it setting us from N. W. to north, so that a vessel lying up S. E. on the larboard tack, and the current setting N.N.W. would be very considerably benefited by it.

In working to windward amongst the Islands, great attention ought to be paid to the setting of the current. In the passages lying in an easterly direction between the Islands, it has been remarked, (and we have frequently experienced it) that when the current runs to leeward on one side of the passage, it runs to windward on the other—also, that it runs or sets to windward at both sides, and at the same time sets to leeward in the middle, and frequently the reverse.

In the day time, attention to the progress you make in getting to windward, by the appearance or bearings of the land, is the best rule you can have, first trying a short tack in shore, where, if you make little or no progress to windward, your best way is to stand across, and try the other side of the channel, and if that do not answer, the midchannel will most likely prove the best, for although contrary to the general opinion, we have often found it so; much, however, depends on the time of day. In the morning and evening you should endeavour to be near the shore, the north side of the passage in preference, where, if the wind be moderate, and the coast not much exposed to the general trade-wind, you are pretty certain of having the wind two or three points more off the land. In like manner, you should endeavour to be in the offing about one o'clock, p. m. as the wind generally blows more on the shore at that time. We have also observed, that the land and sea breezes prevail most where the land on the coast is low.

Should you be bound to a place to the eastward of you, and no land in the way, the best tack to be upon is the one on which you

will lie up nearest to E. by N. that being the point from which the trade-wind generally blows; when it changes from that point, you may consider it a slant of wind, and take advantage of it accordingly—particularly if it veer to the south during the day, or to the north by night, thus, it will be found to be advantageous to be on the larboard tack at night, and the starboard tack by day.

In squally weather in the West Indies, the wind is so very variable, that it is seldom possible to take advantage of it in getting to windward.

To windward of the Islands, and to the north of Barbadoes, in moderate trade-winds, the current will be found generally to set in a direction from N.W. by N. to N. by W. at the rate of from half a mile to three-fourths of a mile an hour. As you approach the Islands, it becomes more irregular—near to the eastward of point Salines Martinique, it frequently sets strong to the N. and even N. E. We have also felt this set of the current near to point Moulacique, (St. Lucia), and have frequently seen vessels bound to Gros Islet Bay (St. Lucia) from Barbadoes only the night before, driven so far to the north as to have passed the Island of St. Lucia, and also a considerable part of Martinique, before they discovered their mistake, and being strangers, they had to wait (very properly) until an observation could be taken to ascertain the latitude, before they could find out their true situation.

In the passages lying nearly in a direction north and south, the current sets generally about N. N. W. until you are past the most northerly land on the east side of the passage, when the western current, being no longer obstructed by the land, sets with great strength in a direction more westerly. This is the case in all the passages from Antigua to St. Domingo, and also the current setting out of the Gulf of Paria Trinidad, and on the coast and islands from Margareta to Bonair, as the current inside to the south of these Islands sets N. N. W. $\frac{1}{2}$ W. at the rate of nearly two miles an hour. Ships running to westward inside, should make an allowance for it, and keep a good look out, for it must be kept in mind, that the currents in these seas are very uncertain, and often shift without the possibility of assigning any probable cause. We are, however, inclined to think that the strong N. W. winds in the Gulf of Mexico, and on the coast of America, may have a tendency to check the progress of the current running out through the Gulf of Florida, (the Gulf stream) which may sometimes occasion a counter-current in the Caribbean Sea, for, as before observed, what is called a weather current in that sea, is seldom more than a current setting N. by W. or N. N. W. so that vessels being on the larboard tack, and lying up S. E. by S. or S. E. will have the current on the lee-bow.

We are of opinion that it is in this way fore-and-aft-rigged vessels have so much the advantage over square-rigged ones, in getting to windward in these seas; as the former lie nearer the wind, they will often have the benefit of the current on the lee-bow, when a square-rigged vessel cannot.

In several passages about the Virgin Islands, it has been observed,

that the current sets to leeward when the moon is in the zenith until setting, then to windward until it reach the Nadir, then to leeward until rising, then to windward until reaching the zenith.* It has also been remarked, that in the first quarter of the moon, the current begins to set to the eastward, and continues to run that way until three days after the full moon, then it runs to the westward until the first quarter;† but these last remarks, we should think, can only be applied to the currents about the Island of Grenada and the Grenadines, but we never have had an opportunity of ascertaining their correctness.

Remarks and Instructions to enable a Vessel to touch at as many of the Islands as possible, without having to beat to windward.

THE turning to windward against the trade-wind, is at all times a very difficult and tedious operation, even for a fast sailing vessel, and it often cannot be accomplished at all in a dull sailing or full built merchant vessel; hence the necessity of considering well the result before you put your helm a weather to run to leeward. We shall suppose that your vessel is at Barbadoes, and you wish to call at as many of the Islands as you can, and with as little delay as possible. From Barbadoes you can steer for Tobago, hence for St. Vincent's, which is as far to windward as you can fetch, and with a northerly trade-wind you will not be able to do that. From St. Vincent's you may steer to any of the Grenadines, and so on to Grenada, and at times you may fetch Trinidad, but it is by no means to be depended on. From Grenada you cannot always fetch St. Kitt's, but in general the Virgin Islands, St. Croix, and St. Thomas, &c. The general course this way is to go to Tobago, and hence to Trinidad. Another track is from Barbadoes to St. Vincent, (south side) hence to the Grenadines and Grenada. From Barbadoes to the N.W. you may go to St. Lucia, passing round the N.E. point of the Island to Gros Islet Bay, and the Careenage, from this place you fetch Fort Royal Bay Martinique, then St. Pierre's, Roseau Dominique, the Saintes, Basseterre Guadeloupe, and sometimes you may fetch point à Petre. From Basseterre Guadeloupe you can seldom weather Montserrat, unless you tack and take advantage of the variable winds under Guadeloupe, which is the best way, if you are bound to Antigua, or to the northward, between Antigua and Nevis, but if not, you may pass close to the west side of Montserrat, and so steer for Nevis or St. Kitt's, or to the Islands to the westward, or you may pass on any side of St. Eustatia or Saba, if you can lie round without tacking, and so through the Dog and Prickly Pear, or Sombrero passage to the northward.

* Mr. Lockwood's chart of the Virgin Islands.

† Information from Mr. George, many years commanding a ship in the Grenada trade.

In steering through these passages, or across them, it is recommended to keep well to windward, as the wind will often head you as you approach the opposite side, and the currents are very strong, and it may be remarked, that in standing to the southward, you feel the force of the current more than when you are standing to the northward.

From these remarks, and an examination of the chart,* it will be easily seen what other track can be accomplished. Thus, from Barbadoes to Antigua, and the Islands to the westward of it, you pass to the eastward of Deseada if you can, if not, between that Island and the east point of Guadaloupe; when you are clear of this last point, you have Antigua, and all the Islands to the westward, in your route.

The intercourse between Barbadoes and Demerara is always very uncertain, and you can seldom trust to fetch from one place to the other, even in fast sailing vessels. From Demerara you can generally weather Tobago, of course it must always depend on the wind and current, therefore we can only speak in general terms. Indeed we have sometimes seen southerly trade-winds continue for a long time, and also northerly winds, and we have seen, owing to N. E. winds and lee currents, vessels from Cayenne not able to weather Barbadoes, and a vessel from Antigua a month in getting to Barbadoes, on account of southerly winds.

In working to windward through any of the passages in the night time, it is strongly recommended not to trust to the distance run, for although you may have an offing of four leagues, and you could lie up so as to make a long stretch, yet before you have gone the distance of your offing, you will probably find it full time to tack from the shore. In the passages lying nearly east and west, the western current runs so swiftly, that, in standing to the southward on the larboard tack, and lying up S. E. by E. you will often find that you have made little or no easting. This has been the case with several vessels leaving the south shore of Antigua; they stood on, lying up S. E. by E. which course they expected to make good, and thought, perhaps, to weather Point Antigua, (Guadaloupe) but the current deceived them, little or no easting had been made, and they ran ashore amongst the small keys off the Bay Mahaut, (Guadaloupe) nearly due south from that part of Antigua which they had left the previous evening.

When bound to windward, it is sometimes an arduous task to beat through the passages between the Islands. The best for that purpose are considered to be between St. Vincent's and Bequia—Martinique and St. Lucia—and between Antigua and Guadaloupe. The wind in general blows a strong breeze, so that you are able to car-

* The British copy of the Spanish chart is the only one that we have seen that can be depended on from Barbadoes to the Mona passage, the limits to which these remarks extend, and, with the exception of the situation of the Island of Avis, we do not think it could be rendered more correct. We do not, however, allude to the surveys of particular Islands, many of which are excellent, particularly Captain Columbine's.

ry double-reefed topsails, courses, top-gallant sails, jib, and driver. These are the most suitable sails for working the ship in the night, as the weather in these passages is in general very squally; if more reefs are out, you are liable to spring your masts and yards in the strong gusts of wind that frequently happen several times in an hour in the best looking weather. We may also remark, that the more sail you carry, the worse it sometimes turns out, as the squalls frequently keep heading you until they blow past, when you come up to your old point; in this way it is easy to see you may run a long way to leeward in carrying sail through a squall.

Observations on Hurricanes.

IN the West Indies, there is a period of the year called the Hurricane Season, but the time of its commencement and termination is not generally agreed upon. It is, however, a period in which not only very violent winds occur, but calms, rains, and unsettled weather usually prevail. Commerce is in a great measure suspended, and all persons who can leave the place most subject to the hurricanes, are glad to depart to a more congenial climate, for it must also be observed, that this season is the most unhealthy and trying for the European constitution.

The hurricane season is commonly said to begin on the 1st of August, and on or before that day, all vessels bound to Europe endeavour to depart from the West Indies, as the underwriters generally claim a higher rate of insurance, should they remain longer. Several hurricanes, however, have taken place before that day; we experienced one on the 7th July, 1811, when many vessels were driven on shore and lost. It began from the N. E. and gradually shifted to N. N. W.—W. S. W. and S. We must, therefore, conclude, that in all exposed situations, no vessel can be considered safe after the first full or change of the moon in July.

Dampier, in his discourse on the winds, gives a good description of the appearance of the weather before a hurricane. Bryan Edwards, in his work on the West Indies, describes its terrible ravages, and records one which happened so late as the 20th October, and in 1817, St. Lucia was visited with a most destructive one on the 21st of that month. We may from this infer, that the hurricane season does not always terminate till after the 22d of October, or perhaps after the second full or change of the moon in that month. We are not prepared to affirm that any particular period of the moon's age has more influence than another in causing these hurricanes, but it is worthy of remark, that most hurricanes have taken place near the time of the full moon, or at the change. Thus, of fourteen hurricanes, (six of which we ourselves experienced) three took place the day before or after the first and last quarters, ten were within four days, seven within three days, and five within two days before or after the full or change of the moon.

The most severe hurricane that we experienced, took place when the moon was eight days old, and it lasted, without any interval, from the afternoon of the 25th September to the evening of the 28th; several days previous, we had light variable weather, and a very heavy swell the evening before it came on. During the hurricane, there were frequent flashes of forked or zig-zag lightning, but little or no thunder. The sea, which at first was exceedingly heavy, became entirely converted as it were, into drift or spray, so that we were completely enveloped in darkness with it—neither sun, moon, nor stars appearing. It commenced from the N. E. and gradually shifted once and a-half round the compass from right to left, or as seamen express it, backing against the sun, and in a day or two after blowing from the southward, the wind settled in the eastern quarter. At the Island of St. Thomas, bearing south, distant one hundred and forty miles, we were informed (on our arrival there) that all the while they had clear weather, blowing a fresh gale from the southward. It may be remarked, that all the hurricanes we have experienced have had this general feature; they began to blow from the E.N.E. or N. E., when they shifted round to the left they increased in violence, and when to the right, they continued but a short time, soon became moderate, and ended by blowing from the southward, until the weather became settled, and the easterly trade-wind resumed its course.

Many persons are of opinion, that what are called in the West Indies hurricanes, are similar to what are called severe gales in the British seas; but experience has taught us, that they are much more severe than the winds in the European seas, and that they require a more particular preparation. Unfortunately for strangers, the weather during the hurricane season is very perplexing, frequently having the appearance of an approaching hurricane without ever reaching them, which renders them on the recurrence of similar appearances, unwilling to dismantle their vessel, so as to be completely prepared, and thus probably they are at last caught in a hurricane, when they least expect it, and are totally unprepared.*

From what we have observed, we should recommend, that contrary to the modern practice, every thing should be prepared for striking the lower yards and topmasts, and these should be struck, if circumstances will permit, as the only chance of saving the lower masts, and perhaps the ship. Indeed, from what we have seen, we think it impossible for any vessels without such a precaution to keep her side to the wind. We need hardly say, that the hatchways should be battened down; we are apprehensive this is sometimes neglected in small deep-wasted vessels, upon which frequently their safety greatly depends. Should there be sea room, as the wind always comes to the southward, we would recommend at the very commencement to run in that direction, when most probably you will run out of the hurricane without suffering from its tremendous

* Since these remarks were written, accounts have been received of a most terrific hurricane which happened among these Islands on 10th August, 1831. It began three days after the new moon.

power; but our limits prevent us from enlarging on the subject, and we shall conclude with the following extracts, which appear very applicable, and agree with our own observations:—

“In Europe we sometimes use the word hurricane, to denote a storm of uncommon violence, but we must not imagine, that a hurricane in Europe resembles a hurricane in the West Indies. The most furious tempest experienced here, is a calm when compared to those terrific elementary conflicts. He who has not felt them, can scarcely conceive the awful scene, much less describe it.” Again, “The ruin and desolation accompanying a hurricane, cannot be described—like fire, its resistless force consumes every thing in its track, in the most terrible and rapid manner. It is generally preceded by an awful stillness of the elements, and a closeness and mistiness in the atmosphere.”

BARBADOES.

THIS Island may be seen from the deck of a sloop of war, about ten leagues off, and when seen from the eastward, the N. E. part appears highest, sloping gradually toward the south point, on which is a battery with a flag-staff. This point lies at the southern extremity of a long sandy bay, which is skirted by a reef of rocks called the Coblers. These rocks lie nearly two miles distant from the beach, extending along the shore from the N. E. to the south point, and terminate in a spit two and a-half miles from the latter point, in a S. S. W. direction.

The south point has been mistaken in the night for Needham's Point and Fort, which, in coming from the eastward, do not appear until you round the Spit, when the extreme east point of the Island bears about N. N. E. and the south point distant about three miles; Needham's Point and Fort will bear N. W. by W. distant five miles, and you can then haul up for it, keeping it a little open on the star-board bow.

Needham's Fort, which has two signal staves, is built of stone, and lies low, having the base of its ramparts washed by the sea; a little to the E. N. E. of the Fort, you will observe a flag-staff on the barracks of St. Ann's, and also a spire with a clock on the main guard-room, these are higher and more inland than the Fort, and may be mistaken for it by strangers when running down for Carlisle Bay in the dusk.

From Needham's Fort, W. S. W. a reef extends about two cables length, and also to the north of the Fort, forming a dangerous shoal of irregular depth. To keep clear of this, observe when the Fort bears N. $\frac{1}{2}$ W. it will be in the direction of high land, with the appearance of three small risings or hillocks, the easternmost of which when brought to bear N. $\frac{1}{2}$ E. or a little to the westward of the church steeple of Bridgetown, will lead you past the shoal in

three and a-half fathoms. If the bay is crowded with shipping, this mark will enable you to get an inshore berth. In large ships, it is best to keep clear of the white water off Needham's Point, or half a mile from the Fort, until the church bears N. by E. $\frac{1}{2}$ E. then haul up and anchor where you please. Should the wind be fresh, it will be necessary to give the ship cable briskly, for the ground is rocky and irregular, except in a few spots.

To the eastward of the anchorage in Carlisle Bay, on the high land you will see a windmill near the telegraph signal post, and a little down the hill towards the bay, a remarkable square white stone house; when the house and windmill are in one, and Pelican Island (very low on the N.W. extremity of the bay,) is open to the westward of the mainland, you will be in a good berth for a line of battle ship, in fifteen to eighteen fathoms water; merchant vessels anchor well inshore to the southward of the Careenage. It is not the general practice to moor with the bower anchors in this bay, as the wind is pretty constant from the eastward, and there is little danger of fouling your anchor; it is, however, recommended to steady your ship, to prevent sheering about in light winds during the night. The current is felt pretty strong sweeping round the bay, sometimes from the north, and at other times from the south, the shipping during the running of the current, lying with their heads in different directions. Observe, the south point should be shut in behind Needham's Fort before you anchor, otherwise you will be in the worst anchorage, exposed to the swell and current, and most likely in heaving up leave your anchor among the rocks. There is a bank with four fathoms on it, having tolerable anchorage, the marks for it are the church (bearing N. E.) on with a house having a large tree to the right of it, on the south side of the entrance into the Careenage, and the flag-staff of St. Ann's barracks (about S. E.) on with a wooden house of two stories in the naval yard, to the right of the naval wharf. The Pelican and Half-acre shoals lying to the N.W. of Pelican Island, are very dangerous, being under water with deep soundings near, and so placed that no mark can be got to direct strangers to keep a proper distance from them. The usual way is to give the shore from Pelican Island to the first rocky point to the north a berth of two miles; it may be observed, that this part of the bay requires great caution in coming in during the night from the N.W.

General Remarks.

The latitude of the Spit stretching from the south point, is $12^{\circ} 58' N.$; among the Cobler rocks are several openings, where Droggers anchor to ship off the produce of the Island, and to the westward of the south point is a bay for small vessels. In running for this Island, vessels should keep in latitude $12^{\circ} 56' N.$ as the current sets in generally to the N.W. From not attending to this, several ships in thick hazy weather have not only missed Barbadoes, but also the islands to leeward; for having been driven to the north-

ward of Barbadoes by the current, and continued a westerly course, they must have passed between St. Vincent's and St. Lucia. Had they passed to the southward of Barbadoes, they would have got also to the southward of St. Vincent's, where the channel is so narrow, that a vessel cannot pass without seeing the land.

