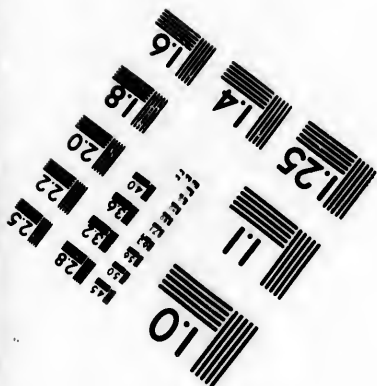
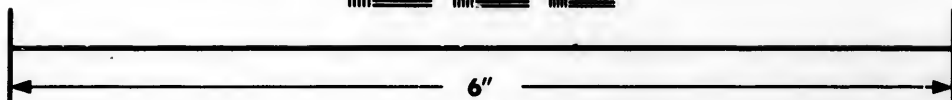
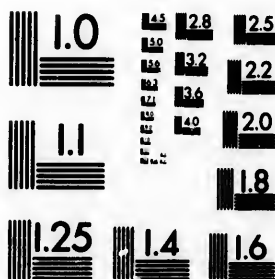


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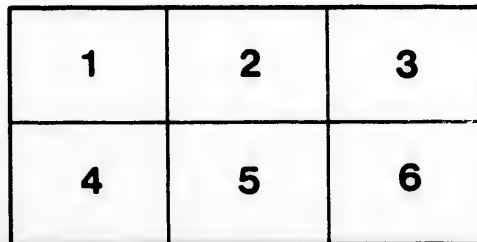
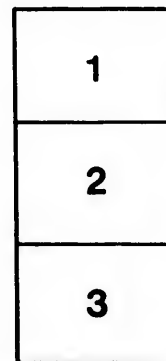
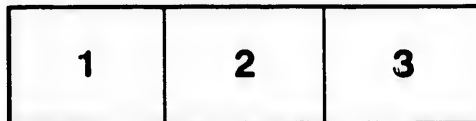
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NEW SAILING DIRECTIONS
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The East Coast
OF
NORTH AMERICA

NEW SAILING DIRECTIONS
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OF
NORTH AMERICA,
IN THREE PARTS.

PART I.
FROM BELLE ISLE TO CAPE COD.

ORIGINALLY COMPILED
By **J. W. NORIE, HYDROGRAPHER,**
Author of a New and Complete Epitome of Practical Navigation,
&c. &c.

Re-arranged, revised, and considerably augmented,
By **J. S. HOBBS, F.R.G.S.,**
Hydrographer.

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NEW SAILING DIRECTIONS
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The East Coast
 OF
NORTH AMERICA,
 IN THREE PARTS.

PART I.
 FROM BELLE ISLE TO CAPE COD.

COMPREHENDING
THE ISLAND AND BANKS OF NEWFOUNDLAND;

ALSO THE

*Island of Cape Breton, St. Paul, Magdalen, Bird, Byron,
 Anticosti, and Prince Edward's Island:*

WITH

**THE COAST OF LABRADOR, RIVER ST. LAWRENCE,
 NOVA SCOTIA, NEW BRUNSWICK,
 BAY OF FUNDY, AND THE UNITED STATES,
 TO THE PENINSULA OF CAPE COD:**

INCLUDING THE

Bays, Harbours, Roadsteads, Rocks, and Shoals in that Navigation.

CAREFULLY COLLECTED AND COMPILED FROM THE

**SURVEYS AND OBSERVATIONS OF CAPTAINS W. H. BAYFIELD, R.N. AND
 F. BULLOCK, R.N.; C. F. LAVAUD, FRENCH NAVY; ALSO OF LANE,
 DES BARRES, LOCKWOOD, LAMBLEY, AND OTHER OFFICERS;
 And Remarks from the Journals of several experienced Masters and Pilots both in the
 British and American Service.**

ORIGINALLY COMPILED

By J. W. NORIE, Hydrographer,
Author of a New and Complete Epitome of Practical Navigation, and other Nautical Works.

THE WHOLE RE-ARRANGED, REVISED, AND CONSIDERABLY AUGMENTED,

By J. S. HOBBS, F.R.G.S.,
 HYDROGRAPHER.

London:

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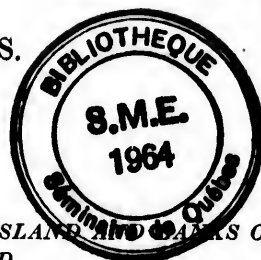
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A List and Description of the LIGHTHOUSES situate between the STRAIT of BELLE ISLE and CAPE MALABAR, including those in the GULF and RIVER of ST. LAWRENCE; with References to the pages where further particulars respecting them may be found in the following Work.—(Corrected to 1849.)

CAPE SPEAR.—A lighthouse, exhibiting a powerful revolving light, at 275 feet above the level of the sea, which shows a brilliant flash at intervals of one minute, and visible 8 leagues in clear weather. (Page 7.)

ST. JOHN'S.—Fort Amherst lighthouse stands on the South Head, at the entrance of the harbour of St. John, and shows a brilliant fixed light. (Page 7.)

HARBOUR GRACE.—On an islet, off the mouth of the harbour, a light is shown from the top of a square wooden building. It is an effective and useful light (fixed). The islet is accessible only in moderate weather by ladders up the cliff, on the landward side. (Page 9.)

CAPE BONAVISTA.—The lighthouse on this cape exhibits a revolving light, which shows a red and white light alternately. The period of its revolution is 2 minutes, and its elevation 150 feet. (Page 15.)

ST. PIERRE OR ST. PETER'S LIGHTHOUSE.—On Gallantry Head, on the south side of the island, is a fixed light, visible, in clear weather, 5 leagues. (Page 47.)

There is also a fixed harbour-light on Canon Point, St. Pierre, visible 3 miles, from 1st of May to 15th of December. (Page 48.)

ST. PAUL'S ISLAND LIGHTHOUSES.—There are two lighthouses on this island, one on the south point, and the other on a rock close to the north end of the island. The northern one is a brilliant fixed light, elevated 140 feet above the level of the sea, and visible 6 leagues between the bearings of N. by E. and E. by N. The southern light revolves, and is visible 6 leagues between the bearings of west and S.S.E. A bell is tolled at the southern lighthouse in foggy weather, worked by machinery. (Pages 61 & 90.)

HEATH POINT LIGHTHOUSE.—On the extremity of the east point of Anticosti Island a lighthouse has been erected, which shows a bright fixed light. The lantern is elevated 100 feet above the sea; it is visible 6 leagues in clear weather. (Page 94.)

ANTICOSTI S.W. POINT LIGHTHOUSE shows a revolving light from 25th March to 31st December, from sunset to sunrise. The lantern is elevated 100 feet above high water, and the light may be seen 5 or 6 leagues between the bearings of N.N.W., round by west and south, to S.E. by E. (Page 94.)

SYDNEY LIGHT (Breton Island).—On Flat Point, on the eastern side of the entrance, is an octagonal tower of wood, 90 feet high, and painted vertically red-and-white. It exhibits a brilliant fixed light at 160 feet above the level of the sea, seen in clear weather 5 leagues off. (Page 106.)