Great care should be taken to keep clear of the Cobler rocks, as several vessels by negligently lying to, have lately been lost on them after seeing the land; it is therefore recommended, never to bring to with the ship's head to the northward, but to keep under sail, and if there is occasion to lie to, let it be done with the ship's head to the S. E. the general trade-wind being E. by N.; by neglecting these precautions, vessels are often driven to the northward, and so far to leeward, as not to be able to weather the Coblers, they are thus obliged to go round the north side of the Island, by which means they cannot fetch Carlisle Bay, unless the wind be far to the northward.

Should you be bound to Carlisle Bay from the N. W. or from the leeward, and make the land to the eastward of you before night, your best way is to beat up under proper sail to the southward of the latitude of the south spit, and run into the bay in the morning; if you keep under the land and lie to, you will be subject to light baffling winds, and perhaps be driven a considerable way to leeward, the best judges being deceived as to the distance of the land from its appearance in the night. There are but few places round the Island where the lead will find the bottom, nor is there any place except in Carlisle Bay, where it can possibly be of any use to prevent a ship from going on shore in the dark.

A light-house has been long wanted on this Island. From the number of vessels and lives lost, the urgent necessity of one must be apparent, and the great saving which it would occasion to the public, would very shortly indemnify any expense which might be incurred by its erection.

Anchoring bearings and marks.—St. Ann's flag-staff on with the cocoa-nut trees in the naval yard, and a remarkable square white stone house on the hill on with Martindel's watering-place, in nine fathoms, sandy bottom; Needham's point S. E., Church N. E. by N. twenty fathoms; Needham's point S. E., church N. E. $\frac{1}{2}$ N. in seventeen fathoms.

These last bearings were at the flag ship's chain moorings.

TOBAGO.

In coming to this Island from Barbadoes, we saw it at the distance of seven or eight leagues, but as the land is high, it might be seen much further off in clear weather. We made the eastern part of the Island, which is the usual way when with a convoy, to enable

the ships bound to the south ports of the island to fetch round to the eastward of little Tobago Island; at this place, it is to be observed, the current is very strong, setting sometimes to north and N.W.

In steering to Courland Bay, we passed at about the distance of a mile to the N.W. from Giles' rocks, lying off the N.E. point of the Island; five or six miles more to the S.W. we passed the Sisters, at about the same distance.

Great Courland Bay, where men of war generally anchor, is a fine open bay; in going into it, we saw no danger, we were informed that a sunk rock, called the Barrel of Beef, lay off the east point of the bay, on which there is a fort; but notwithstanding a diligent search, we found only a rocky flat, stretching off from the point not a cable's length—at about this distance we had three fathoms.

When lying in Great Courland Bay, you can see the mast heads of any vessels lying in Little Courland Bay. When we sailed from this place for Trinidad, it was late in the evening, we gave the S.W. point and reef a good berth. Having only been at this Island two or three times, and then for a few hours only, we had no opportunity of making any further observations. The south side of the Island we are informed, has many dangers, and Man of War's Bay, on the north side, between Giles' rocks and the Sisters, is said to have good anchorage, but somewhat difficult to enter, on account of calms, light variable winds, and deep water.

TRINIDAD.

WE are not much acquainted with the coast round this Island, and never went through the passage to the south of the Island, called the Serpent's Mouth.

The passage by which we have gone into the Gulf of Paria, is the Grand Bocas, situated between the high land of Paria (on the continent of South America,) on the west side, and the small islands lying to the west of Trinidad on the east.

Among these small islands are three passages into the Gulf of Paria, which are narrow and dangerous, subject to calms and strong irregular currents, and the deep water renders letting go an anchor of no use. A frigate attempting to come into the gulf by the easternmost passage, or Ape Bocas, was swept by the current on a rock and lost, the crew being saved with great difficulty.

The second Bocas, from the east was formerly called the Parasol Bocas, on account of a tree on the west side resembling a parasol, which was lately blown down—it is generally called the Egg Bocas.

In case of necessity, this Bocas which is the shortest, is the best of the first three passages to take you into the gulf, as the channel lies in a north and south direction.

The third, or Ship Bocas, lies in a N.W. and S. E. direction. We have gone out of the gulf in a frigate through this passage, with a breeze from the south, but notwithstanding, we found it difficult to steer the ship so as to keep clear of the shore, and with all this risk, we gained only about two miles easting.

The fourth, or Grand Bocas, is the only passage recommended to strangers.

Fort Abercromby, six leagues to the eastward of the eastern, or Ape Bocas, on the north coast of the Island, projects a little way to the north of the line of coast—gives the western current a direction from that Fort, to a supposed point ten or twelve miles north from the Grand Bocas; to the southward of this line, the current setting out of the Gulf of Paria, forms a strong eddy current, generally setting off from the shore—this eddy to the west of the supposed point, loses itself in the western current. To prevent this western current in light airs driving you to the westward of the Grand Bocas, the usual way when bound to Trinidad, is, to make the Island of Tobago, and then get close to the shore of Trinidad, near to Fort Abercromby, which is a bold shore all the way to the Bocas. Steering to the westward along shore, you will soon see the small islands off the west end of Trinidad, forming the three small Bocases, and after passing the Island of Chicachicara, the Grand Bocas will be open. The passage is between the last mentioned Island, and a small one to the S. S. W. of it (called Goose Island) inside the gulf. The only danger is a sunken rock off the S.W. point of Chicachicara.*

The best way to get through the Grand Bocas into the Gulf of Paria, is to keep nearly in mid channel, between the S.W. point of Chicachicara and Goose Island, where you are more certain of the wind, and the water being smooth in the gulf you will soon work up to Port of Spain, about E. S. E. from the Bocas. The lead in this bay is indispensable—when in mid channel in the Grand Bocas, we had sixty-five fathoms, muddy bottom. As Chicachicara, and the N.W. part of Trinidad are high lands, calms are very frequent in the Grand Bocas, for which reason your stream anchor should be ready to let go, to prevent the current driving you out of the gulf, or too near the shore.

The anchorage off the town of Port of Spain, is the town, bearing N. E. three and a half miles distant in five fathoms soft muddy bottom, or the King's Wharf, N. E. by E. and Fort George, N. N. W. in three and a half fathoms. The anchorage in the Gulf of Paria is

* The extremities of Chicachicara bearing from E. $\frac{1}{2}$ N. to N. by E. $\frac{1}{2}$ E.; Goose Island, S.W. by W. $\frac{1}{2}$ W. three fathoms water on the shoalest part; close round this shoal, there are from seven to eleven fathoms, and between it and the S.W. point of Chicachicara, are seventeen fathoms. From the latter point, the shoal bears W. $\frac{3}{4}$ S. three quarters of a mile distant; when on the shoal, the south side of Chicachicara Island will be in one with the round rock of Chagaramus Bay—the bearings were taken in four and a-half fathoms water. It is reported that there are some heads of rocks with only nine feet water. These marks and bearings were taken and communicated by a lieutenant of the Royal Navy.

very extensive. Ships bound out of the Gulf to the N. E. should take advantage of the eddy current before mentioned, particularly if the trade-wind is northerly, otherwise they will very seldom be able to weather Grenada.

Remarks made and communicated by a Lieutenant in the Royal Navy.—"The Egg Bocas is the best passage when bound into the Gulf, (except the Grand Bocas) and with a breeze there is not the least danger.

"The Ape Bocas is very narrow, a high rock lies off the western side, about one-third over, and from the S.W. point of Trinidad, opposite the rock, runs a small bank with six or seven fathoms on it, in mid-channel there are twenty-five fathoms water. Owing to the strong current, and the light and variable winds, this channel, very properly, is seldom used, the sea frequently breaks the whole way across the passage, which is occasioned by the current running to the north, and meeting the sea breeze.

"After passing the Ape Bocas, proceeding to the eastward inside the Gulf of Paria, Madam Titron's estate is the first sugar plantation which you discover on Trinidad. Off the S.W. point of the bay, where this estate is, a reef runs off a cable's length,—Gasparee Island is bold all round, your jib-boom would touch the shore in many places, and your vessel would be afloat. On the south side is a fine cove, well adapted for careening ships. The passage into Chagaramus Bay, between the Main and the Guana Islands, is very good."

Remarks between the Guana Islands.—"We ran through, keeping the eastern one on board, when abreast of the western point, we had three fathoms, and the next cast nine fathoms. A transport in company and abreast of us, that kept the Western Island on board, took the ground, although her draught of water was only thirteen feet."

Between the Western Guana and Gasparee.—"You may make free with the land on either side. This is the passage generally used going into the bay."

Between Gasparee and Round Island.—"You will have upwards of twenty fathoms in mid-channel, and may make free with the land on either side. This is the passage generally used when going out of the bay."

Between Round Island and the Main.—"This passage is about half a cable's length across. In running through it to the westward, you suddenly shoal your water from eleven to five fathoms, but not less. Close to the ruins of an old Fort on the N. E. point of Gasparee lie the wrecks of two Spanish men-of-war in three fathoms water. I saw several large guns, apparently 24 or 32 pounders."

Chagaramus Bay.—"If you keep point Gord and the westernmost of the Guana Islands open, and do not open a large tree (close to Mr. Dare's house) to the west of the boat-house, you will not have less than six fathoms, (we generally anchored in sixteen fathoms). Should you, with the eastern marks on, open the tree to the westward of the boat-house, you will run on shore, as there is a flat lying off the watering place; you may lay close to the edge of it, as it is very steep, and easily distinguished by the colour of the water."

Bearings of a Coral Bank, taken by the Master of His Majesty's Sloop, Ringdove, to the westward of the Round Rock, Naparina.—"Village of Petit Bourgh, or St. Fernandos, E. by N. $\frac{3}{4}$ N. Palmest Windmill, S. E. by E. $\frac{3}{4}$ E. Round Rock, about one mile distant E. $\frac{3}{4}$ N. The bank is one-fourth of a mile in circumference, and nearly three fathoms water all round."

Marks in running from Port of Spain to the southward.—"Do not bring St. David's or Abercromby Tower to bear to the northward of N. N. E. but in small vessels you may run within this mark."

GRENADA.

THERE are many bays in this Island, of which the principal is St. George's, situated at the S.W. point of the Island. If you come from the eastward, keep on the south side of the Island; as you run down you will see Pigeon Island, and a few rocks above water to the eastward of it; give them a berth of three-fourths of a mile; at this distance from the S.W. part of Pigeon Island you will have four fathoms coral bottom, as you near Point Salines, (the S.W. extreme of St. George's Bay); keep a mile from it in seven fathoms water; as you open the bay, you will see Fort George situated at the south extremity of the town, on a high bold rock, forming the north side of the entrance into St. George's harbour; farther in land are the fortifications on Richmond Hill, to the north of these more works are seen on Hospital Hill, not so high as those on Richmond Hill. From the S.W. part of the bay, the town will appear between Hospital Hill and Fort George—Richmond Hill appearing to the southward of them all. The south side of the bay is formed of irregular land decreasing in height towards Point Salines, and forms a long sandy beach, divided only by a long rocky point, jutting out into the sea, which, from its appearance, may be called Red Point. To the N. E. and N.W. of this point lie several shoals, with passages between them and the land for small vessels. Being off Point Salines, come no higher than N. N. E. $\frac{1}{2}$ E. until abreast of Red Point. In working up into the bay, always tack to the northward before the north work of Richmond Hill opens to the south of the works on Fort George.

If you are bound into the harbour, beat up towards the town, and pass close to Fort George, and when you open the harbour, and are in mid-channel, anchor and warp in.

There is another passage between the two and three fathom banks, which lies about a mile to the west of Fort George. Observe on the south shore a long sandy beach, and about the centre of it a valley, in the middle of which is a large tree, beyond this tree is a large house by itself; the tree and the house kept in one, will lead you between the two banks in from six to twelve fathoms water; above Hospital Hill are three peaked hills to the north of the town, these peaks kept to the north of Hospital Hill, will carry you to the north of the two and three fathom banks; this passage, however, is not recommended to strangers.

In coming into this bay from the northward, give the point to the north of the town (Point St. Eloy) a berth of half a mile, as a reef lies off it, yet the north side of the bay is the safest to keep on. The Governor's house, to the east of St. George's Fort, kept to the north of it, is another mark to take you clear of the shoals off Red Point,—all the west side of the Island is bold and clear.

The harbour of St. George is a most secure place for ships in the hurricane season, but unfortunately it is small. It is said the hurricanes never reach this Island, as a proof of which, the windows are without outer shutters, and are fitted with glass, which cannot resist the force of these terrible winds. On the right hand side, after entering the harbour, is a good watering place; in the dry season it fills, with the casks in the boat, about three tons in an hour.

The best anchorage is in the bay, abreast the town, to the north of Fort George. The broad street (the north one) seen right up and down from the ship, and a red house in Grand Malle Bay, on with Point St. Eloy, bearing N. by E. and Fort George, E. S. E. in six or seven fathoms water pretty clear ground. Other bearings when at anchor,—St. George's Fort, on with the north works on Richmond Hill, E. by S. in six fathoms water—also Fort George, E. by S. Point S. Eloy, N. by E. $\frac{1}{2}$ E. in ten fathoms water.

THE GRENADINES.

THEY are laid down correctly in Spanish charts. Strangers should not go between any of them, excepting the passage between Carriacou and Grenada, and it is recommended not to stand too near them on the eastern side, as the current runs strong to the westward among these Islands.

In the Island of Carriacou there are two bays, the one on the S.W. side is said to be excellent. To sail into the one on the N.W. side, you pass to the W. and S. of the easternmost small Island, giving it a berth of a cable's length, then haul up and come to, in eleven, thirteen, or fifteen fathoms water, sandy bottom, half way between

the small Island and the shore of Carriacou, distant half a mile—the small Island before mentioned, bearing N. or N. by W. and the northernmost of several small Islands to the westward of the S.W. point of Carriacou, bearing W. by N. When at an anchor, you lie here only exposed to the wind from N. by W. to W. by N.

Carriacou is high, the S.W. end forms a sugar loaf hill. The Island has been long famous for poultry and eggs. You may pass close to the west side of Union, Canuana, and Bequia. Admiralty Bay, in this last Island, is a very safe anchoring place. If you are bound to windward through the passage between Bequia and St. Vincent's, or going into Kingston Bay in the latter Island, the usual way is to work up close in with the land on the Bequia side, before you stretch over to St. Vincent's; but for further directions, see under the head of Currents, &c.*

ST. VINCENT'S.

KINGSTON Bay, in this Island, is an open bay, where you have no soundings until close to the N. E. part, and it is sometimes difficult to get there, on account of the variableness of the wind, occasioned by the inequality and the height of the land to the E. and N. E. whence the wind blows. The west side of the bay is bad ground—the best anchorage is on the east part of it. Off the east side of the bay is said to be a shoal called the Barrel of Beef; we have never heard of any one having sounded on it. There is excellent fresh water close to the beach, and it might be made very convenient. A high rock, called Young's Sugar Loaf, is about four miles to the east of this bay; abreast of it is the harbour of Carriacou, said to be the best in the Island. When at anchor in Kingston Bay, in fifteen fathoms gravel, the centre of the town was N. E. by N. and the S. E. point S.

The following Remarks were copied from a M. S. belonging to the late Captain A. Thomson, R. N.:—

"In going into Kingston Bay, the course is N. E. by N. You may stand with great safety within half a cable's length of each shore, and anchor abreast of the town, in from seven to fourteen fathoms water, one cable and a half from the shore—your off-shore anchor in twenty-one or twenty-three fathoms water. The east part of the bay is the clearest ground—black sandy bottom."

Ance Morline, or, Winn's Bay.—"The points of this bay lie about N. by W. and S. by E.; regular soundings across of ten and twelve fathoms, a short cable's length from the shore four and five fathoms—near the points soft sandy bottom, but rocky round the N. point."

Layow Bay.—"The points of this bay lie N.W. and S.E. twenty and twenty-five fathoms half a cable's length from the shore. Rocky round the N.W. point. The rest of the bay, black sandy bottom."

Boccamaw Bay.—"The points lie N.N.W and S.S.E. twenty-six fathoms across, half a cable's length from the shore. To the northward of the river you may anchor in seventeen fathoms, half a cable distant—your off-shore anchor lying in forty fathoms. Black sandy bottom. This river is remarked for good water."

Barawallee Bay.—"In coming into this bay from the southward, keep close in with the south shore, and anchor in nine or ten fathoms a cable and a half off shore—your off-shore anchor lying in thirty fathoms. The winds here are very baffling, which requires you to moor immediately. When we anchored here in the *Fury*, sloop of war, the Bottle and Glass Rocks bore N.N.W. $\frac{1}{2}$ W. Southernmost house in the town, E. $\frac{1}{2}$ N. and moored E.N.E. and W.S.W. There is a river runs into the bay—good water."

ST. LUCIA.

THERE are several fine bays in this Island, and, in general, the shore is bold. On the S.W. point are two very high hills in the form of two sugar loaves, whose bases are washed by the sea. To the E.S.E. from the S.W. point lies the point of View Fort, forming a small peninsula, to the westward of which is a fine open bay, well sheltered from the prevailing trade-winds. We anchored here; in a sloop of war, in five fathoms water; sandy bottom; the church bearing N. E. by N. and View Fort point S. by E.

The bays on the N.W. part of the Island are Gros Islet Bay, Choque Bay, the Careenage, and Grand Cul de Sac. Gros Islet Bay is mostly frequented by men of war, and is a most excellent anchorage. Gros Islet, or Pigeon Island (from which the bay takes its name) is a small fortified island, situated on the N.W. part of St. Lucia, from which it is separated by a shallow channel, about half a mile broad, full of rocks.

In coming into this bay from the eastward, after rounding the north point of St. Lucia at a convenient distance, steer to the westward, you soon see Pigeon Island, but do not haul up for it, until it is nearly in one with the south-western extremity of the land in sight; keep it a little open on the larboard bow, and pass to the westward of it, at a sufficient distance to work your ship, in case of being taken aback by the eddy wind. There are six and seven fathoms water close to it, and it deepens to fifteen and eighteen fathoms nearly two miles N.N.W. from Pigeon Island. In coming in, unless the wind is well to the northward of east, you will have to work up into the bay. Observe, in standing to the south shore, a rock which is always above water, (called the Barrel of Beef,) there are

only two fathoms between it and the south shore. To the eastward of this rock, and both sides of the bay, requires a berth of three-fourths of a mile; at this distance you will have four fathoms water, and then suddenly three and two fathoms. Large ships must not go higher up the bay than to bring the two high points to the north of the bay in one. These points lie to the eastward of Pigeon Island, and are easily known.

The shoal water round the bay appears white—with that appearance, and attention to the lead, there is no danger; small vessels may anchor about half a mile from the village, at the eastern part of the bay, in four fathoms—sandy bottom. Seven or eight miles from Pigeon Island, about S.S.W. is the Careenage, a most excellent harbour, but said to be unhealthy, in consequence of the land not being cleared and drained for cultivation. The entrance into the Careenage is too narrow for a large square-rigged vessel to work in, but you will get good anchorage, just outside the entrance, in ten fathoms, and the water deepens to eighteen fathoms, about a mile from it; Fort Vigie on the north side of the Careenage, bearing east, and Morne Fortunee to the southward of the Careenage, S. E. by S. Between Gros Islet Bay and the Careenage is Choque Bay, where there is a fresh water river near a small Island, but the ground is rocky and shoal near to it. From the Report of Lieutenant Odger, R. N. and communicated by him,—“The mark to keep clear of the shoal is, to keep Pigeon Island in sight to the westward of the land lying between it and Choque Bay.” Bearings, when at anchor in Gros Islet Bay—In Eight fathoms, Barrel of Beef Rock, S.W. $\frac{1}{2}$ W., Pigeon Island, N.W. by W.—In Ten fathoms, Barrel of Beef, S.W. by S. $\frac{1}{4}$ S. Pigeon Island, N. $\frac{3}{4}$ W.

MARTINIQUE.

ON the coast of this Island, nature has formed many excellent bays and secure harbours for shipping of all sizes. We are able to describe but few of them, and they are on the western coast. Those on the east side of the Island are much exposed to the prevailing trade-winds, which make it extremely dangerous for strangers getting near on a lea shore, skirted with numerous reefs and rocks, on which the heavy swell of the Atlantic Ocean incessantly breaks. Although calms are not frequent on the eastern coasts of the West India Islands, yet they sometimes occur; and every seaman knows the danger of being becalmed near the land, with a heavy sea rolling towards it, where if an anchor could even find the bottom, the cable would be cut in pieces by the sharp coral rocks, the usual bottom throughout the Caribbean Sea. All vessels, therefore, bound to the ports on the east side of Martinique, should have a person on board locally acquainted with this coast.

On the south side is St. Ann's Bay, formed by the south eastern extremity of Martinique (Point Salines), and to the S. W. by the

Diamond Rock. Point Salines is low broken land rising by degrees to the north. About a mile and a half to the southward of this point is shoal water. We have passed it about this distance off in a ship of the line. The Diamond Rock then appeared about its own breadth to the southward of the westernmost land in sight (Diamond Point). The shoal water runs a little way to the westward of Point Salines, then to the north towards the head of St. Ann's Bay; from which to the Diamond Rock the shore is skirted with reefs of coral rocks just under water. These reefs do not show themselves nor colour the water, which being deep close to them makes this place dangerous. In 1809, a line-of-battle ship landing troops at the attack of the Island, got on these rocks by anchoring too near.

Between the Diamond Rock and the mainland is a clear passage through which we have beat to windward in a large brig; but the western current setting as strong inside as outside the Diamond, renders it unnecessary to make the attempt.

To the westward of the Diamond the shore is safe, and there is good anchorage in all the small inlets between it and Fort Royal Bay. About four miles to the N. W. of the Diamond is a high bold bluff (Point Solomon). When you round this bluff, you see Fort Edward, the ruins of Fort Bourbon, and the town of Fort Royal; and a little to the west of them is Vittoria House, very conspicuous on a high point on the north side of Fort Royal Bay. The town lies in a valley, having Fort Edward to the east, the ruins of Fort Bourbon on the north, and Vittoria House on the west. This house is built of white stones, and has a battery and a flag-staff to the south of it, and a few small out-houses with red-tiled roofs to the north. The land on which these houses stand continues level a little way to the west, and then gradually slopes, until it forms a rocky point, called Point Negro, projecting a short distance into the sea. On this point are a battery and guard house, with ditch and drawbridge.

FORT ROYAL BAY.

Point Negro is the N.W. extremity of the Bay, the high bluff to the N.W. of it is the point of Morne Bœuf and Case Pilot Point. Between these last named places and Point Negro is the river and village of Case Navires. On the south side of Fort Royal Bay lies Pigeon Island, it is fortified, although commanded by the land to the southward, and distant about a musket shot from it. A little to the eastward of Pigeon Island is a low point, (Le Gros) with the ruins of a battery on it, and to the eastward of this is a high bluff, (Deadman's Point) forming the west side of the entrance into Deadman's Bay, which has Charity Island on the east side. To the N. E.

of Charity Island. appears a high hill up in the country, (Voclaine) seen from both sides of Martinique.

In going into Fort Royal Bay, you have the wind in general from the eastward, which obliges you to work up to the anchorage. There is no danger to a ship that draws only eighteen feet water, except the spit off Fort Edward, on the S.W. point of which a Buoy with a flag is placed. You must take care also to keep the trees on the esplanade between Fort Edward and the town in sight, which will prevent your getting too far up the bay, where lie several dangers.

The shoals to be avoided in larger ships, lie nearly in a line from Pigeon Island to Vittoria House. The northernmost shoal has four fathoms water on the shoalest part, and is a rocky ridge lying N.N. E. and S.S. W. The marks for it are—*Point Negro on with the outer N.W. bluff in sight, (Case Pilot Bluff,) and the out-houses with the red roofs behind Vittoria House just shut in.*

The middle shoal is more extensive, lies more in mid-channel, having very uneven ground. On the shoalest part the least water we ever got was three and a half fathoms.

The southernmost shoal is of the same description, and the passage between them is too narrow for large ships to work in, it is therefore advisable that all these shoals should be avoided by line-of-battle ships.

The best way is to work up on the north side of the bay, and anchor with Vittoria House N. $\frac{1}{2}$ W. and Fort Edward E. N. E. twenty fathoms—muddy bottom. Should you wish to go higher up the bay, do not stand further to the S. E. than to shut in half of the red roofed houses behind Vittoria House, when it will be time to tack to the N. The Guard House and Fort on Point Negro seen open to the southward of the N.W. bluff in sight, (Case Pilot,) will carry you to the N. of all the shoals lying to the S.W. of Vittoria House; with these marks the least water we had was six fathoms. There is good anchorage with the S. point of Fort Edward N. by E. $\frac{1}{2}$ E, Point Negro N.W. $\frac{1}{2}$ W. in twenty fathoms, soft muddy bottom, most excellent holding ground, and to the eastward of all the outer shoals.

The following observations were made when coming into Fort Royal Bay, on board of a line-of-battle ship that drew twenty-four feet water :—

When standing to the S. E. the ship was put in stays, when we had ten fathoms water, Pigeon Island being in one with a valley behind it bearing S. $\frac{1}{2}$ E., a plantation house just opening to the eastward of the Island, and Charity Island in one with Deadman's Point. When the ship had lost her head way, we had $\frac{1}{4}$ less 5, and the water appeared to be shoaler to the eastward, (we were now with our head N. by E. on the west side of the south shoal, and on the starboard tack, Pigeon Island as before, and Point Le Gros just touching the south side of Charity Island.) In our progress to the north, we had ten, eleven, and nineteen fathoms, and this deep water appeared to be the channel between the middle and south shoals. The mark taken in the boats for the channel between

the north and middle shoals, was the N.W. bluff in sight (Case Pilot) a little to the south of Point Negro, and the mark to go to the west of the two last mentioned shoals, are the Red Roofed Houses behind Vittoria House, half in sight. With these marks bearing about N. by E. you will see a round peaked hill, of moderate height, upon the eastern extremity of a ridge of high land some little way in the country; keeping this hill a little to the east of Vittoria House, will lead you to the east of the north and middle shoals.

Remarks made in a boat for sailing into Deadman's Bay.—When to the westward of the eastern or upper shoals, (which lie nearly in a line from Fort Edward to Point le Gros,) keep the Church of Fort Royal open to the west of Fort Edward, until a remarkable hillock in the valley is in one with the north part of Charity Island, bearing about S. E. by E. These last marks will carry you along the south side of the shoal, and are the marks for tacking when standing to the northward. When Point le Gros is in a line with Pigeon Island, you may open the hillock to the north, about half the Island's length. The leading mark is the hillock over the high north part of Charity Island.

To the N.W. of Point le Gros, the shoal water extends about two cables' length. To the east of it, and along the shore to Deadman's Point, it is deep water close to the beach. Deadman's Bay is a safe anchorage in the hurricane season, but said to be unhealthy, having much wet and marshy ground about it. The Carenage to the eastward of Fort Edward is equally bad in this respect. The passage into the Carenage ought to be buoyed before a stranger can safely attempt it. Laymington River and Cohee Bay lie on the N. E. part of Fort Royal Bay—they require pilots.

Case Navires Bay.—In running from Fort Royal to this Bay, you can pass close to Point Negro. This point being in one with Point le Gros, and abreast of the houses to the west of the river, you are in a good berth to anchor in fifteen fathoms, about one and a half cable's length from the land. The anchorage extends about a cable's length to the westward, and two to the eastward of the river. There is a flat shoal which lies off the shore to the distance of a half cable's length, nearly the whole length of the bank. This bay is a good place to water at, when the wind is not blowing on the shore; you land your casks on the west side of the river, and have to roll them about half a cable's length, and fill them in the river. At this place and other parts of the Island, and at St. Lucia, you should be careful not to walk about amongst the low swampy ground and long grass, as it is much infested with snakes, whose poisonous bite is said to be attended with instant death.—When we were at an anchor here in a sloop of war, we had ten fathoms water. Point le Gros was a little shut in with Point Negro, and the houses to west of the river in a line with the centre of the valley. Ships frequently drive off the bank into deep water, after letting go their anchor, for want of sufficient cable being ready on deck to veer away.

ST. PIERRE'S.

FROM Case Navires to St. Pierre's, the shore is very bold. You have only to look for the sudden gusts of wind from the high land, and keep far enough from the land to work your ship, should the wind come on the shore, which is often the case during the day. When you get in sight of the town of St. Pierre's, you seldom have calms—the wind generally blowing out of the bay, obliges you to turn in. It is better not to stand near the shore on either side, as the wind blows most steadily in the middle of the bay. The best anchorage is on the south side. In a ship of the line, we anchored with the following marks and bearings :—A high sugar-loaf hill a little up the country to the S. E. of the town, and detached from the ridge more inland, bearing E. S. E ; *The church, with a cupola, N. by E ; The watering place on the south side of the town close to some trees, N. B. by E.* The bank is very steep, and your anchor will not be above a cable's length from the beach, when in eighteen fathoms. When anchored here in a *sloop of war*, we had the south point of the bay S. by W., the church N. by E. in eighteen fathoms. It is necessary to moor at least with the stream or kedge. Merchant vessels lie here with their sterns fast to the shore ; but as the bay is open, it is improper to anchor here from the first full or change of the moon in the month of July, until the 22d day of October.

The fresh water here is very good, and in great plenty, and got on board very easily, either with your casks in rafts, or filled in the boats with a long hose. The town and country around have a most beautiful appearance from a vessel in the bay. The town is the largest in the Leeward Islands, and carries on a considerable trade with Europe, America, and the other Islands.

In proceeding to the N. from St. Pierre's Bay, you open a high round rock called the Pearl, having the small rocks called the Precheur near it. There is anchorage under the Pearl. Point Maucaba is a high upright point, with a small run of water trickling over the Point. E. by S. $\frac{1}{4}$ S. from Point Maucaba is the Carvel Rock. Between this rock and the N. E. point of Martinique, (Point Trinity) we had irregular soundings, from eighteen to ten fathoms, while passing through in a *sloop of war*. The current running strong over irregular ground, caused a great rippling, which at first had the appearance of breakers.

To the S. W. of the Carvel Rock lies the Bay of Trinity, and to the southward of it the Bay of Robert, where a division of the British troops landed in 1809, at the capture of the Island.

DOMINICO.

WE have seen this Island, in clear weather, sixty miles distant. The passage between it and Martinique is in general very boisterous,

and subject to heavy squalls ; and the current runs strong to the westward. The coast on the west side of the Island is clear of danger. The south point is a peninsula formed by a high rock, on which is a fort called Scott's Head ; at a distance from it to the S. E. it appears detached from the land, the Isthmus being low and narrow ; about a cable's length W. by N. from the Flag Staff on Scott's Head lies a rock, on which the sea sometimes breaks—inside of the head has the appearance of a fine bay, and we were informed that vessels are sometimes careened there.

If bound to Roseau or Woodridge Bay, pass close to Scott's Head, then steer for the town of Roseau, (which is plainly seen after rounding the Head,) letting your distance from the land be regulated according to the state of the wind, which is often variable, and comes in strong and sudden gusts. The anchorage at Roseau is to the south of the town, within half a cable's length of the beach ; it is bad ground very steep and rocky. If you are bound to Woodridge Bay, as you approach the town, you will see a low point running off from it to the S.W. near the mouth of a small rivulet, steer round this point at the distance of a cable's length, should the wind be off shore—when past the point, haul up more to the eastward, and when you get the low point before mentioned on with the outer point of Scott's Head, bearing S.S. E. and are abreast of the plantation near the centre of the bay, bearing E. $\frac{1}{2}$ N. you will have sixteen fathoms water, sandy bottom, and be about a cable's length and a half from the shore. Be careful to give the ship cable briskly when you let go the anchor, as the bank is steep. Off the N. point of the bay a reef stretches about two cable's length. Fresh water can be got in the river at this bay ; but the beach being very rocky, it is a bad watering place.

It is frequently very troublesome passing under the lee of this Island, owing to the high land interrupting the regular trade-wind, and you can seldom pass without being sometimes becalmed ; for this reason, if you are bound to Prince Rupert's Bay from the southward, it is better to pass to the eastward of the Island, if you can lie round the east point without working to windward for that purpose.

PRINCE RUPERT'S BAY.

WHEN off Cape Melville going to Prince Rupert's, steer to the westward, after rounding the Cape, you will soon open the Cabritts, two remarkable fortified hills, forming the N. side of Prince Rupert's Bay, and joined to the mainland by a low marshy isthmus, over which you will see any vessels that are lying in the N. E. part of the bay.

On the S.W. point of the bay you will also see a high round hill, called the Barber's Block, or Rollo's Head ; to the west of it is fre-

quently a calm, which you may easily avoid by tacking in time, and keeping the bay open. The wind in general blows out of the bay, and not unfrequently attended with squally weather.

The Cabritts are bold to, and when past them the bay is open to you; on the S. E. corner of this bay lies a bank with three fathoms; about two cable's length off from the beach, it extends to the N. E. corner, where, at a cable's length off, you have the same depth of water. You will observe, as you work into the bay, that you open the N. point of the Island and the Cabritts, the low isthmus appearing between. On the N. E. side of the eastern Cabritt, about half way up the hill, there is a sentry box, when it comes in sight you are on the edge of the bank in deep water,—on the low isthmus are several low arches or drains. *When the easternmost drain comes in one with the N. E. high bluff point*, seen over the isthmus, *and the Tamarind Tree* bears east*, there is good anchorage in ten fathoms water. To the N. of the tree is a two-story house; *with the drain on as before, and the N. gable-end of this house just in sight*, is the mark also for a good berth. Observe, that all to the N. of this mark is good ground, if not more than ten fathoms water. If you should remain any length of time here, you should steady your ship or moor, as the wind in light weather, frequently blows into the bay during the day.

From the first full or change of the moon in July to the 22d of October, it is recommended to moor with a bower anchor to the westward, which will be of great advantage in getting under weigh, if the wind should suddenly set into the bay during the night. We have anchored here in seven and a half fathoms water, with the N. point on with the second drain bearing N. and the Tamarind Tree E. we moored with the best bower to the westward, in thirteen fathoms water. To the N. E. of the Cabritts is an anchorage for small vessels, but we do not know to what extent.

The best watering place in Prince Rupert's Bay is near the Tamarind Tree,* you land your casks to the N. of the river, close to the two-story house, on a sandy beach. It is said the laws and custom of the place prevent the inhabitants from washing in the river above the place where you are watering, but it is necessary to enforce it. In general there is great plenty of fire-wood corded up on the beach ready for the shipping on arrival. The usual price is four dollars per cord, which ought to measure four feet high, four feet broad, and eight feet long. There are several other watering places in the bay, but this is the best for getting your casks on board, having a sandy beach, and you lie to leeward of the place.

* It is the only Tamarind Tree in the bay, close to the beach, in the centre of the town of Portsmouth.

MARIEGALANTE.

THIS Island is of moderate height, the eastern part being the highest, and appearing flat when seen from that direction. The W. side of the Island is low and marshy, and the S. and E. coasts are skirted with coral reefs sometimes covered about a mile and a half from the shore.

These reefs terminate at the S.W. extremity of the Island, where they form a harbour (Grande Bourg). Off this place we have seen several line-of-battle ships anchor, but the bank is steep, and no vessel should anchor here without a pilot, or a person having a local knowledge of the place,—a line-of-battle ship got on shore here on the point of letting go her anchor, although they had some knowledge of the situation.

From the harbour a shoal steep to, and always covered, trends away to the westward nearly two miles, and then runs to the N. and N. E. until it ends at Point Sable. To the N. of this point lies St. Louis Bay, where there is good anchorage for a fleet. The N. point of the bay is a bluff point, (Point May,) not very high, and to the eastward of it is a small Island, (Frigate Island.) When bound into St. Louis Bay from the N. E. give Frigate Island a good berth, *on account of the shoal water lying to the N.W. of it*—keep the Island shut in with the N. E. land of Mariegalante, until you open the whole of St. Louis Bay, you may then haul up for an anchorage about half way between Point Sable and the village which lies in the bight of the bay.