SCATARI ISLAND LIGHT.—The light-tower is on the N.E. extremity of Scatari Island, painted white, exhibiting a revolving light, about 90 feet above the sea, visible 1 minute, and invisible $\frac{1}{2}$ a minute alternately. A boat to render assistance to vessels in distress, and a gun to answer signals when required. (Page 106.)

LOUISBOURG LIGHT (Breton Island).—This light is fixed, and stands on the eastern side of the entrance to Louisbourg Harbour; it shows a fixed light. The lighthouse is a square building, painted white, with vertical black stripes on either side, which renders it conspicuous when the back land is covered with snow. (Page 107.)

GUT OF CANSO (western entrance).—A fixed light is now exhibited on the western side of the northern entrance of the Gut of Canso, which may be seen as far as Cape St. George. (Page 109.)

- PICTOU LIGHT** is on the S.E. side of the entrance. It is painted red-and-white, in vertical stripes, and exhibits a brilliant fixed light, 65 feet above the sea. (Page 112.)
- POINT ESCOMMENAC** (Miramichi entrance).—A fixed light is now established on Point Escumencourt, the southern point of Miramichi Bay. The lighthouse is painted white. (Pages 111. & 126.)
- POINT PRIM LIGHT** (Prince Edward's Island).—On Point Prim, the eastern point of entrance to Hillsborough Bay and Charlotte Town, a fixed light has been established, as a guide to vessels entering the bay in the night. (Page 120.)
- CAPE DE MONTS LIGHT**.—A lighthouse has been erected upon the high land of Cape de Monts, exhibiting a fixed light, 100 feet above the level of the sea. This lighthouse stands on the north shore of the entrance of the River St. Lawrence, nearly opposite Cape Chatte, and forms a conspicuous land-mark. (Page 140.)
- BICQUETTE LIGHT**.—A light, revolving at equal intervals of 2 minutes, is shown from a lantern, 130 feet above the level of the sea, on the islet of Bicquette, from the 15th of April to the 15th of December. A gun, a 9-pounder, is placed near the lighthouse, and will be fired every hour during foggy weather and snow-storms. (Page 145.)
- GREEN ISLAND LIGHT**.—On the north point of Green Island, which is on the south side of the river, is a light-tower, exhibiting a fixed light, 70 feet above the level of low water mark, from the 15th of April to the 10th of December. (Page 146.)
- RED ISLAND LIGHT**.—A tower has lately been erected on Red Island, which exhibits a fixed light every night during the navigable season. (Page 148.)
- SOUTH PILLAR LIGHT**.—A revolving light will be shown from the tower erected on the Stone Pillar; it revolves at regulated intervals of $2\frac{1}{2}$ minutes, and lighted during the season of the navigation. (Page 152.)
- TRAVERSE FLOATING LIGHT**.—A light-vessel is moored in the South Traverse off Cape St. Roque, in the Narrows, 5 miles above the first buoy on the south shore, and shows a fixed light. (Page 152.)
- LAKE ST. PETER** (above Quebec).—A light-vessel is moored at the western end of Lake St. Peter, about 47 miles below Montreal, and a buoy is moored near it; these indicate the entrance to the South Channel. (Page 166.)
- GUIBOROUGH HARBOUR LIGHT**.—This light is situated at the head of Chedabucto Bay, near the entrance to Milford Haven; it is a fixed light, and serves as a guide to Guisborough Harbour. (Page 170.)
- CRANBERRY ISLAND LIGHTS**.—This lighthouse is an octagonal tower, built of wood, 88 feet in height, painted red and white horizontally, and showing two fixed lights, one above another. (Page 170.)
- WEDGE ISLAND**.—Off St. Mary's River, eastward of Halifax, a beacon is erected 140 feet above the level of the sea, painted white, and covered at the top. (Page 173.)
- BEAVER ISLAND LIGHT**.—A lighthouse has been erected on Beaver Island, to the eastward of Halifax. It exhibits a revolving light, visible $1\frac{1}{2}$ minute and dark $\frac{1}{2}$ a minute. (Page 174.)
- SAMBRO' LIGHT**, on the west side of Halifax Harbour entrance, an octagonal tower, 197 feet high, with a brilliant fixed light. There is a small party of Artillery attached, with two 24-pounders for signals. (Page 177.)
- SHERBROOK TOWER LIGHT**, on Manger's Beach, Halifax Harbour.—This is a fixed red light, to be left on the starboard side when entering the harbour. (Page 178.)
- DEVIL'S ISLAND BEACON**.—A beacon of wood, painted white, and 50 feet in height, is erected on Devil's Island, at the eastern side of the entrance to Halifax Harbour. (Page 178.)
- LUNENBURG LIGHT** is upon the S.E. point of Cross Island, at the entrance of Lunenburg Bay; the tower is octagonal, painted red, with two lights placed vertically, 30 feet apart.

- The lower light is fixed, and the upper light is flashing, showing a flash at intervals of a minute, abruptly changing from light to dark. (Page 185.)
- LIVERPOOL LIGHT.**—A lighthouse is built on Coffin's Island, at the entrance of Liverpool Harbour, 90 feet above the sea level, octagon shape, painted red-and-white horizontally, and shows a brilliant light, revolving once in every 2 minutes. (Page 187.)
- CAPE ROSEWAY LIGHTS.**—Shelburne light-tower on Cape Roseway, is of an octagon shape, painted black-and-white vertically, and exhibits vertically two brilliant fixed lights. The larger upper light is 150 feet above the level of the sea, the lower one 36 feet below it. (Page 189.)
- CAPE SABLE.—SEAL ISLAND LIGHT.**—A lighthouse is now erected on the highest part of the southern Seal Island; it exhibits a brilliant fixed light, 170 feet high. The tower is of an octagon shape, white. (Page 198.)
- CAPE FORCHU LIGHT (Nova Scotia).**—On the western side of the entrance to Yarmouth is a lighthouse, exhibiting a brilliant revolving light, visible $1\frac{1}{2}$ minute, and invisible $\frac{1}{2}$ a minute. The building is painted red-and-white, vertically, and elevated 145 feet above the level of the sea. (Page 199.)
- BRYER'S ISLAND LIGHT.**—This lighthouse is painted white, and exhibits a brilliant fixed light, elevated 90 feet above the level of the sea, and stands about $\frac{1}{2}$ a mile N.E. from the N.W. point of the island. (Page 200.)
- ANNAPOLIS GUT.**—On Point Prim, at the western side of the entrance to Annapolis, a lighthouse is erected, exhibiting a fixed light, 76 feet above the sea. (Page 202.)
- BLACK ROCK LIGHT.**—On Black Rock, situated on the south side of the Mines Channel, a lighthouse has lately been erected, which exhibits a brilliant fixed light. (Page 203.)
- APPLE RIVER LIGHT.**—A lighthouse has lately been erected, which exhibits two fixed horizontal lights. This light-tower stands on the south side of Chignecto Bay. (Page 204.)
- POINT ENRAGÉ LIGHT.**—On the north side of Chignecto Bay is a square lighthouse, exhibiting a brilliant fixed light. The house is painted white, and is elevated about 120 feet above high water. (Page 204.)
- QUACO HEAD LIGHT (on the north side of the Bay of Fundy).**—The lighthouse is erected on a small rock near this head, with a brilliant revolving light, which is full and dark twice in a minute. The lighthouse is painted white-and-red, in horizontal stripes. (Page 204.)
- ST. JOHN'S HARBOUR.**—The lighthouse is built upon Partridge Island, and exhibits a brilliant fixed light, at 110 feet above the level of the sea, and having a bell near it, which is tolled in thick weather. The lighthouse is painted red-and-white, in vertical stripes. (Page 205.)
- ST. JOHN'S BEACON LIGHT** is within Partridge Island; it is erected on a spit which dries at $\frac{3}{4}$ ebb. The tower shows a fixed light, and is painted white-and-black, in vertical stripes; the light is white, and about 35 feet above the level of the sea. (Page 205.)
- POINT LEPREAU,** north side of the Bay of Fundy.—The lighthouse erected upon this point exhibits two brilliant fixed lights, one 28 feet above the other, and both lights can be seen from every point of the compass where they may be useful. The lighthouse is painted red-and-white horizontally, in stripes 5 feet broad each. (Page 208.)
- GANNET ROCK LIGHT,** to the southward of Grand Manan.—This lighthouse is intended to warn vessels of their approach to the *dangerous ledges* lying off the south side of Grand Manan, and exhibits a brilliant flashing light. The brilliant flash appears for 40 seconds, succeeded by 20 seconds of darkness. The lighthouse is black-and-white, in vertical stripes. (Page 210.)
- MACHIAS SEAL ISLANDS.**—There are two lighthouses on the southernmost of these islands, standing 200 feet apart; and they exhibit brilliant fixed lights, horizontally, about 45 feet above high water; the lights bear E.S.E. and W.N.W. of each other.

Vessels standing to the northward, between these lights and the Gannet Rock, should tack off the moment they bring the lights in one, as they will then be only $\frac{3}{4}$ of a mile from the Murr Ledges; if more than 5 miles to the eastward of the lights. (Page 211.)

HEAD HARBOUR LIGHT, Passamaquoddy Bay, is a brilliant fixed light, on the N.E. extremity of Campo Bello, as a guide to vessels entering the main channel to West Isles, Moose Island, and the inner bay of Passamaquoddy, and to enable vessels to enter Head Harbour at all times. The light is 60 feet above high water mark. The lighthouse is painted white, with a red cross upon it. (Page 211.)

ST. ANDREW'S HARBOUR LIGHT serves to point out the narrowest part of the entrance. There is also a beacon. (Page 213.)

UNITED STATES.

MOUNT DESERT ROCK.—The lighthouse erected on this rock shows a bright fixed light, 56 $\frac{1}{2}$ feet above the level of the sea.

Columbian Ledge, surveyed by Captain Owen, lies S.W. by S., 1203 yards from the rock; inside there are 22 fathoms; outside, close to the rock, 17 to 35 fathoms. (Page 215.)

WEST QUODDY HEAD LIGHT.—This lighthouse is erected upon a low point of land, on the western side of the entrance to Scoodic River. It shows an improved fixed light, 90 feet above the level of the sea; and is furnished with an alarm bell, which, in foggy weather, is struck 10 times every minute. This light may be seen 20 miles off. (Page 215.)

LIBBEE ISLAND LIGHTHOUSE.—It is situated on the southern part of the island, at the entrance to Machias Bay. The lantern is 65 feet above the level of the sea, and contains a bright fixed light. (Page 215.)

MOOSE-PECK HEAD LIGHT.—This lighthouse is situated about 3 leagues S.W. of Libbee Island, and revolves at 54 feet above the level of the sea, and is eclipsed twice in every 4 minutes. At 6 leagues off, the duration of light and dark are nearly equal; but on approaching it the time of darkness diminishes, and the light increases. (Page 215.)

NASH ISLAND LIGHT, PLEASANT RIVER.—There is a lighthouse, 47 feet above the level of the sea, on this island, containing a fixed light, of a peculiar color, which you leave on your starboard hand going in. Coming from the westward, you must keep Petit Manan on your port hand; give it a berth of $\frac{1}{2}$ a mile, then steer N.E., 10 miles, which will carry you up with Nash Island light; leave it on your starboard hand $\frac{1}{2}$ mile, when you must steer N.E. by E., 2 $\frac{1}{2}$ miles, which will take you into Libbee's Bay. (Page 216.)

PETIT MANAN LIGHT.—A lighthouse of stone has been erected on this islet, which exhibits a fixed light, at 53 feet above the level of the sea; it lies $4\frac{1}{2}$ miles S.W. from the entrance of the Port of Goldsborough. (Page 216.)

CRANBERRY ISLANDS.—Baker's Island lighthouse is situated on the outermost of the Cranberry Islands, and exhibits a brilliant fixed light, at 70 feet above the sea; bearing from that on Petit Manan W.S.W., 5 leagues. (Page 217.)

BEAR ISLAND.—On this island there is a fixed bright light; it lies near the centre of the passage between Sutton's Island and Mount Desert; it is small, and covered with spruce-trees. The light stands upon the western end, elevated 65 feet above the level of the sea, and visible, in clear weather, 12 to 15 miles. (Page 217.)

SADDLE BACK ROCK, or LEDGE.—On the S.E. end of this is built a lighthouse, of hewn granite, and of that colour; it is elevated 40 feet above the level of the sea, exhibiting a fixed light, and may be seen, in clear weather, 15 miles. You may near it on all sides within a cable's length. (Page 219.)

EAGLE ISLAND LIGHT is fixed, and bears about north, 20 miles from Saddle Back Rock light. (Page 219.)