If from this place you are bound to Grande Bourg, give Point Sable a berth by your lead, keep Point May open to the N. of Point Sable, and when you deepen your water, haul up by your lead, which you must be careful to heave constantly on the west coast of this Island. You have then to work up to Grande Bourg, taking care not to stand to the N. of the town, when standing in shore on the starboard tack with the usual easterly trade-wind.

On the W. coast of the Island, we have anchored in what is called Englishman's Bay, Point Sable N. N. E. $\frac{1}{2}$ E. and the S.W. point in sight S. E. $\frac{1}{2}$ S. in seven and a half fathoms, sandy bottom, one mile and three-quarters off shore,—and also in St. Louis Bay, in eight fathoms, Frigate Island N. by E. a mile and a half from shore. Fresh water may be got at St. Louis Bay, from wells about a quarter of a mile from the beach, a little to the westward of the village. Near Point Sable we procured great plenty of bitter oranges and limes growing wild, and on the beach near to the same point we caught great plenty of fish with the seine.

There is a good deal of wood on this Island, particularly sandal wood. The produce of this Island consists of a superior quality of coffee, cotton, a little sugar, rum, and stock. It is considered a very unhealthy place; and many marines and seamen died here in 1808-9, when in our possession.

PETITE TERRE.

THIS small Island lies between Point Chateau (Guadaloupe) and Mariegalante, distant from the former about four or five miles. It is low and narrow, lying in a S.S. E. and N.N.W. direction. It may be said to be two Islands, as there is a passage in the middle for small boats to pass through in fine weather,—on the west side there is anchorage, where we have seen a fifty-gun ship and a frigate anchored, during the blockade of Guadaloupe. In the night this Island is very dangerous, a sloop of war was wrecked on the S. E. point, when working to windward in the night, between Mariegalante and Guadaloupe.

Being exposed to the whole range of the Atlantic to the east—the sea breaks with great violence on the eastern side. It is covered with low wood, and there are said to be a great many snakes and large guanas on it. The passage between this Island and Guadaloupe is safe and clear, we went through it in a line-of-battle ship, and passed to the eastward of Point Chateau, at the distance of half a mile,

DESEADA

Is a high Island, and in clear weather may be seen at the distance of ten leagues. It lies to the eastward of Point Chateau. The passage between them is above two gun shots across, with a sufficient depth of water for the largest ships. Off the S.W. point of Deseada the water shoals to three and four fathoms about a mile off, but in the centre of the passage there are from ten to seventeen fathoms, and the water so transparent, that you generally see the bottom. This passage is of great use to ships coming from Barbadoes, and going to Antigua, as they frequently fall to the westward; and with a northerly trade-wind, a convoy from Barbadoes can seldom weather the east point of Deseada. In time of war, the French had a battery on the west point of Deseada, but that does not hinder ships from passing through, as you may keep out of gun shot even with a large convoy. To the N. and S. of the W. point of Deseada, we have frequently seen vessels at an anchor, but we understand the bottom is very rocky, and that many anchors have been lost there. This Island is considered a very healthy place, and was occupied by the French as a convalescent post for the troops at Guadaloupe.

It is the safest land, and the best to make, if bound any where to the westward of it. As, should you not see the land before dark, you may get into the latitude of Montserrat, and have sixty miles to run during the night.

SAINTES.

THEY consist of three principal Islands. The upper, or Eastern Sainte, St. George's, or Sober Island, and the lower, or Grande Sainte, and a great number of small Islands and rocks to the southward, all clear of danger at the distance of half a mile from the shore.

The principal Islands are high, but not nearly so high as Guadeloupe, from which they are distant about six or seven miles. The three largest Islands form one of the most secure harbours in the Caribbean Islands, divided into the upper and lower anchorages, the former being the most secure, but the most difficult to enter, as in the N. E. passage lie the Whale Rock and Whale Bank, forming three separate channels, and in the W. passage, between St. George's and a reddish looking point, (Red Point,) on the Eastern Sainte, there is also a shoal with only six feet water, called the West Middle.

If bound to the Saintes, the first object is, to get to the north of them, as on that side is the best passage into the lower anchorage, and the only one into the upper for a large ship without warping. It is to be understood that you must get to the north of the Islands, by passing to the eastward of them; if you cannot do that, your best way will be to pass to the westward of the Grande, or lower Sainte, and work to windward, between Guadeloupe and the Islands. The Island of St. George's, or Sober Island, lies on the north side of the group, in a line, between the north points of the Eastern and Grande Saintes, and forms the shelter to the anchorage from the N. and N.W.

In coming from the eastward, you will first see Ance la Mari-got, a deep inlet on the north side of the eastern Sainte. Off this place is a rocky shoal, with two and a half fathoms water, about a quarter of a mile from the shore. A little farther to the westward are the N. E. passages, between the eastern Sainte and St. George's Island. Near the east side of the passage is the *Whale Rock* above water; there are four fathoms between it and the eastern Sainte; but this passage should never be attempted, as the high land is so close, that you will be becalmed or taken aback; in either case you would be in great danger of being driven on the rock, as it is shoalest on the eastern side.

N.W. by N. from the Whale Rock, about a cable's length distance, lies the Whale Bank under water, showing itself only when there is a heavy sea on; between the rock and the bank there are six fathoms water. *The leading mark* to steer through the passage, *is just to see the horizon between the Saintes*, borrowing close to the Whale Rock. If the wind be far to the southward, this is the best passage, but as this is seldom the case, the channel between the Whale Bank and St. George's being wider, and of greater depth, and not so subject to baffling winds, it is recommended in preference to ships of the line. The leading mark for this channel, *is a*

large tree on the S.W. part of the Upper Sainte, just seen to the east of St. George's, or it may be shut in a little; when the signal post on the hill of the Eastern Sainte is in one with the Whale Rock, you are inside the Whale Bank, and may then haul up. Another mark, if you are standing in from the northward, and not far enough to the east to have the tree open, is to keep the governor's house (a square two-story stone house on a rising ground,) open to the westward of a low black rocky point, a little to the west of the bluff on which there is a small battery with a flag-staff. These marks will keep you to the westward of the Whale Bank, but they are not so easily seen as the other marks. It may be observed, while the tree is shut in behind St. George's, you cannot come on the bank, but it is requisite to come as near to it as you can with safety, otherwise the wind generally blowing on St. George's Island, might head you, and oblige you to tack and stand out of the passage.

The best anchorage is in from seven to ten fathoms water, off the bold headland between the town and a deep cove to the northward. In this cove small vessels generally lie with their sterns moored to some very large trees, and their anchors placed to the westward. In the hurricane season, in a large ship, if you wish to anchor in the centre of the cove, the *Whale Rock just shut in* with the *north point of the cove*, will be far enough to the eastward to place your best bower anchor, on which you should have a cable and a half, and a whole cable on the small bower to the westward, placed as near as possible, to have the N.W. passage shut in by the extremes of the Grande Sainte and St. George's; by this means you will lie land locked, and only a little exposed to the north, and in that direction Guadaloupe is about six miles distant—you have an open hawse, and if the wind should come from the westward, you can let go your sheet anchor and have room to veer on the small bower.

If you are bound out of the Upper Sainte by the west passage, (which is the safest,) you must keep over towards Red Point on the Eastern Sainte, on purpose to avoid the West Middle. The mark to carry you to the southward of this shoal, is the governor's house (before described,) on with a similar looking building close to the beach. The mark to go to the eastward of it, is the east side of a high conical rock (to the west of Red Point, called the Organ Rock,) touching a high bluff point, (Cointe Point) seen over the low land; there is also a passage to the northward of the West Middle with seven fathoms, but very narrow. The leading mark, is the south point of Pic Rock touching the north point of the Grande Sainte.

In a small vessel there is but little occasion for these marks, as Red Point is bold to, and you may borrow towards it, leaving two-thirds of the channel to the right: steer towards the Organ Rock, which is very bold, then steer to the westward, until you get the first small hillock above Vieux Fort in Guadaloupe in sight, when you are clear of the West Middle, and in the lower anchorage, and may steer out of the N.W. passage between the Western Sainte and St. George's; or if you are bound to the southward, steer towards the S.W. passage, between the Eastern and Western Saintes, taking care

to pass to the westward of a range of islands and rocks lying to the southward of the Eastern Sainte, (called Great Key, the Sow, and Augustines,) more than a cable length and a-half, as at that distance lie several sunken rocks with only three feet water on them, and seven fathoms close to them, the west end of the Augustines bearing E. by S. $\frac{1}{4}$ S. On these rocks the Ister frigate struck in coming into the Saintes, by keeping close to the west point of the Augustines, to be able to weather the east point of the Western Sainte.

Should you be to the S. E. of the Saintes, and bound to the lower anchorage, you can run between Redondo (a high rock on the south side of the Eastern Sainte,) and Great Key, &c. and haul to the northward, through the S.W. passage into the lower anchorage. This is a bad passage with the wind far to the northward.

The lower anchorage is extensive—the Augustines shut in by the west point of the Eastern Sainte, and the signal post in sight, is a tolerably good berth. The passages between the Great Key and the Sow, and between that and the Augustines, are all very narrow and dangerous, and not to be attempted without being buoyed; as also, the passage inside the Pic Rock, on the north side of the Western Sainte, as a shoal lies to the N.W. of the Pic, near two cables' length, spreading from the west side of the Pic nearly half-way to the Grande Sainte. The shoalest part has twelve feet on it, with the Pic bearing E. S. E. In the Saintes you have various depths of water, from six to seventeen fathoms; the upper anchorage in general is fine sand, and the lower coarse sand and gravel. The passages described, we have gone through frequently in ships of various sizes, or sounded them in boats. The rocks to the west of the Augustines, are not laid down in any chart that we have seen. In 1815, a French ship was lost on the Whale Bank, and a British sloop of war got on shore and was much damaged, by attempting the passage to the eastward of the Whale Rock.

GUADALOUPE

Is a very extensive Island, and has several ports, but Point à Petre and Basseterre are the principal. The former is situated on the south side of the Island, at the entrance of the Salt River or Strait which divides the Island in two. This shallow strait admits only small vessels to communicate with the Bay Mahaut on the north side of the Island. The land to the eastward of the Strait, is low level land, and to the westward high towering mountains, and one of them on the south side, a little to the east of Basseterre, has a volcano which is frequently seen to send forth fire and smoke.

Point à Petre harbour, is formed by the (low) Isle de Cohon, and other small islets lying before the entrance into Salt River or Strait.

This harbour is very secure for large merchant vessels, but pilots are necessary for strangers. It is sometimes difficult to get out of this harbour, without a good deal of warping to windward, as the trade-wind generally blows into the passage during the day, and often no land winds for a long period.

From the east point of Guadaloupe (Point Chateau) to the Iale de Cohon, there is no danger in running along shore a mile distant from it; between the Iale de Cohon and Fort Louis, which is situated a little to the eastward of Point á Petre on a point a little higher than the adjoining coast. In the fair way of the entrance into Point á Petre, we anchored in four fathoms water; Fort Louis N. by E., Point á Petre N. by W. $\frac{1}{2}$ W., the Saintes S. $\frac{1}{2}$ W., off the shore three or four miles. This is a convenient place for ships of war to anchor, waiting a convoy coming out of the harbour. About four miles to the south of Cohon, lies a rocky shoal with two fathoms and a half water on it. We had no opportunity of examining this shoal, but it appeared, that if we had kept the Saintes and Guadaloupe open, we should have passed to the eastward of it.

The south side of Guadaloupe is in many places bounded by a coral reef at no great distance from the shore, and only requires a good look out to be avoided during the day. When you round the S.W. point of Guadaloupe, (Vieux Fort) which is bold, you will see the town of Basseterre. There is no danger in getting to the anchorage, but you often have calm, light airs, and squalls in quick succession, owing to the very high and abrupt land close to the beach; and you frequently have much bracing about before getting to the anchorage, which is close to the beach. Many vessels lie with their sterns fast on shore, and most frequently in time of war chained to it, to prevent their being cut out in the night time. Fort Matilda is situated to the south of the town. After you pass it, in coming to an anchor, you must get *Vieux Fort Point* in one *with the west point of the Saintes*, you will then be on the bank, and when the *wharf bears east*, or the street that leads up from it, is seen up and down, you are in a good berth in twenty-two fathoms water. The bank being very steep, take care that you have cable enough ready on deck to veer away briskly, to prevent driving off. If you intend to moor, shut in the Saintes by Vieux Fort point, and place your inshore anchor in fourteen fathoms, which will be about half a cable's length from the beach, and place your other anchor to the N.W. in twenty-four to thirty fathoms. All large ships ought to moor here, as the wind is constantly shifting about, and often blows fresh on the shore during the day. The watering-place is about one and a half cable's length to the south of the wharf—it is the most convenient place for getting water on board in the West Indies, you fill all your casks in the boat; but here, as at other open places, there is sometimes a heavy surf occasioned either by strong winds, or the current setting to the eastward, or both.

The west side of Guadaloupe is a bold shore, and no soundings to be got a very short distance from the beach, except in a very few spots. About ten miles to the north of Basseterre, is an inlet named

Ance la Bark, where there was formerly a strong battery. A little farther to the north, are two islands with a deep passage between them and Guadaloupe, only used by droghers or coasters. Gross Morne is a round hill, forming the N.W. point of the Island; on its south side is the inlet called *La Hayes*, which had formerly a battery on the south point. About three or four miles N.N.E. from Gross Morne is a small island within gun-shot of the shore; between this island and Gross Morne is an extensive anchorage, extending a considerable distance from the shore. N.E. from this island lies a high rock, well known by the name of *Englishman's Head*; between the island and Englishman's Head, and between both and the shore of Guadaloupe, there are only twelve feet water—in strong winds we have seen the sea breaking nearly all the way across this passage. It is necessary to notice, that in all the charts we have seen, *this island between Gross Morne and Englishman's Head, is not laid down at all*, and the passage before mentioned is laid down without danger or soundings, which might convey the idea, that there was a deep channel between them.

The north part of Guadaloupe, between Englishman's Head and Point Antigua, should be approached with great caution, as it is low land, and skirted with many low islands at a great distance from the mainland of Guadaloupe; and the danger is increased, by these islands having deep water close to them. From Englishman's Head to Point Chateau, we are not so well acquainted with, as to be able to offer a description.

ANTIGUA.

THE shores of this Island are more dangerous for a stranger to approach, than any in these seas.

The south side of the Island is the part most free from danger, and most vessels prefer keeping on that side, although bound to St. John's, the principal port of the Island, situated on the N.W. part of it.

Being to the eastward of this Island, you bring the southernmost land to bear about west, and steer towards it; you will first pass Willoughby Bay, which has reefs across the entrance, and is not much frequented except by droghers—the land in the centre of the bay is low, with an extensive beach. To the west of this, the land rises pretty high; between this land and another ridge of still greater height, (Shirley heights) is Indian Creek, with a rock about a quarter of a mile off from it. Shirley heights is a very bold looking perpendicular cliff, with deep water close to it, and without any beach; when past this place, you suddenly open English Harbour, with Freeman's Bay.

English Harbour.—If you are going into this place, keep under sail, as the current frequently runs strong to the westward. This

port being entirely allotted for the king's service by the legislature of the Island, no merchant vessels are allowed to discharge or take in a cargo here. There is anchorage off the entrance of the harbour. Fort Barclay on the N. side the entrance, N. N. E. Extreme S. point E. $\frac{1}{2}$ S. in thirteen fathoms.

If you are bound into Freeman's Bay, (which is the southernmost part of English Harbour,) it is usual to stand in for the entrance after the pilot is on board, with a press of sail braced up on the starboard tack with the easterly wind, that you may have fresh way to shoot up into the bay, as the wind generally blows out; all things being ready to shorten sail instantly,—both anchors ready, a long range on the starboard one, being the weathermost, and a short range on the small bower, to let go in case of your not getting the moorings in, and backing upon Fort Barclay. Should you be going up into the harbour, it is sometimes necessary to round in briskly your starboard head braces, haul over the starboard head sheets, take in your after sails, and so box your head from the eastward to the northward, and then steer up the harbour. When off the harbour, you will observe a large house to the N. E. of the entrance, upon a high ridge, with a signal post in front of it, and a small redoubt a little way to the N. This is the General's house, formerly called Dow's Hill. A short distance to westward of English Harbour is the entrance into Falmouth Harbour, the eastern part of it a very safe place, but of difficult access. To the W. of Falmouth Harbour is a long open beach, called Rendezvous Bay, the S.W. point of which is a round looking head, without any beach, called *Old Road Bluff*, with deep water close to it. Old Roads lies round to the W. of the Bluff,—only used by coasters.

If you are bound to the N.W. part of the Island, after passing this bluff, as the coast is dangerous, you must keep the *General's house open to the southward of Old Road Bluff*, and when Johnston's point* bears N. E. steer N.W., and when a rock appearing like a Hawk's Bill, is seen to the W. of the Five Islands, steer N. or keep away for Sandy Island, to the S. and W. of which you must give a berth of three cables' length in a ship of the line. If you wish to go to the E. of Sandy Island,† keep Johnston's Point open to the S. of the outermost Five Islands, until Mackinnon's Hill‡ is open to the N.W. of Ship's Stern.§ When the Hawk's Bill bears E. by S. you are to the N. of the nine feet bank, and may steer direct for the Ship's Stern, on which is Goat-hill Fort. All the S. shore of St. John's road is clear of danger. At the upper part of the roads stands Rat Island, on which are several high barracks and a flag-staff—to the W. of Rat Island is St. James's Fort, built of stone, facing the anchorage, having two flag-staves, one on the N. and the other on the

* The S.W. point of Antigua, having a fort on it (low), and Pelican Island very low near it.

† Sandy Island is very low, there are two or three cocoa-nut trees on it, but it cannot be seen in the night time.

‡ To the E. of an old tree called the Camel, on the N. side of St. John's Road.

§ The S.W. point of St. John's Road.