- MARTINICUS ISLAND.**—This island lies at the mouth of Penobscot Bay. On the rock south of the island are two fixed lights, 82 feet above the level of the sea, attached to a dwelling-house, 40 feet apart, and bearing S.S.E. and N.N.W. from each other. (Page 219.)
- OWLS HEAD LIGHT.**—This light is on the western side of Penobscot Bay, and bears nearly N. by E. from White Head light; it is built upon the easternmost part of Owl's Head, and shows a fixed light, 147 feet above the level of the sea. There is a good harbour on your port hand as you go to the eastward. The harbour makes with a deep cove; it has 4 fathoms, muddy bottom. (Page 220.)
- CASTINE LIGHTHOUSE** is on Dice's Head, at the entrance of Castine Harbour, Penobscot Bay. It is a fixed light, 116 feet above the level of the sea; N.W. $\frac{1}{2}$ W. from Fort Point Ledges, and from the eastern end of Long Island S.E. by E. $\frac{1}{2}$ E. The shore near the lighthouse is bold. (Page 220.)
- On **OLD FORD POINT**, above Castine, there is a lighthouse, to indicate the direction to Prospect Harbour. (Page 220.)
- WHITE HEAD LIGHTHOUSE** stands on the western side of the entrance to Penobscot Bay, and exhibits a fixed light, elevated 58 feet above the level of the sea. Attached to this light is a bell, weighing 1000 lbs., striking in foggy weather three times in a minute. The light is small, but of great importance, as all vessels bound to Penobscot Bay, going in shore, are obliged to pass by the light, through the Muscle Ridges. (Page 220.)
- CAMDEN LIGHT.**—The lighthouse is situated on the S.E. part of Negro Island, and contains a fixed light, elevated 49 feet above the level of the sea. (Page 221.)
- BROWN'S HEAD LIGHT.**—On Brown's Head, at the western entrance of Fox Island Passage, is a fixed light, 80 feet above high water. (Page 221.)
- FRANKLIN'S ISLAND LIGHT** is on the north end of Franklin's Island, which is on the eastern side of the entrance to George's River; it is a fixed light, 50 feet above the level of the sea. (Page 221.)
- MANHEIGAN LIGHT.**—On Manheigan Island, south of the entrance to George's River, is a revolving light, alternately red and white; time of revolution 2 min. 15 sec.; elevation 170 feet above the level of the sea. You can run close to the island on either side, taking care to go between some dry ledges on the northern side of it. (Page 221.)
- PENMANQUID LIGHT.**—This light is on the eastern point of St. John's or Bristol Bay; is fixed, and 75 feet above the level of the sea. It is a light to Bristol and Waldoborough Rivers; bears N.W. $\frac{1}{2}$ W. from Manheigan revolving light, distant 4 leagues. (Page 222.)
- BURNT ISLAND LIGHT** is fixed, at 55 feet above the sea. It is placed near the entrance of Townsend Harbour. You may run for the light without danger when it bears N. by E. (Page 222.)
- SEGUINE LIGHT** is off the mouth of Kennebec. This lighthouse is of the first class, and exhibits a brilliant fixed light, at 200 feet above the level of the sea, and may be seen, in clear weather, 9 leagues. (Page 223.)
- POND ISLAND LIGHT**, off Kennebec River, is a fixed light, 52 feet above the level of the sea; it lies N. $\frac{1}{2}$ E., nearly 2 miles from Seguine River; bearing N.N.E., it leads directly to the river. (Page 223.)
- HENDRICK'S HEAD LIGHT**, at the mouth of Sheepscut River, is a brilliant fixed light, 30 feet above the level of the sea, on the starboard hand going in. (Page 224.)
- PORTLAND LIGHT.**—This lighthouse is built of stone, on a point of land called Portland Head, and contains a fixed light, 85 feet above the level of the sea. (Page 225.)
- FORT HILL OBSERVATORY** bears N.N.W. $\frac{1}{2}$ W., 4 miles from Portland light, is on an eminence 141 feet above high water mark; the building, 32 feet high, is painted red, and the telescope placed near the top, by means of which vessels may be discovered 15 leagues off; and their colours or private signals, 8 leagues' distance. (Page 225.)

CAPE ELIZABETH LIGHTS are situated on Cape Elizabeth, south of the entrance to Portland Harbour, about 140 feet above the level of the sea, and 300 yards apart, bearing from each other S.W. $\frac{1}{2}$ W. and N.E. $\frac{1}{2}$ E. The western light revolves in 2 minutes; the eastern is a fixed light. (Page 226.)

WOOD ISLAND LIGHT is on the south side of Saco Bay; this is a brilliant revolving light, at 53 feet above the level of the sea, and eclipses once in $1\frac{1}{2}$ minute, and appears total until within the distance of 6 or 7 miles. (Page 226.)

CAPE PORPOISE LIGHT.—The lighthouse stands on the S.W. part of Goat Island, and contains a fixed light, 33 feet above the level of the sea. (Page 227.)

BOON ISLAND LIGHT.—This island is very low, about $\frac{1}{4}$ of a mile in length. The lighthouse stands near the west end of the island; the building is 50 feet high, and shows a fixed light, 70 feet above the level of the sea. (Page 227.)

WHALE'S BACK LIGHTHOUSE is situated on the east side of Portsmouth Harbour. Its height is 68 feet above low water mark. It has two fixed lights, one 10 feet below the other. (Page 228.)

PORTSMOUTH LIGHTHOUSE is near the mouth of the harbour, on the west side, on the N.E. point of Greet Island, near Fort Constitution; it is 85 feet above the level of the sea, and shows a fixed light. (Page 228.)

WHITE ISLAND LIGHTHOUSE (Isles of Shoals,) stands on the south point of White Island, and exhibits a light, 67 feet above the sea, which revolves once in $3\frac{1}{4}$ minutes; it is triangular, and exhibits in succession, a bright red, a blue, and brilliant light of the natural colour: this last may be distinguished, in clear weather, about 7 leagues, and on approaching, the red and blue in succession. A bell is suspended in the tower, and kept tolling during thick weather, both by night and day; its sound may be heard about 4 miles off. (Page 228.)

NEWBURY PORT LIGHTS.—There are two lighthouses on the south side of the entrance, upon the north end of Plumb Island, which exhibit fixed lights, and so constructed as to be easily moved, a circumstance requisite from the frequent shifting of the bar at the mouth of Newbury Port Harbour. (Page 230.)

IPSWICH LIGHTS.—There are two lighthouses on Ipswich Beach; they bear from each other W. $\frac{1}{4}$ N. and E. $\frac{1}{4}$ S.: keeping the two lights in one lead over the bar. The western light is a revolving one, the eastern light is fixed. (Page 233.)

ANNIS SQUAM LIGHT.—The lighthouse is octagonal, painted white, with a light on Wigwam Point, upon the eastern side of the entrance. It is a fixed light, about 50 feet above the level of the sea; it may be known by its being lower than any other lighthouse on the coast of Massachusetts, and its inland situation. (Page 233.)

CAPE ANNE, (Two Lights on Thatcher's Island).—These lighthouses contain fixed lights, and are about $\frac{1}{2}$ of a mile apart. The lanterns are elevated about 90 feet above the level of the sea; the lights bear from each other N. by E. $\frac{3}{4}$ E. and S. by W. $\frac{3}{4}$ W., and may be seen 7 or 8 leagues off. (Page 234.)

ON STRAITSMOUTH ISLAND is a fixed light, about 35 feet above the level of the sea. (Page 234.)

EAST POINT LIGHT, Gloucester Harbour.—This is a fixed light, 57 feet above the sea, visible 6 leagues; you must give it a berth of a mile in rounding the point, before you bear up for Ten Pounds Island light. (Page 234.)

TEN POUNDS ISLAND LIGHT, Cape Anne's Harbour.—This is a small fixed light on Ten Pounds Island, within the harbour, 45 feet above the level of the sea; it is intended to lead up to the harbour. (Page 235.)

SALEM (BAKER'S ISLAND LIGHTS).—There are now two separate lighthouses on Baker's Island, the bases of which are about 45 feet above the level of the sea. One is 72 feet, the other $81\frac{1}{2}$ feet high, and bear from each other N.W. $\frac{1}{4}$ W. and S.E. $\frac{1}{4}$ E.; the southern light is the highest, and is visible 6 or 7 leagues. (Page 236.)

- CAT ISLAND BEACON.**—This island bears S.W. by W., near 2 miles from Baker's Island, and $1\frac{1}{2}$ mile from Marblehead Neck. The beacon consists of a spar, 40 feet high, to the top of which is annexed a cask, of about 130 gallons, which is seen at sea, 20 to 30 feet above the land. (Page 236.)
- MARBLEHEAD HARBOUR LIGHT.**—This is a fixed light, 40 feet high, and is shown on the point of the neck, on the S.E. side of the harbour. (Page 238.)
- BOSTON LIGHTHOUSE** is situated on Little Brewster Island, on the north side of the entrance to the harbour. The light is a revolving one; it appears brilliant 40 seconds, and obscured 20 seconds, alternately. (Page 240.)
- LONG ISLAND LIGHT, BOSTON HARBOUR.**—This is situated on the N.E. point of Long Island, and shows a fixed light, 80 feet above the level of the sea, to enable vessels to run through the passage of the Broad Sound at night. (Page 240.)
- SCITUATE LIGHT.**—These lights are situate nearly midway between Boston and Plymouth. This lighthouse shows two lights one above the other; the lower one is red, and the upper one is brilliant, 50 feet above the level of the sea. (Page 242.)
- PLYMOUTH.—GURNET POINT LIGHTS.**—There are two lights on the Gurnet, a round hummock on the north side of the entrance to Plymouth Harbour. There are two lighthouses, containing fixed lights, 86 feet above the level of the sea, and $18\frac{1}{2}$ feet apart, visible 5 leagues. (Page 243.)
- CAPE COD LIGHT.**—This is a fixed light, 220 feet above the level of the sea, in latitude $42^{\circ} 3'$, and longitude $70^{\circ} 3'$ west; on the eastern side of Cape Cod the light is seldom seen more than 6 leagues, on account of the haze over the cape. (Page 244.)
- RACE POINT LIGHT, CAPE COD,** is situated 155 feet distant from high water-mark, and 25 feet above the level of the sea; it is a revolving light, on the same principle as that of Boston. (Page 245.)
- LONG POINT LIGHT, PROVINCE TOWN.**—At the entrance of this harbour is a fixed light, 25 feet above the level of the sea. (Page 245.)
- BILLINGSGATE LIGHT.**—There is now a lighthouse erected upon Billingsgate Island, fitted up with lamps and reflectors, and bearing a fixed light, 40 feet above the level of the sea. From the west end of the island a *shoal* extends off full 10 miles, in a W. by S. $\frac{1}{2}$ S. to a W. by N. direction from the lighthouse. (Page 245.)
- BARNSTAPLE HARBOUR LIGHT.**—This is a fixed light, erected on a dwelling-house, over which it is elevated 16 feet; the light is on the west or starboard side of the entrance. (Page 246.)
- NAUSET BEACH LIGHTS.**—On the eastern side of Cape Cod peninsula have been erected three lighthouses, 150 feet apart. (Page 251.)
- CHATHAM LIGHTS** are two fixed lights on James's Head, 70 feet above the level of the sea; but they are only of use running over the shoals, as the beach has made out 2 or 3 miles since they were erected. (Page 251.)
- MONOMY POINT LIGHT.**—This is a fixed light, 25 feet above the level of the sea, situated on Monomy Point, the extreme southern point of Cape Cod peninsula, and about 3 leagues to the southward of Chatham lights. (Page 251.)

ADDENDA.

Since this Work was published, the following alterations have been made, affecting the navigation therein described, and which the mariner will please mark with his pen in their respective places, before perusing the directions therein given.

JANUARY, 1850.

LIGHT on MINOT'S LEDGE.—The lighthouse recently erected on Minot's Ledge is now so far completed, that it has been determined to exhibit a fixed light thereon, of the first order, on and after the evening of January 1st, 1850.

Minot's Ledge, or Cohasset Rocks, is 8 miles S.E. $\frac{1}{2}$ E. from Boston light, and consists of fifteen large rocks out of water, and ledges all round these rocks, extending north and south, from $3\frac{1}{2}$ to 4 miles. The depth of water round the rocks is 5 and 6 fathoms.

When this light shall be lighted up, Scituate light, which is 6 miles to the southward of Cohasset Rocks, showing two lights, one red and the other white, will be suspended, by order of the Departments.

Masters of vessels, pilots, and other persons interested, are requested to take especial notice hereof.

Custom-House, Boston,
Nov., 15th, 1849.

P. GREELY, JUN.,
Superintendent of Lights.

(Page 243.)

CASHES LEDGE.—Another account, from the recent U. S. Coast Survey, 1849; extracted from the "Nautical Magazine," vol. xviii., p. 432.

"CASHES LEDGE.—Report from Lieut. Com. CHARLES H. DAVIS, U.S.N., dated June 12th, 1849, giving the particulars of his recent determination of the position of *Cashes Ledge*, off the coast of New England.

"The determination Lieut. Com. Davis places *Ammen's Rock of Cashes Ledge* in latitude $42^{\circ} 56'$ north, and longitude $68^{\circ} 51' 30''$ west. As this differs nearly 12 miles in latitude and 12 miles in longitude from the last previous determinations, this official report is of the greatest importance to navigators.

"The U. S. Steamer *Bib*, employed on this survey, remained at anchor on the rock 24 hours, during which time the boats were employed in repeated examinations of the surface of the rock. The sea was smooth, the wind west, the weather perfectly clear, and the southern and western horizon well defined. The latitude was observed—1st, by the meridian altitude of the moon by three observers, agreeing within $\frac{1}{2}$ a minute; 2nd, by a meridian observation of the sun, with four sextants, agreeing within a mile. The longitude was determined by three chronometers, from Messrs. William Bond & Son, which were proved to have gone correctly.

"The least water on this rock is 26 feet, although a less depth has been reported by the fishermen. The extent of the rock having 10 or less fathoms upon it, is about $\frac{1}{2}$ a mile in a N.W. by W. and S.E. by E. direction, and very narrow; it is surrounded by deep water at a short distance particularly on the S.E. side, where the depth suddenly increases to 60 fathoms.

"Note.—This rock has been named *Ammen's Rock*, in compliment to the officer who discovered it."

[N. AMERICA—PART I.]

JUST PUBLISHED,

By CHARLES WILSON,

(Late J. W. Norie & Wilson),

AT THE NAVIGATION WAREHOUSE AND NAVAL ACADEMY,

No. 157, Leadenhall Street, near the Royal Exchange,

LONDON.

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Sailing Directions
FOR
THE COASTS, HARBOURS, AND ISLANDS
OF
NORTH AMERICA.

NOTE.—The bearings throughout the work are magnetic, and the soundings those taken at low water.

An order, recently issued by the Lords Commissioners of the Admiralty, states, that in order to prevent mistakes which frequently occur from the similarity of the words starboard and larboard—in future, the word **PORT** is to be substituted for **LARBOARD** in all *H.M. ships or vessels*.

PART I.

BELLE ISLE TO CAPE COD.