S. angle. *When working up towards St. James's Fort, take care to have your head to the southward before the north flag-staff touches or comes in one with the N. part of Rat Island.* This will keep you to the S. of the Warrington, a very dangerous shoal steep to, and generally covered. *The largest of the Five Islands open to the W. of the Hawk's Bill will take you close to the W. of the Warrington.* The Hawk's Bill shut in behind Ship's Stern, will take you to the eastward of it. Another mark to keep you to the southward of it, is to keep Drew's Hill open to the S. of Rat Island. There are many dangerous shoals on the N. side of the bay, and this island.*

St. Thomas's Mount in one with Goat-hill Fort, bearing about S. by E. will lead you to the west of the Diamond, the westernmost danger to the N. of Sandy Island.

Notwithstanding what has been said, it is strongly recommended to strangers to take a pilot, they are generally upon the look-out off Johnston's point, and if your vessel draws only twelve or thirteen feet water, they will carry you inside the reefs on the W. side of the Island, which will save a dull sailing vessel a great deal of time and trouble in beating to windward.

By observing the preceding directions, however, a stranger may safely get to the anchorage, which extends from the bar, three-fourths of a mile to the westward of Fort St. James to Sandy Island. The bar has twelve and thirteen feet water, and extends from Fort St. James to the south shore.

Many vessels have got on the Warrington, no doubt, from not making a proper allowance for going a-head in stays, this should be guarded against, and it may be observed, that the marks are far distant from you, and rather close to one another, and therefore a considerable distance makes no great alteration in their appearance. We have anchored in St. John's Roads with the following bearings:—St. James's Fort, E. S. E., the Great Sister, N. N. E., eight fathoms, sand and mud. St. James's Fort, E., Sandy Island, S. W. by W., Ship's Stern, S. E. by S., twelve fathoms, sand. St. James's Fort, E. N. E., Ship's Stern, S. W. by S., six and a-half fathoms, sandy bottom.

BERBUDA.

THE passage between this Island and Antigua is not recommended, the N. shore of the latter being dangerous, and the shore of this Island being excessively low, with extensive reefs under water nearly all round the Island, but particularly on the S. E. and N. W. part, where they extend nearly two or three leagues from the land.

* They are all correctly laid down in Columbine's Chart, as far as we have had an opportunity of ascertaining.

On making the Island from the southward, about seven or eight miles distance, you will observe, near to the S.W. point, (which is very low) a white tower, on the W. side of which are a number of cocoa-nut trees in a cluster,—keep the tower bearing N. by W. $\frac{1}{2}$ W. or N. N.W., but not more to the westward,—this will bring you from one to four miles from the S. E. reef. When the tower bears N. $\frac{1}{2}$ W., and the S.W. point, W. by N. or W. N.W., you may anchor in four and $\frac{3}{4}$ or five fathoms water, sandy bottom, about a mile and a half from the tower.

If you pass to windward of Antigua, when bound hither, or on making the Island from the S. E., you are liable to mistake the tower on the S. E. point for the one before described on the S.W. point. You will observe the one on the S. E. point is situated upon high ground, of a blackish appearance, a considerable way from the beach, whereas the one on the S.W. point is built close to the water, on a fine white sandy beach. The anchorage before described is sufficient to contain a large fleet,—wood, cattle, sheep, and other stock are to be had in abundance, but there is little or no fresh water on the Island.

A great many vessels have been lost on this Island. No vessel should cross the latitude of it in the night, unless the longitude is ascertained beyond doubt, for neither the lead nor a good look-out will prevent you going on shore, should the Island be fallen in with in the night time. On the E. and N. sides the reefs extend from two to four miles from the land, but on the W. and N.W. side you have only the trees in sight from the deck, when passing the shoals in twelve and fourteen fathoms water. H. M. ship, the Woolwich, was lost on the N. side, when coming from the northward during the night, in bad weather.

When at an anchor off the S.W. tower, the extreme point of Antigua above the horizon, from the deck, bore S. 5° E. to S. 8° W., and the centre of Nevis, S. 64 W. per compass.

REDONDO.

Redondo is a high steep rock bold to, and in the night it is useful to ascertain, by its bearing, your situation in the passage between Montserrat and Nevis.

MONTSERRAT.

THIS Island is a high saddle mountain, and can be seen a long way off in clear weather; the anchorage is on the W. side, near the S.W. point, at the town of Plymouth. Old Roads is a bay on the N.W. side of the Island, where fresh water may be procured.

The Island of Nevis

Is a mountain terminating in a high point. The shores of this Island, however, are very low, and ought to be approached with caution in the night—the distant high land causing the low land to appear farther from you than it really is. The mark to keep clear of the shoal water on the S. side of the Island, is to keep the highest hill of the Island of St. Eustatia to the S. of Brimstone Hill on St. Kitt's, (easily known by the fortification), or you may keep a mile from the land, without regarding this mark,—until you get Booby Island (in the passage between St. Kitt's and Nevis), open its own breadth to the W. of Nevis, when you may haul up and anchor with the high hill of St. Eustatia shut in behind Brimstone Hill; you will be then near the town of Charleston, in eight or nine fathoms water, sandy bottom.

Passage between Nevis and St. Kitt's.

In coming into the passage from the N. the leading mark is, to keep the *W. point of Nevis just seen to the W. of Booby Island*, which will carry you clear of the shoal water on both sides. With the leading mark on, when rock Redondo is in one with the hollow between the two highest hills in Montserrat, you have ten fathoms; when the west point of Montserrat is in one with the east point of Nevis, seven fathoms; and when Montserrat is shutting in with the east point of Nevis, six and seven fathoms, a fine sandy bottom, until you get Booby Island in one with the east point of Nevis, the former about half a cable's length distant, when you have five fathoms. From this to the Cows, (small low rocks to the south of Booby Island), you have five, four and a-half, and four fathoms water; the least depth, you will be about half a cable's length distant from them. From this situation across the passage, you have four, five, five and a-half, five, and four and a-half fathoms; the last cast a cable's length from the St. Kitt's shore, which appears to be the deepest side of the passage. There is no passage between the Cows Rocks and Nevis, except for boats; a cable's length to the south of the Cows, is four fathoms, and you carry this depth steering towards a round bluff on Nevis—near to the south of which are two windmills—keep them open to the south of the bluff, you will have four and five fathoms across the channel from Nevis to St. Kitt's, at a moderate distance from the beach.

Remarks on the shoal water lying to the northward of the east point of St. Kitt's.—The east part of St. Kitt's and the west point of Nevis in one, and Montserrat just open to the eastward of Nevis, we had six fathoms—with the latter marks on,

we never had less than four and a-half fathoms, and always deepened our water by standing to the northward. *Montserrat, if kept open to the eastward of Nevis, will carry you clear to the northward of the shoal water on the west side of the passage.*

When running through with the proper leading marks on, we observed the sea breaking on both sides of us, it was blowing very fresh from the northward, and a hollow sea.

It may be remarked, that in some maps a rocky bank of three fathoms is laid down nearly where we saw the water break. This passage is of great use to vessels bound to Basseterre from the northward, and not able to weather the east point of Nevis. In every part of the passage to the southward of Booby Island, there is excellent anchorage. We anchored here with Nag's Head, St. Kitt's, W. by N. Nevis, (N. E. point), E. in four and a half fathoms.

ST. KITT'S.

To the southward of Nag's Head, (the S. E. point of St. Kitt's), in the track from Nevis to Basseterre Roads, there is a rocky shoal, with only four fathoms on some places. This may be avoided by keeping Brimstone Hill open to the north of the high hill of St. Eustatia. The shore from Nag's Head to the town of Basseterre is free from danger, and Frigate Bay forms a fine smooth water anchorage against the prevailing trade-winds.

The anchorage at Basseterre is very extensive, but the ground in many places is rocky and irregular.

On the high land above the town of Basseterre, there is a Pollard looking large tree, which cannot be seen from the westward for a round hill of no great elevation, (called Monkey Hill). When the Pollard is just in sight to the eastward of the hill, and the low land in Frigate bay is shut in, or Nag's Head in one with the south part of the mountain of Nevis, there are ten fathoms, sandy bottom,—said to be the best ground in this extensive anchorage.

Old Roads, St. Kitt's.

THIS is the only considerable watering place we have in the Islands belonging to Great Britain, between Dominico and the Sombrero passage.

The watering place is at the east end of the village, and fitted with two projecting spouts, from which, with the addition of a hose, you are enabled to fill your casks in the boat. As the beach is

rocky, this accommodation is of great consequence, particularly when the surf is high, which is frequently the case here.

The proprietor of this watering place has had very little encouragement, to keep it in order, few vessels having frequented the place after the capture of the French Islands. Old Roads lies about five miles to the westward of Basseterre, and three miles to the eastward of Brimstone Hill. As the wind in general is very variable under the high land at this place, we have found some difficulty in getting to an anchor, unless we could make sure of fetching Stony Point—the east point of the Roads. All ships should therefore get in shore a little to the eastward of Stony Point, which will easily be known by the remains of an old fort on a low rocky point.

From this situation you may bear away, and pass Stony Point, at the distance of half a cable's length or more. Then haul up a little to the shore, and bring the extreme south point of St. Kitt's in sight in a line with the south point of Nevis. With these marks on, and the gulley or ravine a little to the west of Stony Point, seen right up and down from the ship, you will be on the anchoring ground, which is not very extensive. To the west of the gulley are the buildings of two plantations; the one nearest the sea has a tree to the west of it, and the one a little more inland, a tree to the east of it. Observe, a little to the north and east of Brimstone Hill, there are two windmills, these two in one are the long shore marks for ten, eleven, twelve, and thirteen fathoms—the first soundings when the gulley is seen up and down, and the last when a remarkable black stone on the beach is in a line with either of the two trees, or should they be removed, the black stone will be seen between the two plantation buildings. To the westward of this spot the water deepens very suddenly. Off the watering place there is a flat bank, very steep to, extending about a cable's length from the beach, with only two fathoms. Ships should not anchor to the west of the black stone on with the trees, even with land winds, for although nearer the watering place, they will not only be liable to be driven off the bank, but also, should the flaws of wind blow from the sea, which frequently happens, they will be driven on the bank, and this we have been unfortunate enough to experience. **When the flag-staff on Brimstone Hill is in one with Old Road Church,** (which is about a mile to the west of the village, and is a low building without a spire), **and the gulley up and down, you will be just on the edge of the anchoring ground, in seventeen fathoms,** when it suddenly deepens to twenty-five and forty fathoms.—Off Sandy Point there is a danger called the Sheep; we have seen the sea break on it, but we are not acquainted with the exact situation or extent of it. The western part of St. Kitt's (Mount Misery) is very high.

ST. EUSTATIA

Is about three leagues from St. Kitt's. In the passage between them the current at times runs strong to the northward—it is also much subject to calms and variable winds, owing to the high land, Mount Misery, and also Brimstone Hill, obstructing the true trade-wind. This Island can be seen a long way off, appearing, at a distance from the S.W., like two islands; it is high land, but not so high as St. Kitt's; the shores are bold all round. The town lies on the south side of the Island, and the anchorage lies off it, and extends about a mile from the beach. We have been several times lying to here, and always had regular soundings in from twelve to seventeen fathoms water. There is a small reef off the S. E. point of the bay, which, upon the whole, is very much exposed to the southerly trade-wind, and there is frequently a very heavy surf on the beach.

SABA

Is a very high Island, whose sides are almost perpendicular. We have seen it, in clear weather, from the deck of a frigate a few miles to the eastward of the Round Rock passage, Tortola, which is about eighty miles distant. There are only two landing places on the Island. On the N.W. side there is a sharp pinnacle rock detached from the Island, and appearing, at a distance, like a small vessel under sail. Between this rock and the S.W. point* is the anchorage, where we were informed the *Alfred*, 74, anchored here in fourteen fathoms, and remained several days. Near this anchorage is the landing place. The other anchoring place is on the south side, round Ladder Point, a little to the east of a yellow cliff, not very remarkable. The pilot informed us the *Morne Fortune* anchored here in seven fathoms, which must be very close to the shore, as we never could get bottom with thirty fathom line when tacking, and we had only room to wear should we have missed stays. In northerly winds, however, this is the best place to anchor, it is about a mile to the eastward of Ladder Point, near to the west of some rugged rocks, where the path-way leads to the town. This path is said to be better than the one before mentioned.

The sea round this Island, except at the anchoring places, is unfathomable by ordinary means. About three leagues to the S. S.W. of it lies Saba bank, stretching, it is said, as far to the southward as the Island of Avis, or Bird's Island. We have passed over this

* Called Ladder Point, from a steep, narrow foot-path on both sides of it leading up to the town.

bank many times, and, as far as we have observed, it is correctly laid down in the charts of the Spanish survey.

Fish, particularly the Barracouta, caught on this bank, and at St. Eustatia, are generally of a very poisonous quality, and eating them often proves fatal. We have seen them, on boiling, turn silver to a dark blue colour, similar to blued steel, but whether or not it was caused by the poisonous quality of the fish, we had no means of ascertaining.

Avis, or Bird Island.

THIS small Island lies nearly in the fair way of vessels coming from Grenada to Tortola, and it was in making this passage that we saw it—the homeward bound convoy being then in sight.

We had afterwards an opportunity of tracing the shores, and ascertaining the latitude, by two sextants and a quadrant on shore: the mean of which gave the latitude of the south point, $15^{\circ} 36' 30''$ N. The length from N. to S. is about half a mile, and the breadth from E. to W. a little more than one-eighth of a mile. The highest part of it, being a few loose stones piled up, we supposed, by some of the Turtlers, did not exceed seventeen feet above the level of the sea. A quarter of a mile from the beach there were not less than four and a half fathoms all round the Island. We had four and five fathoms at half a cable's length from the N. and S. points. The longitude we found to be $63^{\circ} 46'$ W. by a well-regulated chronometer, which had agreed with the longitude of the Island of Saba the day before.

In the chart of the Spanish survey, it is placed six miles too far north. To the E. S. E. three miles distant from the Island, we had soundings in fourteen fathoms, shoaling as we approached it,—a mile to the westward of the Island we could not get bottom. The number of sea fowl on this Island is truly astonishing.

We have been particular in noticing this small spot, as several people doubt its existence altogether, and every book and chart that we have seen place it in as many different situations. Indeed some have described it as six miles long from E. to W. and so unlike the present Island, that one might hazard a belief that the bank to the eastward had at one time formed the foundation of the Island, since washed away by the perpetual rolling of the sea from the eastward—the trade-wind always blowing from that direction.

ST. BARTHOLOMEW

Is an Island that may be seen about nine leagues off. At that distance from the southward or northward it appears in several hills.

but from the eastward it makes like a round hill. It is surrounded by many rocky islets, particularly to the N.W. between it and St. Martin's, which renders that passage dangerous in the night.

The islets on the south side, near to the west of a high rocky peninsula, form the chief port. Into this harbour we entered by the second channel from the east; there is no danger that we have heard of, but what is laid down in the sketch of the place.

The anchorage is very extensive, and you may fetch it by going to the westward of the round rock, called the Sugar Loaf, but the further you lie to the east, the less you will be exposed to the swell. The south shore of the Island to the eastward of the port is bold; there are a few low rocks to the southward of the east point of the Island which are easily avoided in day light.

We anchored here with the town S. E., the Islets S., Sugar Loaf Rock S.W. by W. In the latitude of $18^{\circ} 2' N.$ to the eastward of this Island, a single rock is said to have been seen by an American. The southernmost part of the Island in sight bore W. S.W. which will make the rock about six or seven leagues from the land. This rock, however, has never been seen since, although a search was made for it, for some time, by a sloop of war.

ST. MARTIN'S

Is a very high Island, and may be seen ten or twelve leagues distant. When you are to the northward of it, you will see it long before you can distinguish the low islands of Anguilla, Dog and Prickly Pear, which renders these latter islands very dangerous in the night.

There are two bays in St. Martin's—Grande Bay on the south side, belonging to the Dutch, and Marigot on the north, belonging to the French. The inner part of Grande Bay is very shoal, and only fit for small vessels, but between Fort Amsterdam, on the west point and the east point of the bay, you may anchor in seven, eight, and nine fathoms water, sandy bottom. We anchored in seven fathoms, with the town bearing north, and the High Fort, or Fort Shipley, N.W. $\frac{1}{2}$ W. Nearly S.W. $\frac{1}{2}$ W. from the east point of Grande Bay, and S. $\frac{1}{2}$ W. from Fort Amsterdam, about two miles distant, lies a dangerous shoal, called Man-of-War Rock, on which a British Frigate was lost. The shoal is very narrow, lying north and south, with only eight feet water, having six fathoms within a few feet to the west of the shoalest part. Upon a conical shaped hill above Fort Amsterdam, there is a fort with a flag-staff, called Fort Shipley. *Keep this flag-staff half way between the flag-staff and barracks on Fort Amsterdam, it will carry you on the rock.* If you wish to pass to the south of the rock, do not open the horizon between the Island of St. Bartholomew and the high round key, called the Sugar Loaf, to the southward of it. *In standing in from*

the southward for Grande Bay, keep Fort Shipley open on either side of the bluff on which Fort Amsterdam stands.

These remarks were made in a boat sent to examine it. From Grande Bay to the west point of the Island the shore is bold, with several little sandy coves. The west point is low, off it extends a shoal. We have passed it in five fathoms, three-fourths of a mile from the beach. To the northward of the west point it appears to extend farther from the shore, and as far to the eastward as a high rocky bluff. Marigot Bay is extensive, but we never had an opportunity of exploring it. We have stood into four fathoms, and were then about a mile from the shore, and there did not appear to be any danger—the water was smooth, and remarkably clear. Off the N. E. point of St. Martin's is a small island, and a little to the north of the passage between them, is a rock, which shows itself when there is any swell—by keeping to the northward of the line of coast of St. Martin's, or to keep the bluff to the westward of Marigot open to the northward of the high N. E. point, you will avoid it. The passage between St. Martin's and Anguilla is every where safe, with soundings pretty regular from eighteen to eleven fathoms.

Anguilla, Dog and Prickly Pear Islands.

ANGUILLA is a long, low, narrow island, bounded partly to the northward and westward by a very dangerous reef. It commences at the small island of Prickly Pear, and runs in an easterly direction to the north part of Anguilla, and also in a south-easterly direction towards Sandy Island, leaving a clear passage between the latter Island and Anguilla. There are soundings on the north part of the reef in twenty fathoms, but so near as not to be of any service in warning a ship of the danger in the night time, or in thick weather. The soundings to the westward of the reef between the Prickly Pear Island and the west point of Anguilla are very regular, decreasing in depth very little, until you are amongst the rocks. Therefore, although the soundings will answer the purpose of guiding you to an anchor at this place, yet they ought never to be depended on for navigating your ship during the night, or in dark weather. To the eastward of Anguilla is a small island; between them there is a narrow channel, through which it is said a British Frigate has passed. To the N. E. of Anguilla there is a bank called the Grouper Bank, from the number of that fish caught on it.

The south coast of Anguilla is bold, and the west point may be passed at the distance of a cable's length. At this point the land turns quickly to the eastward, and the shore is perfectly safe, having several sandy bays or coves, off which there is good anchorage.

Sandy Island, already mentioned, has a reef which stretches to

the westward nearly a mile,—the island kept open to the north of Anguilla, will keep you clear to the south of it.

The passage leading up to the anchorage off the town, is to the south of Sandy Island. There is also another passage through the reef to the N. E.; but it requires a person locally acquainted with the island at that place, to be able to get a pilot on board in safety. Between Sandy Island and Anguilla, a stranger may anchor in great safety in nine or ten fathoms, with the S.W. point of Anguilla S.W. by S., Sandy Island, N. E., Dog Island, N.W. $\frac{1}{2}$ W. sandy bottom, and about a mile from the Anguilla shore.

Dog Island and Prickly Pear.

PRICKLY Pear bears from the west point of Anguilla, N. by W. $\frac{1}{4}$ W. and Dog Island from Prickly Pear, W. $\frac{1}{2}$ N. distant one mile and a half, which forms what is called the *Dog and Prickly Pear Passage*. From these Islands to the west point of Anguilla, you have regular soundings from ten to fifteen fathoms, but the soundings do not extend much to the westward of Dog Island. On the north side of Dog Island are a few rocky keys close to it, and on the west side is a low flat key, sometimes called Flat Key, with a shallow passage between it and Dog Island, having a sunken rock in mid-channel, about S. E. by S. a cable's length from Flat Key. The west side of this key is bold to, and you may pass it at the distance of a cable's length, or less if necessary.

In the Dog and Prickly Pear passage there are from ten to thirteen fathoms; Dog Island is the largest and highest of the two, yet it cannot be seen above ten or twelve miles distant. We have anchored to the southward of Dog Island frequently, with the Flat Key N.W. $\frac{1}{2}$ W., extremes of Dog Island from N. E. to N. by W. $\frac{1}{2}$ W. in eleven fathoms,—on a bottom of a white sort of clay.

SOMBRERO.

THE Island of Sombrero lies N. by W. $\frac{1}{4}$ W. distant twenty-two miles from Dog Island, it is a low, flat barren rock, bold to, all round, and clear of danger. We have sounded at the distance of two cables' length from the east and west sides, in sixteen fathoms water. The island lies nearly in a N. N.W. and S. S. E. direction, and is about three-fourths of a mile long, and one-fourth of a mile broad.

From this Island to the south point of the Horse Shoe Reef, Anegada lies W. $\frac{1}{4}$ S. distant twelve or thirteen leagues; but here we may observe the current sets strong to the N.W. which no doubt is one reason why these places are laid down within seven leagues of each other in the old charts.

Anegada Island and Reef.

THESE ought not to be approached in the night time, as they cannot be seen, and have no soundings sufficiently distant to give you timely warning to avoid them. There is good anchorage to the westward of the reef; we have anchored here to assist a vessel in distress; the east point of Anegada bearing N. $\frac{1}{2}$ E., the mountain of Virgin Gorda S.W. by S. in seven fathoms water, sandy bottom. A great many vessels have been lost on this Island and Reef. The mountain of Virgin Gorda will always be in sight during the day, if the weather is at all clear, before you are in danger. In approaching the reef from the southward, we sounded in thirteen fathoms, and tacked, the south point of the breakers on the reef being in sight about two miles distant, and bearing north,—the mountain of Virgin Gorda, W. by S. $\frac{1}{4}$ S. A vessel, therefore, having the mountain at west, may run towards it in that direction, and pass at a sufficient distance to southward of the reef. The east point of Virgin Gorda is very bold, so that in running through between Virgin Gorda and the reef, you may come as near as a mile to the point if necessary, and have only to make sure that you are to the westward of the reef, which lies about seven miles to the eastward of Virgin Gorda. And you have also to avoid a sunken rock about a mile to the eastward of Nicker Island, and when past that, you may steer away N. N.W. or more westerly from the mountain of Virgin Gorda, which will carry you clear to the west of Anegada. The north coast of Anegada is very safe in day light; you may run along shore at about two miles distant. You may pass the west point at about a mile distant, but be careful not to haul up to the eastward, as on the south side of Anegada the water is very shoal, and numerous rocks just under the surface, with five and six fathoms close to them, lying nearly four miles from the beach. See also observations on making the land.

VIRGIN GORDA.

THIS Island (except Anegada) is the most easterly of the Virgin Islands, and it is frequently the land made by vessels bound to Tortola. Although very necessary to keep to windward in these seas, we should take care, in avoiding one evil, we do not get into a greater danger; thus it sometimes happens here, that vessels coming from the S. E. or St. Kitt's, &c. steer a course which brings them a considerable way to windward, that they may have room to drift sufficient to bring to and wait for day light. Instances have been known of vessels bound into the Round Rock passage, Tortola, having been so unfortunate as to run on shore on the Anegada reef,—probably owing to their lying to with their heads to the northward, and the current also setting that way.

NORTH SOUND.

THIS sound is situated on the north side of Virgin Gorda, it is a most excellent harbour, and capable of containing several hundred sail of large vessels. To sail into this sound, coming from the eastward, you pass Nicker Island, so as to avoid the sunken rock to the eastward of it; when Musquito Island is open to the north of Nicker, you are clear of that danger, which at most times you may see by the water breaking on it. When past this rock, you steer about S.W. by W. for the N.W. part of Nicker, under which there is good anchorage in ten and eleven fathoms, fine sandy bottom, and smooth water, with the prevailing trade-wind; the west point of Prickly Pear Island, which you next steer for, forms the north side of the sound, will be about S.W. by S. from you—look out for the reef lying off the west point of Prickly Pear. The entrance is between this reef and one to the S.W. which stretches to the eastward from Musquito Island, on which reef there is a high black rock. The mark to keep to the westward of the reef running off Prickly Pear Island, is to keep two trees on the top of the ridge to the southward on Virgin Gorda just in sight to the eastward of a bluff situated on the south side of the sound. Although this mark is not very distinct, yet it may be of use. When in the fair channel you will see *the low neck of land* in the upper or eastern part of the sound *just in sight to the southward of Prickly Pear*, you must then haul round up to the eastward, your sails being previously trimmed for that purpose. By this method, having fresh way on your vessel, you will shoot to the eastward clear of the S.W. reef, although the wind should be a little to the southward of east.

A stranger, bound into this sound, ought to keep to windward, until a boat or buoy is placed on the S.W. point of Prickly Pear reef, and also on the eastern part of the reef to the southward, which runs off from Musquito Island. In the channel into the sound there are six and seven fathoms, and from eight to fourteen in the sound. There is a rock near the S.E. corner of the sound, we understand it is at no great distance from the shore. Between Musquito Island and Virgin Gorda there are only ten and twelve feet water. This port or sound is worthy the attention of a great maritime power, and if we do not make use of it ourselves, we should take care that it does not fall into the hands of our rivals.

VIRGIN ISLANDS.

BETWEEN Virgin Gorda and Tortola lie a number of small islands and keys.

The Little Dog passage is mostly used in coming in, the channel lying in a S.W. by S. and N. E. by N. direction, renders

it, with the usual trade-wind, rather difficult for a vessel to go out to the northward, but it is very safe with a leading wind. This passage lies between the Dog Islands and Virgin Gorda. In coming in after passing the North Sound, if you wish to go through the Little Dog passage, you haul up close along the Virgin Gorda shore. The first point you come to on Virgin Gorda is low and rocky, and has deep water close to it, but at the next point to the southward, (with a fine sandy bay between them) there is a sunken rock nearly a cable's length off, on which the sea sometimes breaks. To the south of this point is the valley, where a few small sloops find shelter inside the reef—here are also a few small houses called Spanish Town, where formerly the courts of law were held, but they have been long ago removed to Rode, or Road Town, Tortola. On the next point to the south, are the ruins of an old fort and a flag-staff. Round this point the ground is rocky to the distance of two cable's length, the only spot that we know of where it is improper to anchor to the south of Dog Island, and this remark is applicable to any part of the great bay to the eastward of a line north of Salt Island. A little way to the south of the Fort point is a spring of fresh water, issuing from under one of those huge detached rocks, with which this part of the Island of Virgin Gorda is nearly covered. The Little Dog Islands lie at the north entrance of the passage, they are three small rocks lying in the form of a triangle, clear all round. The Great Dogs are to the southward, and in the passage between them is a sunken rock lying about a cable's length from the N. E. point of the Great Dogs. This rock is generally seen by the water breaking on it.

The Great Dog, or Scrub Island Passage

HAS the Dog Islands to the east, and the Island of Scrub to the west. The best way to go through it, is to keep near the Great Dog Islands, the winds being generally from the eastward. In this passage is said to be a sunken rock, with eighteen feet on it; but although we spent a whole day in searching for it, yet we could never find less than five fathoms water, and these soundings were farther to the westward than any ship would get with the usual trade-wind in going out or coming in through this passage. The marks, however, are said to be the *points of Scrub and Salt Islands open*, and the *Great Dog Island bearing east*. The soundings in the Great and Little Dog passage are from ten to fifteen fathoms.

We have anchored off the valley, or Spanish Town, Virgin Gorda, in ten fathoms, good ground, with the Round Rock S. $\frac{1}{2}$ E. Mountain of Virgin Gorda, N. E.

Old Jerusalem, or Fallen City.

Off the S.W. point of Virgin Gorda is a rocky islet, which, from its appearing like old ruins, is called Old Jerusalem, or Fallen City. Between this islet and Virgin Gorda, there is a narrow dangerous passage, with four and six fathoms water, but unless the sunken rocks lying nearly in the middle of the passage are buoyed, this channel should not be attempted; the deepest water, however, is close to the rocky islet. Between the rocky islet and the Round Rock there is no passage except for boats.

Round Rock Passage.

SHIPS, in coming in, must be careful to pass to the *westward of the Round Rock*, which is easily known from its round appearance, and having a still higher and larger island to the westward, called Ginger Island. *Between them is the Round Rock passage*, about a quarter of a mile broad, and so short, that a vessel, being a little to the north, following you, if not keeping a good look out, will not be able to see on which side of the rock you have gone; and this, we suppose, was the cause of a ship, in 1807, under convoy of a frigate, being lost, in attempting to pass to the eastward of the Round Rock.

This passage is the best to go into the bay of Sir Francis Drake, (the name of the waters within the Virgin Islands), because in it you are never liable to be becalmed, and you can generally lie through with the prevailing trade-wind. In this passage there are soundings in ten, twelve, fifteen, and twenty fathoms, rocky bottom. When inside the Round Rock, the town of Tortola is west northerly nine or ten miles.

The next island to the west of Ginger Island is *Cooper's Island*, in the passage between them is a high rock, called the Carvel, and off the N. E. point of Cooper's Island, there are a few rocks just awash. This passage is not recommended, being subject to calms, baffling winds, and currents.

Salt Island is the *third island to the west of the Round Rock*. Between Cooper's Island and Salt Island there is no safe passage for any vessel.

Salt Island Passage.

THIS passage lies between Salt Island to the east, and Peter's Island and the Dead Chest to the west. It is the best for going into Tor-

tola, should you fall to leeward of the Round Rock passage, and it is the best passage for large ships going out of Tortola roads, bound to windward; it is nearly two miles wide, but is much contracted by a sunken rock lying two-thirds of the channel over towards Dead Chest, and on this rock several vessels have struck. The marks for it are the *Carvel Rock* near to the west side of Cooper's Island, *on with the north point of Salt Island*, which terminates in a pointed rock, or, *the north point of Peter's Island just shut in with the north part of the high land of the Dead Chest*. The north point of Cooper's Island on with the south slope of the high land of Virgin Gorda, will be to the southward of the shoal. The marks to know when you are to the east or west of the shoal are very indifferent, and *the only way for strangers to do is to keep close to Salt Island*, which is very bold close to the shore, which is not the case with the east side of the Dead Chest.

Dead Chest Passage.

DEAD Chest, or Deadman Chest, is a small island, or rather rock. The passage between it and the N. E. point of Peter's Island is very narrow, but there is plenty of water for the largest vessels, and perfectly safe, with a breeze from the usual eastern quarter; and it may be of use in going into Tortola, if you cannot fetch close under Salt Island, (and so be in danger of getting on the sunken rock), for it is a safer passage for a ship than the one to the westward of the sunken rock, that is, between the rock and Dead Chest. This passage requires no particular description, you have only to open it and steer through in mid-channel. It may be noticed, however, that it is a bad passage for going out, as the current is strong at times, and the bottom rocky, which render anchoring unsafe, and the wind in general is scant, if not against you. A man-of-war schooner, many years ago, we understand, was lost in making the attempt.

Norman's Island Passage.

THIS passage between Peter's Island and Norman's Island, is to the west of the rock called Peter's Island Carvel. The fishermen say there is a sunken rock to the west of this Carvel rock, but during the survey of Mr. Lockwood, it could not be discovered, and therefore is omitted in his chart of these Islands. To go through the passage, give the Carvel a good berth. To the north of it, Peter's Island forms a small bay, with tolerable anchorage. To the west of the passage lies Pelican Key, it has the form of a bell, to the westward of which lie the rocks called the Indians, and by some the Lug-

ger rocks, from their appearing at a distance like one. Between the Indians and Pelican Key, there are only nine feet water, as we were informed by one who wished to pass that way, and struck on the rocks, but got over them. Between the Pelican and Norman's Island, and also Peter's Island, the passage is clear. In Norman's Island there is a good bay, where we have frequently seen vessels lying.

Flanagan Key, or Witch Island

LIES between Norman's Island and the Island of St. John's, and it gives the name to the passage between it and St. John's; and the passage between the Flanagan and Norman's Island, is generally called the Santa Monica passage, and sometimes the Lugger or Indian passage.

Santa Monica Rock and Passage.

THIS rock has been so called, from a frigate of that name having struck on it, and been forced to run on the shore at Crawl Bay to prevent sinking. It lies about S. S. W. nearly from the S. W. point of Norman's Island, distant about one mile. The marks for it are, *the Carvel Rock between Peter and Norman's Island, just open to the south of Norman's Island*, or the two extreme southern points of Norman and Peter's Island in one; when in this direction, the Carvel will be open beyond the points, and you can just see between them, the opening being very small. From the rock the points bear nearly E. N. E. and *Pelican Key* about N. by E. $\frac{1}{2}$ E. will then be in a line with the hollow on the north side of the Saw-pit Hill.* *The pinnacle of Saw-pit Hill and Pelican Key in one, will carry you pretty close to the N. W. of the rock.*

On the shoalest part of the rock we had only nine feet, and it had the appearance of consisting of three heads of rocks, with deeper water between them, but the night setting in, we had not time to examine the nature of the rock very minutely. There is a good passage between the rock and the S. W. point of Norman's Island, which you may safely pass at half a cable's length distance; with a northerly trade wind, this will save you a good many short tacks in the narrowest part of the Santa Monica passage, the other part of the passage is clear at working distance from the shore. The S. W. point of the Island of St. John's, is called *Ramhead*, between it and

* Saw-pit Hill lies to the eastward of the town and harbour of Tortola, and is easily known from the southward, the west side of it appearing something like the teeth of a saw, and being the highest hill in Tortola.

the S. E. point of the same Island, lies Buck Key†, and north from it is Crawl or Coral Bay, said to be a very safe harbour, but not very easy to get out of it in a square-rigged vessel; the way to go in, is between Buck Key, and the S. E. point of St. John's.

Flanagan Passage

LIES between Flanagan Key and the Island of St. John's. Between Buck Key and the Ramhead, lies a sunken rock, which sometimes shows itself in strong winds. The marks for this rock are, *Frenchman's Key* (which bears nearly W. S. W. ten miles distant from the Ramhead,) *opening to the south of the Ramhead, and a house on a projecting point of land in Crawl Bay, over the west point of Buck Key.*

Vessels coming out by this passage from Tortola, should keep to the southward until they open Frenchman's Key, at least its own breadth to the southward of Ramhead, and there is no other danger at half a cable's length from the shore.

Both the Flanagan and Santa Monica passages, are much used by convoys and vessels bound to St. Thomas', St. Croix, &c.

Passage between St. John's Island and Tortola.

THIS is the usual passage for the convoys and vessels bound to the northward. From Tortola Roads there is no danger but what is visible; you have generally a free wind until you pass three small keys on your right, the last being the largest and highest, is called Thatch Key. About half-way down to Thatch Key, is a small bay on your left hand side, and a key lying off it, called Water Melon Key, a little to the eastward of which, is a house finely situated on a projecting point of land. In this little bay, and off the Water Melon Key, is very good anchorage in from ten to sixteen fathoms.

Jos Van Dyke's Passage.

IN going through the passage, after you pass Thatch Key, you haul round up N. $\frac{3}{4}$ W. or more easterly if necessary, for the west point of the Island of *Jos Van Dyke's*; this point is hold to, and you ought to pass close to it, particularly with a northerly trade wind, to prevent your falling to the westward upon the Island of Tobago, a mile

+ Buck Key, instead of Buck Island, to distinguish it from the well-known Island of the same name, off St. Thomas's.

to the eastward of which, lies a sunken rock, on which a British vessel was lost in 1802. Whenever you open the Island of Guana to the northward of the north part of Jos Van Dyke, bearing from each other about E. $\frac{1}{2}$ N. you are clear to the north of the sunken rock lying off the east end of Tobago.