**I.—GENERAL DESCRIPTION OF THE ISLAND AND BANKS OF
NEWFOUNDLAND.**

The ISLAND of NEWFOUNDLAND is situated on the eastern side, and directly in front of the Gulf and River St. Lawrence, its northern part being separated from the coast of Labradore by the Straits of Belle Isle; and its south-western extremity from Breton Island and Nova Scotia, by the great entrance into the gulf. Its length, from Cape Race to Cape Norman, is nearly $5\frac{1}{2}$ degrees, and its breadth, from Cape Spear to Cape Anguille, about 6 degrees 51 miles; being very narrow at the northward, but becoming wide as you approach southerly; its extremes lie between the latitudes of $46^{\circ} 37'$ and $51^{\circ} 40'$, and the longitudes of $52^{\circ} 40'$ and $59^{\circ} 31'$ west. The general features of this large island are unequal, but for the most part high and woody, while the interior rises up in lofty grandeur, and gives birth to numerous lakes and rivers; the hills are covered with snow nearly five months in the year, and the banks near the shores are subject to heavy fogs, accompanied by snow and sleet; yet the summers on the island are generally dry and hot, and the winters clear and free from fogs. The whole circuit of the island is indented with inlets and bays, many of which are extensive, commodious, and well sheltered, where vessels ride in perfect security; into these bays and harbours numerous rivulets continually run, which, besides the fine purity of

their water, afford abundance of trout and other fish. Most of the harbours have complete anchorages, with clear and good channels into them, so that they can be navigated at all times without the assistance of a pilot; they are frequently situated so near to one another, that in many places they form a succession of harbours, but they are not all inhabited; the towns and villages are in general to be found in the larger branches only, where the situation and soil are most convenient; the inhabitants at present are said to amount to nearly 100,000 persons. Cod fishing is the universal employment, for which they have their stages for drying, with their storehouses for curing and laying up their fish, till the season arrives for disposing of them. The fisheries and oil trade of the island have very much increased of late, and large quantities are sent to Great Britain and the colonies, as well as to the United States and continental Europe. The two principal towns belonging to the English, are St. John's, situated on the eastern side of the island, and Placentia on the southern side, both possessing excellent harbours; the interior of the country is but little explored, and so overgrown with pines, firs, and birch, that, except where the inhabitants have made roads, it is almost impassable. The French possess the right of fishing and drying their nets on the north and west shores of Newfoundland; and they also may fish in the Gulf of St. Lawrence, but not within the distance of 3 leagues from any of the coasts belonging to Great Britain. The small islands of St. Pierre and Minquelon were given up to the French, on condition that no fortification shall be erected there, nor more than 50 soldiers kept up in the establishment.

It was agreed in 1818 that the vessels belonging to the United States should have, in common with British subjects, the privilege of fishing on the southern coast, between Cape Ray and the Ramea Islands, and on the western and northern coasts, from Cape Ray to Quirpon Islands; also on the shores of the Magdalen Islands, and on the coasts, bays, harbours, and creeks of Labrador, from Mount Joli through the Straits of Belle Isle and thence northward, indefinitely along the coast as heretofore, but without prejudice to the exclusive rights of the Hudson's Bay Company. And they also have the liberty to dry and cure fish on any of the unsettled bays, harbours, and creeks of the southern parts of Newfoundland and Labrador, but so long only as they shall remain unsettled.

The BANKS of NEWFOUNDLAND.—To the eastward, as well as to the southward of the island of Newfoundland, are several extensive *sand-banks*, abounding with fish of various kinds; in sounding, the bottom is commonly covered with quantities of shells, and frequented by shoals of small fish, most of which serve as food for cod; and these thrive so amazingly, and are so inconceivably numerous, that although many hundreds of vessels have been annually supplied with them for more than two centuries, yet such a prodigious consumption has not apparently diminished their numbers. At the present time it is computed that Great Britain, France, and the United States, annually employ above 3000 sail of small craft, which, with those engaged in curing, drying, and packing the fish, cannot amount to less than 100,000 persons, supported by the fishery alone; so that it must prove a most valuable branch of commerce for the merchant, a livelihood for the industrious poor, and an excellent nursery for seamen. But the fishery is not confined only to the banks, but extends in equal luxuriance to the shores and harbours of Newfoundland, Nova Scotia, and Breton Island. The fish commonly are most abundant where the bottom is sandy, and the depth about 30 fathoms: where the bottom is of mud they are observed to be less numerous. In winter they appear to retire to the deep water; but in February, March, and April, they come again on the banks, and fatten rapidly.

The Great Bank of Newfoundland is to the eastward of the island, and extends from about the latitude of 43° to 47° north, or upwards. Its form, like those of the other banks, is irregular, and not easily ascertained or defined; but about the latitude of 45° , its breadth is nearly 5 degrees; to the southward it narrows almost to a point, and seems insensibly to drop into fathomless water; but the north end, which is nearly in the latitude of Cape Boyle, is about 60 miles across having 45 to 48 fathoms, sand and shells. In the latitude of Cape Race, or in 46° $40'$ north, soundings in 76 fathoms, whitish sand, will be obtained, in longitude 47° $30'$ west, $5\frac{1}{2}$ degrees to the eastward of the cape, and $8\frac{1}{2}$ degrees eastward of the *Virgin Rocks*. Although the Grand Bank extends farther to the eastward, in this parallel, than to the southward of it, it cannot be recommended as a safe one, as a *rocky shoal* of only 21 feet, of about 100 or 200 feet

surface, is reported to have been discovered by Mr. Jesse Ryder, master of the fishing schooner *Bethel*, in 1845, in latitude $46^{\circ} 30'$, and about 50 miles eastward of the Virgin Rocks. In latitude $45^{\circ} 30'$ you will obtain soundings on the edge of the bank, which is very steep, in longitude $48^{\circ} 45'$ west; but in latitude 45° , you will not get soundings until you are in $49^{\circ} 10'$ west; in $44^{\circ} 30'$ north, you will have 35 fathoms, white sand, in longitude 49° west; and when to the southward of latitude of 44° north, the eastern edge of the bank runs to the S.W., and terminates in latitude 43° north; when crossing the bank in $43^{\circ} 30'$ north, you will obtain soundings in 32 fathoms, in longitude $49^{\circ} 30'$ west. Ships not having chronometers, may, by paying attention to the lead, and the parallel, strike soundings on the outer edge of the bank, and shape their courses with certainty for the Gulf of St. Lawrence or the Bay of Fundy. On the western side of the Great Bank, and to the southward of the island of Newfoundland and Nova Scotia, a chain of banks extend almost 2 degrees from the land; these are called the *Green Bank*, *St. Peter's*, *Banquereau*, *Sable Island Bank*, &c.; all these have soundings over them of various depths, from 20 to 70 fathoms, admirably situated, in dark weather, to warn the mariner of his approach towards the land.