It may be remarked that here, during the middle of the day, the wind often blows more northerly than in the evening and morning.

With a convoy where the vessels are crowding together, should the wind be so that they cannot fetch through the passage, it will be better to bear up and pass to the westward of *Little Tobago*, at the distance of a mile or more, as there are some sunken rocks off it, about S.W. and a few rocks to the southward of Tobago just a-wash.

The passage between St. John's and St. Thomas' we are not so perfectly acquainted with, as to be able to describe it, indeed, there is such a number of rocks and keys, that to attempt a description, might only lead a stranger into danger.

Anchoring Places.—Tortola Harbour.

HAVING described the passages for shipping going or coming into the Great Bay of Tortola, or Sir Francis Drake, we may say something of the various anchoring places, and the harbour of Tortola.

It has already been remarked, that all the ground to the eastward of Salt Island bearing north, is good and clear of coral banks; to the westward of this bearing there are a great many coral banks, which make the ground so very uneven, that merely in sounding you will often lose your lead, by getting entangled amongst the rocks. To avoid these rocky banks, many vessels anchor at Peter's Island, where there are two small coves, but these are not extensive enough for a whole convoy in time of war, and in peace few vessels can have occasion to anchor hereabout unless in distress, and then it will be their object of course to go where they can get supplies, and that must be at Tortola town, off which there is a small spot where two or three vessels may find good ground free from coral rocks. The marks for this spot are, the **S. E. point of Beef Island just shut in behind the south point of Tortola, E. by N. $\frac{1}{2}$ N.** and President Hetherington's house, seen on high land over the east part of Tortola harbour, **on with an old dismantled fort on Hodge's point, N. by W. $\frac{1}{2}$ W.** here are from thirteen to fifteen fathoms, good ground.

Road Reef, or Denmark Bank, on which there are only ten feet water on some parts, will be only about one and a half cable's length from you to the W.N.W. From this anchorage, Ginger and Cooper's Island appear just open of each other, and

Saw-pit Hill appears very plain to the N. E. and the east part of the Dry Reef, on the west side of the entrance into Tortola harbour, will be nearly in a line between you and the centre of the town. The Dry Reef shelters Tortola harbour from the southerly winds, and the Denmark Bank lies about a cable's length distance to the south of the Dry Reef, and between them is a narrow passage with deep water. In weighing from this anchorage with a southerly wind, attention must be paid to avoid the bank. *To keep clear of it, Saw-pit Hill must be kept to the south of the south part of Fish Bay point,* until the high hill on Beef Island is seen over the south point of Tortola*, when you may keep away in that line of bearing if necessary. The marks for the west side of the Denmark Bank are, a large house in Chico Bay on with another house half-way up a round cultivated hill, the town of Tortola will be then shut in behind the fort on the west side of Tortola harbour. To go to the eastward of the bank, you *keep the round rock shut in behind the south part of Tortola*, and this mark answers also for going into the harbour, *until you are past the Dry Reef*, when you may anchor as near the town as the draught of your ship will admit; the farther to the west, the more you are sheltered from southerly winds, but then the water is shoalest. The ground in the harbour is much encumbered with coral rocks and lost anchors. It is much safer, however, during the hurricane season, than at an anchor outside the reefs, and by warping up to the east land or Fish Bay point, you can generally fetch out in the morning, at which time there is frequently a light air from the land.

Chico Bay Watering-place lies about two and a half miles to the westward of Tortola harbour, it is sheltered from the easterly winds by a small island connected at the north end to the mainland by a coral reef. The bay has only from four to six feet water for small shallows or launches, but there is a good spring of fresh water in the low ground near to the S.W. of the plantation-house. In this place a well has been made, and a pump erected, by which the water is raised, and conducted in a spout into the bay, where the water is deep enough to permit a loaded boat to float; with this convenience, we got forty tons a-day, and there was no want of water. This being the best watering-place about the island, it is worthy and capable of being much improved. There is good anchorage off the south point of Chico Island, in ten, twelve, and fourteen fathoms water; there is, however, a small rocky bank about S. $\frac{1}{2}$ W. from the west point of the Island, about one mile distant, and on this we had only five and seven fathoms; but the situation or extent was not exactly ascertained. Excepting this bank, all to the eastward, for a considerable distance, appeared clear good ground, and better than any we found in Tortola Bay, to the

* Fish Bay point, or east point of Tortola Harbour, lies to the south of Hodge's point with the old fort on it.

westward of Salt Island. The water shoals from ten to three fathoms about a cable's length off from Chico Island. We have frequently watered here, and anchored so that the boats when loaded could sail free to the ship with the usual trade-wind.

ST. THOMAS'.

IN running to this Island from the eastward or Tortola, you may pass on either side of Frenchman's Key. N. N. W. $\frac{1}{2}$ W. from it lies Buck Island; and in the same direction is the Harbour of St. Thomas'. Between Frenchman's Key and Buck Island there is no danger but what is visible; but between *Buck Island and St. Thomas'* there is a dangerous rock, called the *Packet Rock*, from a packet having been lost on it some years ago. The marks to keep clear of this rock when coming from the eastward, **is a remarkable tree open to the southward of the S. E. point of St. Thomas', bearing N. E. by E. $\frac{1}{2}$ E. until a windmill (Content) is seen open to the southward of the high Fort, bearing N.W. by W. on the west side of the entrance into St. Thomas' Harbour.** The sea at times breaks on the Packet Rock, on which there are only six feet water, and seven fathoms at a short distance round it. There is a passage between this rock and St. Thomas'; but it should never be attempted, as the wind close in shore is often very variable, and there is foul ground to the westward of the Packet Rock, lying off a small rocky island near the land. *Between the Packet Rock and Buck Island is a good passage, which may be taken by strangers, although they do not discover the marks to keep clear of the Packet Rock. In this case they have only to keep within a cable's length and a half of Buck Island, and not to haul up for the harbour until they see the low Fort on the west side of the entrance into the harbour, open to the westward of the Fort, and point on the east side of the entrance; you may then steer for the Harbour; in this direction, a rocky shoal, just a wash, with deep water close to, called the Triangle, will be nearly a-head; pass to the S.W. of it, and run to the Harbour or anchor outside: there is no danger but what is visible.*

ST. THOMAS' HARBOUR.

A LITTLE within the entrance, on the east side, there are a few rocks above water (Rupert Rocks); pass to the westward of them; the harbour then becomes wider, and you may anchor in what depth you please, four and five fathoms being the general depth in the centre of the harbour. But there is a cove on the west side used as a careening place, where a few line-of-battle ships may lie in perfect security, moored head and stern. Between the Fort on the east side

of the entrance and Rupert's rocks, in a sandy bay, there is said to be a sunken rock, and by keeping the west point of Buck Island in sight you will avoid it.

In getting to sea out of the harbour, it is sometimes necessary to warp out as far as Rupert's Rocks; but this may often be avoided by sailing at break of day, as the wind is always most northerly at that time.

The anchorage between Buck Island and the entrance of St. Thomas' harbour is very extensive, and there are no dangers but what can be seen (except the Packet Rock). The safest way for strangers to approach this anchorage is to pass between Frenchman's Key and Buck Island; to these Islands you may pass as close as you think proper, as they are bold to. When past Buck Island you steer for the entrance of St. Thomas' harbour, N. N. W. and anchor at any distance from the shore, in from fifteen to seven fathoms, sandy bottom; the latter depth is between the east and west points of the entrance into the harbour. In the night time give the west point of Buck Island a good berth, as it is low, and not easily seen under the high land of St. Thomas'. The Triangles must likewise in the night time be carefully avoided; they have nine and ten fathoms very close to them. The following are some of the marks and bearings we have had when anchored off St. Thomas'. In seven fathoms, sandy bottom, S. E. point of Water Island, S. W. by W.; Fort on the east side of the entrance, E. S. E. one-fourth of a mile; Low Fort on the west side of the entrance, N. W. by N. In eight fathoms, white sand; Low Fort on the west side, N. by W.; and Blackbeard's Tower in a line with the Rupert Rocks. In thirteen fathoms, sand; Town of St. Thomas', N. N. W. extremes of Buck Island, from S. E. $\frac{1}{2}$ S. to S. E. by E.

Water Island and Passage.

THE land to the west of the anchorage off St. Thomas' is called Water Island, separated from the main land of St. Thomas' by a narrow passage, in which you have five, and four and half, fathoms water.

Should it happen that a vessel gets so far to leeward as not to be able to weather the S. E. point of Water Island, which is sometimes the case when large convoys are anchored here, this passage may be of use. When Content windmill bears N. W. it will be seen to the south of the high Fort, on a high round hill, on the west side of the entrance into St. Thomas' harbour. The passage will then be open, and you may steer boldly towards the windmill, borrowing on the starboard shore, to avoid a shoal lying off the N. E. point of Water Island. To avoid this shoal, *keep the windmill in a line with the east part of some tall growing trees*, bearing N. 48° W. Steering on in this direction, you see the passage open to the westward, and the Island of Little Saba appearing likewise to the west: *whenever Little*

Saba is half shut in by the land, on the north side of the passage, and bearing S. 60° W. you haul towards it; and when nearly abreast of the first estate on the south side of the passage, you are clear of the shoal off Water Island, and in the fair way to steer into Black-point Bay, taking care to avoid the Netley rock, for which see the marks afterwards noted.

In the passage just now described, the anchorage is every where good, and the western part, after passing the shoal water off Water Island, is often used as a roadstead, remarkable for the smoothness of the water, the moderate depth, and the clear ground.

Black-point Bay and Watering Place.

THE anchorage at Black-point Bay is the best any where about this Island for a fleet or convoy, being much better sheltered by the keys and rocks to the south from the sea breezes, than the anchorage off the harbour of St. Thomas'. Coming into this bay may appear intricate to strangers, but they have only to steer for the Island of Little Saba, and pass to the S.W. of it, at about one mile distant, as a few rocks lie off it, visible in day light, and work up between the Keys and Little Saba to the south, and the land of St. Thomas' to the north, which last is a bold shore, and clear of danger. *Black point* is easily known by its appearing black, and lying to the east of a rocky bay, near which is a large sugar work, store-house, &c. and to the west of a long white sandy bay, having a small rock above water near the centre of the bay, close to the shore.

The watering place is a very little to the west of Black-point, where the shore forms a small dark sandy cove for boats; and when a ship is anchored in a good station for watering, the cove will be just seen to the westward of Black-point from her.

In the wet season the supply of water will be about 40 tons a-day, but in dry weather not more than 10. An inhabitant informed us, he had only known it to be once dry in the course of forty years, when every spring in the Island was in a similar state. *The marks for anchoring near the watering place*, in from fifteen to thirteen fathoms fine sand and clay, are Green or Thomas' Key, about S. $\frac{1}{2}$ W. open to the east of Little Saba; and a house on Water Island, about E. by S. (appearing something like a chapel) on with the rocks above water, lying off Red-point, so named from its appearance, and part of Savannah Island to the westward, just in sight, to the southward of St. Thomas'. Besides the passage to the westward into Black-point Bay, there are four others, viz.—

- 1st. Between Water Island and St. Thomas', already described.
- 2d. Between the S. W. point of Water Island and the Porpoise Rocks, which are always above water.
- 3d. Between the Porpoise Rocks and Green Key.

4th. Between Green Key and the Island of Little Saba.

To sail into Black-point Bay by the second passage. From the anchorage off St. Thomas' harbour steer close to the S.W. point of Water Island, and round it, if the wind be in the usual eastern quarter, at the distance of half a cable's length; after passing the point, haul up as much as the land and wind will allow, especially if the wind be light, to prevent the current setting you upon the Porpoise Rocks. When you have rounded these rocks, you will be nearly in the fair way of the passage already described, between St. Thomas' and Water Island; and the only danger not visible which you have to avoid is a *sunken rock, when smooth water always covered*, called the Netley, from a vessel of that name having struck on it.

Marks for the Netley Rock.

OBSERVE to the westward, between St. Thomas' and Savannah Island, a pretty high key, appearing as if it had a deep notch in the middle of it, for which reason we have named it Notch Key. *This key kept open off St. Thomas', nearly W. by N. $\frac{1}{2}$ N. will take you to the S.W. of the Netley Rock.* The Notch a little shut in will take you on the rock; this is the long mark. The cross marks are the *north side of Little Saba*, or rather the rock off it, just touching the *south side of Green Key, nearly S.W. by W. $\frac{1}{2}$ W.* There is a narrow passage of five fathoms between the Netley Rock and a few rugged rocks above water, lying off Red-point; and between these rocks above water and the point is a shoal passage for boats. When past the Netley Rock, you may run boldly on for the anchorage at the watering place, Black-point, or steer out to the westward.

In the third passage between the Porpoise Rocks and Green Key there is no danger but what is in sight; it is necessary to give the Porpoise Rocks a berth of half a cable's length, or more, and also to a sunken rock about a hundred yards on the east side of Green Key. This passage being nearly north and south, is to be preferred for coming out to the southward from Black Point, as the usual trade wind is free to sail out with, which is seldom the case in coming out by the second passage.

To sail through the fourth passage between Little Saba and Green Key, you keep nearly in mid channel, the water being shoal on both sides. This passage being far to the westward, is seldom used, and never in going out to the southward, as little Saba and the rocks off it extend a long way out in that direction, and you have generally a heavy sea and a scant wind. There is a passage between Notch Key and St. Thomas', and between Notch Key and Savannah Island; the latter we have gone through; both are subject to baffling winds, particularly the eastern one, which is seldom used but by small vessels, although there is no danger but a reef stretching off the S. E. point of Savannah Island, on which the sea generally breaks.

Sail Rock Passage.

THE usual way to get to the northward from St. Thomas', or Santa Cruz, is to pass between Little Saba and the Sail Rock, and steer close to the west end of Savannah Island, which is very bold to.

The Sail Rock lies S. by W. four miles from Savannah, and has deep water all round it. The keys lying to the N. E. from Savannah are all bold to. This passage, between Savannah on the east, and the Passage Islands on the west, is nearly three leagues wide, and is generally called the **Sail Rock Passage**. The Little Passage Islands lie to the eastward of Great Passage Island, and are separated from it, and from each other, by a narrow channel. You may approach the north side of the Passage Islands at the distance of a mile, but on the south side a reef under water stretches a long way to the south and westward. Off the south Little Passage Island, we have tacked on the S. E. edge of this reef, with the east part of Little Passage Islands, north about four miles distant.

On the south side of Great Passage Island there is an excellent harbour, but rather difficult in getting in and out, so that pilots are necessary here. All to the westward of Passage Islands, as far as the east end of Porto Rico, and also between these Islands and Crab Island, is full of keys, rocks, and dangerous shoals; and it requires great local knowledge to conduct a vessel amongst them. On the north extremity they are generally above water, and may be approached from the north within one or two miles distance.

Santa Cruz, or St. Croix.

On the south side of this Island are no harbours, but small vessels find shelter inside the reefs, with which this side of the Island is bounded. For this reason, it is extremely dangerous to stand for the south side of Santa Cruz during the night; and it may be observed, that the lead will give no sufficient warning of your approaching the Island, which many may be inclined to do in coming from the southward; supposing that they will be able to weather the east end of it. In this opinion many have found themselves mistaken, and, when they least expected it, found themselves on shore, or amongst the breakers; the latitude of which, at the S.W. part, according to the Spanish chart, is $17^{\circ} 37' N.$; and the east end of the Island lies in latitude $17^{\circ} 45' N.$ and longitude $64^{\circ} 35' W.$

The east end may be passed safely at the distance of two miles to the eastward; and were it not that the wind generally blows from that quarter, it might be approached nearer. N. E. from it, from three to five miles, there is a bank with from eight to fifteen fathoms.

On this bank we have frequently sounded. North-westerly from the east end of Santa Cruz lies *Buck Island*; between them there is no passage for ships. Buck Island has extensive reefs lying off the east and N.W. part of it; and vessels frequently anchor on the west side of it, sheltered from the prevailing trade-wind; but with the wind from the northward, the anchorage is much exposed. About one mile and a half to the westward from Buck Island, an extensive reef under water commences, and continues to the westward, until it is separated by the passage into the harbour of *Christianstad*, from another shoal, just a wash, which shelters the harbour from the northerly winds. These shoals have deep water close to them, which makes the eastern one very dangerous to approach, as it cannot be seen.

The Signal Staff on the top of the hill kept to the west of the *Fort Flag Staff*, situated upon a bluff point near the entrance into the harbour, will take you clear of the west part of the shoal to the eastward of the passage into the harbour, where you generally get the pilot on board, upon making the signal.

CHRISTIANSTAD.

THIS harbour is rather of difficult access, and will only admit a vessel drawing between fourteen and fifteen feet water; and in getting out to sea, square-rigged vessels are obliged to warp a long way to the eastward before they can make sail out of the passage.

From the town of Christianstad the land trends to the N.W. where it forms a tolerably high point, off which lies a rock on which the water generally breaks. It is about a mile from the shore. From this point the shore is bold, and the land abrupt, trends westerly as far as a point called Hands Bluff, and then runs south-westerly to the Town of Frederickstad, or west end.

At the second estate to the southward from Hands Bluff, there is an indifferent *watering place*. The water is not very good, and it did not keep well with us. The anchorage is abreast of the estate before mentioned, bearing about east upon a bank which is steep to, and very shoal near the shore, so that you must be certain of your soundings before letting go your anchor, and have plenty of cable ready on deck to veer briskly.

Frederickstad, or West End.

THE anchorage at this place is pretty good, and extends a good way to the northward from the Town, but not far to the westward. The

depth is various, according to the distance you are from the land. A flat, with three and four fathoms water, extends a mile to the northward of the Fort, continuing the same depth, about four cable's length from the shore. The bottom is fine white sand, and coral rocks interspersed. The water is so very clear, that in general you can see to let go your anchor in a clear spot. We have anchored frequently at west end. *A good berth is to have the Fort bearing E. N. E. in ten fathoms water*; or you may anchor with the street to the south of the Fort, when seen up and down. The anchorage is much exposed to the westerly winds, therefore an improper place for the *hurricane season*. From the town, the land trends to the W. S. W. and forms a long narrow sandy point to the western extremity of the Island.