The *Outer*, or *False Bank*, called also the *Flemish Cap*.—This is a patch of rising ground, lying 3 degrees to the eastward of the edge of the Great Bank, in latitude $47^{\circ} 30'$ north, and longitude $44^{\circ} 10'$ west; its length is supposed to be about 90 miles, and breadth 50 miles; on it are from 76 to 158 fathoms; between it and the eastern edge of the Great Bank is much deeper water, the bottom being very fine sand and ooze, which will hardly stick to the lead; as you enter upon the Great Bank you will have fine whitish sand, speckled black. Should you make the bank in this latitude, between 46° and 47° , you must be very careful to avoid being drifted upon the Cape Race, or Virgin Rocks. These banks are frequently enveloped in most dense fogs, which, from the middle of spring to December, have been known to last 8 and 10 days successively; at such times they are often so thick that you will not be able to see any object at 10 fathoms distance; a continual drizzling rain is dropping from your sails and rigging, a general calm prevails, and sometimes attended with a considerable swell of the sea, so that you are constantly in fear of running foul of some vessels, or being drifted by the currents upon some danger, which, from a total inability of discovering, you will have great difficulty to avoid. Added to this, the currents which surround the island of Newfoundland are frequently so violent and so irregular, sometimes driving towards the shore, and sometimes towards the sea, that the greatest caution will always be found necessary, while the known current coming from the northern regions, sweeps along the shores of Labradore, and in the spring detaches immense ice-bergs, which float to the southward, and become exceedingly dangerous, especially in foggy weather; some of these masses will frequently be grounded it 40 and 50 fathoms water, and others will be met with farther out to seaward, at the distance of 125 or 130 leagues from the land. Fortunately these formidable objects may generally be discovered, even in dark weather, by a white and bright appearance of the sky above them, and also by the roar of the waters breaking against them; they may also be apprehended by the intense coldness they diffuse to a great distance around them; they continue and are usually met with as late as June, July, and August. Your approach towards the banks may be known by the numerous sea-fowls which will attend you, as roches, malimauks, and divers; these latter are seldom found more than 30 leagues off the banks, but malimauks and others are occasionally seen all across the Atlantic, but in the vicinity of the banks they become numerous. The great fishery begins in May, and continues till the latter end of September.

The **VIRGIN**, or **CAPE RACE ROCKS**, are extremely dangerous; their exact situation has been ascertained to be in latitude $46^{\circ} 26' 15''$ north, and longitude $50^{\circ} 57' 30''$ west. They extend in an irregular chain, or cluster, S.W. by W. and N.E. by E., 800 yards. The least water is on a white rock, in $4\frac{1}{2}$ fathoms, with 5 to 6 $\frac{1}{2}$ fathoms all around it, the bottom distinctly visible. Towards the extremity of the shoal are from 7 to 9 fathoms on detached rocks, with deep water between them, the current setting W.S.W., a mile an hour. The bank on which the shoal is situated extends E. by N. and W. by S., $4\frac{1}{2}$ miles, its broadest part $2\frac{1}{2}$ miles, with regular soundings of from 28 to 30 fathoms, when they suddenly deepen, on its outer edge, to 39 and 43 fathoms. The sea breaks violently over these rocks in bad weather.

In order, therefore, to avoid these dangers, it will be prudent to keep about the parallel of 46° , and when you reach the outer edge of the bank, and have obtained

soundings in longitude $48^{\circ} 30'$ or 49° west, then, if bound for St. John's Harbour, steer north-westward for Cape Spear; but if bound for the Gulf of St. Lawrence, endeavour to cross the bank in $45^{\circ} 30'$, and when about in the 55° or 56° of longitude, shape your course north-westerly for St. Paul's Island, or Cape North or Breton Island.

In thick weather the lead should be kept going when leaving the western edge of the Green Bank, to ascertain when you fall into the deep gully of 80 to 90 fathoms, mud, which runs N.N.E. and S.S.W., about 60 miles, between St. Peter's and the Green Bank. The middle of the gully is in latitude $45^{\circ} 35'$ north; by sounding in this gully, and feeling the edges of the banks on each side of it, you will obtain a fresh departure.

Vessels from Great Britain, in the spring or winter, should keep well to the northward; for it has been long observed, that vessels from the Pentland Firth and the Clyde have invariably made their passages quicker than those from Bristol or the English Channel. The American packets always keep well to the northward during the winter season. Vessels bound to the Bay of Fundy, in the summer, would do well to keep far to the northward as latitude 47° , until they had reached longitude 40° west, then edge away so as to cross the tail of the bank in about latitude $43^{\circ} 30'$ north; at this season you will be more clear of the numerous fishing-vessels that resort to the banks, and perhaps fall in with less ice; but a strict look-out for the latter is always necessary. After being to the westward of the banks, endeavour to keep in latitude 43° , to avoid the northern edge of the Gulf Stream; but in the winter the bank should be crossed well to the northward, to guard against the north-westers, which blow very heavy.

We have known two vessels pass the Pentland Firth together, in the month of April, bound to the lower ports in the St. Lawrence; the one had a passage of 21 days, and the other 7 weeks; the latter ship being the fastest sailer of the two. In comparing logs afterwards, it appeared they were both in about longitude 30° west on the same day, but the one was about 100 miles to the southward, with a gale at west, while the one to the northward was running 9 knots, with a fresh gale at N.E. All the ships which kept to the northward had fine passages.

CURRENTS.—The direction of the currents at the north and south, and on the eastern approach to the Great Bank, varies little from E.S.E. to S.S.E. (true), and is generally between these points; its velocity is seldom less than 8 to 10 miles in the 24 hours, and sometimes increases to 24 and 30 miles. Mariners should observe, that outside all the banks, and especially off the south part of the Great Bank, the currents boil and form such strong eddies, that a vessel becalmed, or with light winds, cannot estimate her position with exactness; this is probably occasioned by the edge of the Gulf Stream.

The currents on the Great Bank have a variable direction, of which the wind is not the only cause, as it is, at times, in a different direction. The fishermen state, that the current every day makes the round of the compass; and it is found, by close observation, that beyond the meridian of Cape Race it is mostly to the westward.

Vessels bound to the Gulf of St. Lawrence should take care to notice and make a proper allowance for the currents, which set from the eastward all along the southern shore of Newfoundland, and often with fatal velocity, causing violent indraughts into the various bays, occasioning the wreck of many vessels, and the loss of numerous lives. These currents chiefly prevail between Cape Race and Cape Ray; more vessels have been lost near St. Shot's and Cape Pine than on any other part of the island. That these accidents are chiefly attributed to currents, there can be but little doubt.

It is well understood by the boat-masters employed in the fisheries, that there is generally a strong current setting in from the eastward along the southern coast of Newfoundland, which, after passing Cape Pine, runs towards St. Mary's and Placentia Bays. This current will be felt at least 20 leagues S.W. of Cape Pine, and becomes more rapid as you approach the land; its velocity increases as the wind favours its direction; but it is at all times of sufficient magnitude to endanger the safety of any vessel approaching from the S.W. in foggy weather. The fishermen, when coming from the westward, invariably use the lead, depending more on the depth of water than the compass.

II.—EAST COAST OF NEWFOUNDLAND.

FROM CAPE RACE TO ST. JOHN'S HARBOUR.

Variation 24 degrees west.

CAPE RACE is the S.E. point of Newfoundland, and lies in $46^{\circ} 39' 44''$ north latitude, and in $53^{\circ} 7'$ longitude west from Greenwich; it is table land, moderately high; near it is a black rock, and several smaller ones around it. The cape itself is clear of wood, steep, and about 50 feet high.

E.S.E. from Cape Race is a fishing-bank, over which are from 17 to 20 fathoms water; it is named the New Bank, and is about 5 miles long and 2 miles broad.

From Cape Race to Cape Ballard the course is N.E. by E., distance 8 miles. About a mile southward of Cape Ballard is Chain Cove Head, appearing high and dark: between the points is a cove; and to the westward of Chain Cove Head is Chain Cove, having a *black rock* above water lying before it. Southward of this is Clam Cove, only fit for boats.