From the town to this point is all a bold shore; and you may pass the point at a cable's length off, in four or five fathoms; but you must keep Hands Bluff just open to the west of the point, until you are near two miles to the southward of it, when you will deepen your water to seven, eight, and fifteen fathoms. In rounding this point from the southward and eastward, the same caution is necessary, if your object is to keep as far to the eastward as possible; but if not, the dangers are all easily avoided, by keeping out of soundings (with the hand lead), as they do not extend above one mile to the westward of the point. The south side of the Island, as before remarked, is very rocky and dangerous, and improper land to be made in the night.

CRAB ISLAND.

THIS Island is high towards the S. W., and this part of it may be seen eight or nine leagues off. The north side of the Island, as before remarked, is all foul, and not fit to be navigated by vessels of any burthen. The south side from the east point to the S. W., is all the way a bold shore, and may be approached as near as one and a half miles, and in some places much nearer. In running along shore at about this distance, you have fifteen, seven, fifteen, seven fathoms water; the last depth is abreast what is called the Great Harbour, upon a spit running off the shore, about one and a half mile. A little east of this place is the Little Harbour; both of which have shelter for small vessels drawing twelve and fourteen feet water; and they lie there secure from all winds. About three miles to the eastward of the S. W. point are two small Islands, or Keys, upon one of which the Spaniards have of late years built a fort, and have a garrison for the purpose, they say, of taking up runaway negroes from Porto Rico. We have, however, been informed, that of late they have levied duties on vessels taking in and cutting wood here; and as they have also begun to clear and cultivate the land adjoining to

their fort, it would look as if they had taken permanent possession of the Island, which has always been claimed by Great Britain.

The S.W. and west points bear from each other S. E. and N.W. nearly. The west and N.W. points nearly north and south from each other. The S.W. point has a small rocky reef running off from it. The west point is rocky, low and woody. The N.W. point is a fine white sandy beach, with a little brush wood, and verdure on it. On the north side of the point are a few small wells, where fresh water may be had in small quantities; but it is said the Spaniards often poison them, to prevent the cattle smugglers from using it, when they come here to wait for an opportunity to push for the coast of Porto Rico, which is only seven or eight miles distant to leeward of this anchorage. From the situation of the wells being so close to the sea, the water must be of a very indifferent quality, and probably it has a deleterious effect upon strangers, which may have given rise to this report.

The best Anchorage is between the west and N.W. points, in any depth you please; the farther to the north, the shoaler the water. We have frequently anchored here in four and a half fathoms, with the *west point* on with the south side of the mountain.

The N.W. point N. N. E. $\frac{1}{2}$ E., the west point S. 55° E. off shore, six cables' length; but the anchorage is very extensive, and the ground free from rocks. There is much valuable hard wood here, and easily procured by cutting it close to the centre of the bay, between the west and N.W. points.

PORTO RICO.

THE land of Porto Rico is in general very high land; but towards the coast on the south side, it is for the most part low; and that part from Cape Malapasqua to the Dead Chest is low mangrove land, forming, we have no doubt, many good harbours, particularly about the Boca de Inferno.

Cape Roxo is low and sandy, rising into small hillocks farther inland. The soundings do not extend far to the S. E. of Cape Roxo, but a long way to the southward and westward.

In coming from the eastward, you round the Cape at about the distance of four or five miles. You will then see *Zachea*, a *small high Island*; when it bears N. $\frac{1}{2}$ W., you may haul up for it. The lead, however, should be paid great attention to on this part of the coast; it is even necessary to have two—heaving them in quick succession. We have said this to prevent any accident occurring, similar to what happened to two vessels that were strangers to the coast. One was lying to, with a leadsman in the chains; yet got on shore,

and with some difficulty got afloat again : and the other got on shore in the night time, Cape Roxo bearing about E. S. E. four or five miles distant : by which it would appear they were several miles upon the shoal water without being aware of it.

The north coast of Porto Rico is generally a bold shore ; and we know of only one danger at any distance from the coast. This is a *sunken rock discovered by H. M. ship Barrosa*, and lies between the town of St. Juan's and the east end of the Island. The bearings communicated by the master of H. M. ship the Barrosa are, Cape St. Juan, E. by S. $\frac{1}{2}$ S., distant ten miles ; Morro Castle, west, distant twenty miles. The rock is three miles from the shore, with only fourteen feet water on it, and five and six fathoms alongside of it all round. It is about a ship's length from east to west, and very narrow.

The Island of Zachea is nothing more than a large high rock, about a mile in circumference, with fifteen, twenty, thirty fathoms close to it all round.

MONA ISLAND

Is a small Island, with a good deal of small wood on it, and can be seen about five or six leagues distant, and appears flat.

The best anchorage is between the S.W. point, which is low and sandy, and the N.W. point, which is a high upright and rocky point. We came to this anchorage by the south side of the Island, steering along shore about a mile distant, until we came to the S.W. point, and then hauled up into the bay, and anchored in eight fathoms sandy bottom ; the S.W. point bearing south about one mile distant, and the N.W. point N. N. E. $\frac{1}{2}$ E., and the small Island of Monica, which is merely a rock, bearing N. $\frac{1}{2}$ W. The shore of the bay is surrounded by a coral reef : the best passage for boats to cross the reef is in the bight, where the sandy beach upon the low land joins to the high rocky cliff, E. S. E. from the anchorage. This is also the best landing place : a small supply of *fresh water* may be had here. The watering place, consisting of a few old casks sunk in the ground in a swampy place, is under the cliff, about half way from the landing place to the S.W. point of the cliff, which is seen from the anchorage over the low land. In this Island we saw several head of cattle and wild goats, but no appearance of inhabitants.

This Island, from its situation in the middle of the *Mona* passage, must be of great use to vessels going through, by enabling them to ascertain their exact situation before night.

Observations from the Island of Blanco to the Islands of the Rocas on the Spanish Main.

THE Island of Blanco is low flat land, and cannot be seen above ten or twelve miles distant from the deck of a sloop of war; it is about seven miles long from north to south. About half a mile from the S.W. point lies a rock, which is visible by the swell breaking on it. This is the only danger that we have seen or heard of. Small schooners and sloops anchor here in the sandy bays, to catch fish and turtle, and cut grass for the mules, previous to their going for them to the mainland. In these bays you anchor very close to the beach in the white water. They are all on the west side; and we did not see any that would afford shelter to vessels above 100 tons from the north winds; and they are open to all winds from the westward. Between Blanco and the Seven Brothers to the S. E. is a bold and wide passage.

The Seven Brothers are seven very high, bold, barren rocks, and consist of two ranges, one to the S. E., and the other to the N.W., between which is a broad clear passage. We went through in a frigate, without getting bottom with the hand-lead; and the Island of Blanco was just visible from the deck. The other passages had the appearance of deep water, but we are not acquainted with them. Near to the Seven Brothers we were in latitude $11^{\circ} 44'$ N. by observation, when the extremes bore from E. S. E. to N. E. by N., about four or six miles distant. In several charts the Seven Brothers are laid down too far to the southward. This error may have arisen from the Islands being laid down by the dead reckoning, without making any allowance for the strong northern current, which we felt all along this coast of America, and which we think is caused by the water of the River Oronoko, and the western current caused by the trade-wind, having their outlet chiefly to the N. N.W.

ISLAND OF TORTUGA.

THE north side of this Island lies nearly east and west; it is low land, and cannot be seen farther than four or five leagues. It is about the same height as Blanco, but appears more in hillocks, covered with wood, which at a distance appeared large, but on a nearer approach, it will be found little better than brush-wood. There are no settlers or inhabitants; but people belonging to small vessels are frequently left here, and at the Islands of Blanco, Orchilla, and the Rocas, to fish and turtle, and gather salt, of which there is a considerable quantity at all these small Islands.

On the north side of Tortuga there are several small low Islands, or Keys. They extend two or three miles to the westward of the N.W. point of the Island. From these Keys to the S.W. point is a very extensive anchorage, capable of containing many ships; and although open to the west winds, they can anchor in from seventeen to seven fathoms water, sandy bottom, and be far enough from the shore to have room to get under sail, should the wind blow on the shore.

The S.W. point is low and sandy, and so bold that you may pass it at half a cable's length off, and have nine and ten fathoms water. You are then clear of the bay, and may steer to the eastward along the south side of the Island, which is bold and clear, and no bottom can be found with the hand-lead half a mile off. The eastern point is low and rocky, and the sea appeared to break about a mile to the eastward of it. These Islands ought to be avoided in the night or in thick weather.

Cape Codera and the White Rock.

THE White Rock bears N. by W. from Cape Codera about twelve miles distant. About fifty fathoms north of this rock lies a small one with deep water between, and twenty-five fathoms round them. We were in latitude $10^{\circ} 46'$ north by observation, when the White Rock bore E. by N., and the Cape Codera S. E. by E. The Cape may be easily known from the north, N.W., or N. E., by the land to the S. E. being very low, and the land to the westward increasing in height. To the westward of the Cape is good anchorage with S. E. winds. About twenty miles to the westward of this is another Bay, where it is said there is a fresh water river.

Cape Codera to La Guayra.

WHEN you are about five leagues from the shore, and six or seven to the westward of the White Rock, the high land will appear to terminate, and look like a Cape: in this direction is La Guayra: but when you get a little to the westward, the Cape disappears, and the land looks high to the westward, without any remarkable appearance so far as the eye can reach: for this reason it is necessary for strangers to keep within five miles of the land after making Cape Codera or the White Rock, to prevent running to leeward of La Guayra. All the way from Cape Codera to La Guayra the shore is bold, and the land high. The Fortifications of La Guayra are situated close to the sea, and very conspicuous, being built with stone. The anchorage is a little to the N.W. of the Fortifications.

The ground is rocky, which renders this a very dangerous place, being exposed to the N. E. winds, which occasion a heavy sea ; and if you part your cable, the land is so close astern, that in all probability you would be driven on shore before you can make sail or let go an anchor. All vessels bound to this port ought to be furnished with chain cables.

ORCHILLA.

IN making this Island from the north or south, it appears like two Islands, the eastern part being the highest. It consists also of low land, which is of considerable extent. That on the north side stretches about a mile north from the east high land, and appears to form a safe anchorage from the prevailing trade-wind. The low land to the south runs to the southward, and terminates in a low point, at nearly an equal distance between the east and west high points. Off the west high point lies a rock above water, about half a mile from the shore. From this rock to the extreme south point, which is low, runs a fine bold sandy beach ; but at a quarter of a mile from it we could not get bottom with the hand-lead (say twenty fathoms). On this Island we only saw a few mangrove bushes. On the low land to the south are a great many salt marshes, where people occasionally come to collect it. The passage between this Island and the Rocas to the westward, is safe and clear. The low reefs on the west side of the passage, forming the east and N. E. boundary of the Rocas, ought not to be approached in the night, as the lead would not warn you of the danger. In the day time a stranger has nothing to fear except from the current, during a calm or light air. The current here has not only a northerly set, but also a great indraught to the west between the reefs of the Rocas.

Islands of the Rocas.

THEY extend from east to west nearly twenty-six miles, and from north to south, thirteen. They are all very low, excepting the High Roca on the north extremity of this group of rocks, keys, shoals, &c. The High Roca is a high rocky ridge, lying east and west. When seen at a distance from the north or south, it appears like two Islands, and very white. When it appears in this way, it may be mistaken for Orchilla ; but the eastern part of the latter Island is the highest, and of greater length, whereas the western part of the high Roca is the highest. Strangers making them in the

evening, and bound to the Spanish Main, La Guayra, Porto Cabella, or Curaçao, should steer for the west point, keeping it in the direction of south or S. by E. until within five miles of it; and they can make out plainly whether there is low land lying to the westward, which, if seen, they may be sure that the land is the Rocas, as no land lies to the west of Orchilla except the rock above water, before mentioned in the description of that Island. If you have made the Rocas in the above direction, you may steer away to the westward, taking care not to bring the High Roca to the northward of east. If you keep your lead going, you will get soundings in ten, twelve, and fourteen fathoms water off the N.W. part of the group; two or three miles from the Keys, this will be a tolerable guide in the dark. If you wish to haul close round the western key, which is bold to, but very low, it is necessary to be careful, and shorten sail sufficiently to enable the lead to reach the bottom, particularly if you are going with the wind free. When the High Roca bore east, and the west Key S. by W., we had ten fathoms, distant from the nearest Key two miles. From this round the outside of the west, south, and S. E. Keys, you may come as near as half a mile with the greatest safety; but do not go within these Keys, as it shoals very suddenly: for although there are many openings between the keys and reefs of the Rocas, and which no doubt would be found to be most excellent harbours for small vessels, if they were examined: yet it is not advisable for a stranger to attempt them until the depth of water has been truly ascertained. At the High Roca, a stranger will find no difficulty in anchoring the largest ship, by attending to the following directions. Coming from the N. E., and making the High Roca, you steer for the west part of it, and which you may approach as near as you please, taking care not to be taken aback by the eddy wind occasioned by the high land: there being no danger but what you may see, stand on, and beat up into the bay. When you bring the west point of the high land to bear N. N.W., and a remarkable gap in the high land to open and bear N. by E., you will have soundings in seventeen and fifteen fathoms. The north-western key in the bay will bear west, and the keys and reefs to the southward distant two miles and a half. When the gap bears north, and the west point of the High Roca N.W. or N.W. by N., you will be in a good situation to anchor in sixteen fathoms sandy bottom, and about three cables' length from the edge of the white water lying off the low parts of the High Roca; and the mangrove bushes on the south part of this low land, bearing about E. N. E. The anchorage is very extensive, with a bottom of sand and coral in seventeen, fifteen, and ten fathoms water. The coral we found soft, and not hurtful to the cables. A large fleet might anchor here, and remain in great safety in all winds, except from west to N. N.W., winds which seldom blow in this climate; and we understand there have never yet been any hurricanes on the coast of La Guayra.

To the eastward of the High Roca there is a passage to come into the above anchorage, having four fathoms in mid channel, (but

it is not recommended to strangers;) it is however the best entrance to an anchorage named Pirate's Harbour.

After you come round the west point of the High Roca, you will see on the south side of it a high round rock. About thirty fathoms to the west of this rock there is a trifling spring of *fresh water*, the only one, we understood from the fishermen, on these Islands. The Keys are in general covered with mangrove trees and bushes, and on several a light sort of wood named button wood, which the fishermen use for their nets instead of cork. These Islands are resorted to by fishermen from the Leeward Islands to catch turtle and fish, which are found in great plenty, particularly two or three days before the full and change of the moon. Upon many of the Keys are saline springs, which produce great quantities of fine salt, with only the trouble of gathering together and drying it in the sun. Upon the reefs are great numbers of flamingos, pelicans, and all kinds of water-fowl. The variation in June 1814 was 4° east. We did not remark any tide or current when at anchor, but the rise and fall of the water on the shore was about four feet.

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LATITUDE AND LONGITUDE

OF

PLACES MENTIONED IN THE WORK.

		North Latitude. <i>Deg. Min.</i>	West Longitude. <i>Deg. Min.</i>
BARBADOES,	North Point,	13 20	59 46
	South Point,	13 02	59 42
ST. LUCIA,	South Point,	13 40	61 00
	North Point,	14 06	60 58
MARTINIQUE,	South Point, (Salines)	14 22	60 52
	North Point,	14 53	61 15
DOMINICO,	South Point, (Scott's Head)	15 10	61 24
	N. E. Point,	15 38	61 28
ISLAND OF AVIS,		15 37	63 46
MARIEGALANTE,	South Side,	15 50	
	East Side,		61 14
	North Side,	16 2	
DESEADA,	North Point,	16 20	61 06
GUADALOUPE,	N. E. Point,	16 28	61 30
ANTIGUA,	English Harbour Bluff,	17	
	East Point,	17 05	61 36
BARBUDA,	North Side, Reef,	17 47	
	East Side, Reef,		61 40
	South Side, Reef,	17 29	
MONTSERRAT,	North Point,	16 48	62 17
	South Point,	16 40	62 15
REDONDO,		16 55	62 24
NEVIS,	South Point,	17 07	
	East Side,		62 37
ST. BARTHOLOMEW,	East Point,	17 55	62 51
	South Side,	17 52	
ST. MARTIN'S,	N. E. Point,	18 8	63 06
ANGUILLA,	South Side,	18 10	
SCRUB ISLAND,	North Point,	18 19	63 1
DOG AND PRICKLY PEAR PASSAGE,		18 17	63 19

	North Latitude. Deg. Min.	West Longitude. Deg. Min.
SOMBRERO,	18 37	63 29
ANEGADA, S. E. Point of Horse Shoe Reef,	18 37	64 10
..... North Side,	18 48	
VIRGIN GORDA, East Point,	18 33	64 21
ROUND ROCK PASSAGE INTO TORTOLA,	18 25	64 29
FRENCHMAN'S KEY,	18 15	64 55
BUCK ISLAND.—ST. THOMAS'S, East Point,	18 18	64 56
SANTA CRUZ, S.W. Part of the Reef,	17 37	64 55
..... N. E. Point,	17 45	64 35
CRAB ISLAND, East End,	18 10	65 18
SAIL ROCK,	18 18	65 08
WEST END OF SAVANNAH ISLAND,	18 21	65 07
N. E. POINT OF PASSAGE ISLANDS,	18 21	65 17
TOBAGO, N. E. Point,	11 22	60 30
ST. VINCENT, N. E. Point,	13 21	61 19
..... East Point,	13 15	61 10
..... S. E. Point,	13 9	61 14
BEQUEIA, N. E. Point,	13 03	61 14
TRINIDAD, N. E. Point,	10 52	60 55
GRENADA, S.W. Point, (Saline)	12 00	61 47
SEVEN BROTHERS, South Side,	11 42	64 28
ISLAND OF BLANCO, North Point,	11 53	64 40
..... ORCHILLA, North Side,	11 54	66 07
..... HIGH ROCA, North Side, (Gap)	12 01	66 44
CAPE CODERA,	10 38	66 08
THE WHITE ROCK,	10 50	66 10

The Plans to be placed with their respective Islands when bound.