RENEWES.—About $\frac{3}{4}$ of a league N.E. from Cape Ballard, lie some *small rocks*, off Small Point; and $3\frac{1}{2}$ miles beyond Small Point are the *Renowes Rocks*; they are moderately high and bold-to, being distant from the land about a mile; $1\frac{3}{4}$ mile to the northward of these lies Renowes Island, situated near the main land; and about a mile to the southward of the entrance to Renowes Harbour, which is but an indifferent place of shelter, with a depth of water of 15 feet; to sail into it you must keep the north shore on board, for *several rocks* lie scattered about its entrance, and S.E. winds commonly send in a very rough sea.

FERMOSE.—Near 3 miles farther north is Fermose, or Fermowes Harbour, and between them is Bear's Cove, off which a *sunken rock* lies a cable's length from the shore. There is no danger in sailing into Fermose Harbour, though the entrance is narrow; just within it, on the northern side, is a small cove, where a fishery is carried on, but the anchorage is indifferent; farther in is Admiral's Cove, where merchant-vessels ride land-locked, in 7 and 8 fathoms; and a mile within that, on the southern side, is Vice Admiral's Cove; large ships anchor on its south side, in 12 and 15 fathoms, muddy ground, and very convenient for both wood and water. On the same side, farther in, is Sheep's Head Cove, directly off which, near the middle of the channel, is a *bank*, with only 9 feet, constituting the only known danger within this harbour.

From Fermose Harbour, about a mile N.E. by E., is Bald Head; N. by E. from which, a mile farther, is Black Head.

AQUAFORT.—From Black Head to the entrance of Aquafort Harbour the course is N. by W., distant a mile, at the mouth of which is a *rock* above water; to the northward of this rock is the passage in, having 15 fathoms water; the harbour runs in W.N.W., about 3 miles, becoming narrow as you advance; here you have 4 fathoms water; within the narrows, on the northern shore, is a little cove, where vessels may heave down, the shore being steep. To sail up, give the stony beach on the north shore a berth, it being shoal, except at the point of the narrows, where it is bold-to.

FERRYLAND HARBOUR is to the northward, and its entrance is between Ferryland Head and Bois Island, being little more than $\frac{1}{2}$ a cable's length wide. Ferryland Head has *two rocks* near it, called the *Hare's Ears*; when you have passed these, and are within Bois Island, it becomes wider, having good anchorage, with 8 and 10 fathoms, but N.E. winds send in a heavy sea over the low rocks which run from Bois Island to the main.

From Bois Island to Goose Island the course is N.N.E. $\frac{3}{4}$ E., distant $\frac{1}{2}$ a mile, and from Goose to Stone Island the course is N.N.E. $\frac{1}{2}$ N., distant $\frac{1}{2}$ a mile.

CAPLIN BAY.—At $2\frac{1}{2}$ miles from Goose Island is Caplin Bay, running in N.W. by N.; there is a passage into it on either side of Goose Island; to the northward of Goose, and between it and Stone Island, there is no danger, the islands being bold-to; but, in passing between it and the Island of Bois, take care to keep the point of Ferryland Head open to the eastward of Bois, by which means you will avoid a *sunken*

rock, having only 2 fathoms water over it; this rock lies nearly midway between Goose Island and Cold East Point: and, having passed this rock, no other danger will be found in sailing up the bay to the best anchorage, which is abreast of a cove on the port shore, and $\frac{1}{2}$ a mile within Scogin's Head, with 16 fathoms water.

From Ferryland Head to Cape Broyle, the course is nearly N.N.E., distant $2\frac{1}{2}$ miles. Cape Broyle is high land, making somewhat in the form of a saddle, and is the most remarkable land on this part of the coast. South of the north part of the cape, $\frac{1}{2}$ of a mile, lies the *Old Harry Rock*, over which are only 3 fathoms water, though between the main and it are 20 fathoms. E.N.E. of the cape, distant $\frac{1}{2}$ of a mile, are the *Horse Rocks*, having from 7 to 14 fathoms over them: the mark for these rocks is, a white house on Ferryland Downs, open with Stone Islands; and the head of Cape Broyle Harbour open, will lead directly upon them. In stormy weather the sea breaks very high over them.

CAPE BROYLE HARBOUR runs in about 4 miles, between Cape Broyle and Brigus Head, their distance from each other being $1\frac{1}{2}$ mile. Within the entrance, on the north side, is Admiral's Cove, where you may anchor in 12 fathoms water, good ground, but exposed to the S.E. The best anchorage will be found above the Narrows, in 7 fathoms; the only danger in the way is the *Saturday's Ledge*, which lies about $1\frac{1}{2}$ cable's length outside of the Narrows, on the north shore: bring the saddle of Brigus Head open of the point of Admiral's Cove, and you will clear it; and after you get beyond the Narrows, anchor, in 7 fathoms, good ground, very convenient for both wood and water.

BRIGUS.—This is a small cove, or harbour, a little to the northward of Brigus Head; but it is only fit for boats.

At $4\frac{1}{2}$ miles from Cape Broyle is Cape Neddick, a kind of table land, moderately elevated, and steep-to. From Cape Neddick to Baline Head is $1\frac{1}{2}$ mile; $\frac{1}{2}$ of a mile to the northward of this is Baline Cove, fit only for boats. The outer part of Great Island is about $2\frac{1}{2}$ miles N.E. by E. $\frac{1}{2}$ E. from Cape Neddick; and from Baline Head to Spear Island, the course is N.N.E. $\frac{1}{2}$ E., distant a mile. Within this island is a fishery, but the anchorage is unsafe, and the bottom rocky. A mile to the northward is Toad's Cove, fit only for boats; $\frac{1}{2}$ a mile from which is Tinker's Point, the southern boundary of Momables Bay: this piece is nearly a mile deep; it is open, and its northern point forms the southern part of Witless Bay; about $\frac{1}{2}$ of a mile from which is Green Island; and the same distance to the northward of Green Island, is Gull Island, about a mile in length, and $\frac{1}{2}$ of a mile in breadth, the land appearing high.

WITLESS BAY extends inwards full 2 miles from Gull Island, but lies open to the sea; the ground is tolerably good, and the depth of water moderate; but half-way up is a *ledge of rocks* off the northern shore, part of which are seen at half-tide.

BAY OF BULLS.—At $1\frac{1}{2}$ mile to the northward of Gull Island is the southern point of the Bay of Bulls, and from hence to the northern point, called the Bull Head, the course is E.N.E. $\frac{1}{2}$ E., distant $1\frac{1}{2}$ mile: between these points the bay runs up N.W. by W., nearly 2 miles, and then N.W. by N., a mile farther, to the river head. Within this bay the riding is good, in from 20 to 16 fathoms; and after you have passed Bread and Cheese Point there is a cove; off this latter point lies a *sunken rock*, at the distance of about $\frac{1}{2}$ a cable's length, having passed which, the bay is free from danger, and the shores bold; run up and anchor over against John Clay's Hill, bringing it to bear N.E. by N., having 12, 13, and 14 fathoms; the merchant-vessels run farther in to 10 and 7 fathoms.

From Cape Broyle to the Bay of Bulls the course is N.E. by N., distance $4\frac{1}{2}$ leagues. From Bull's Head to the south point of Little, or Petty Harbour, from which a *reef of rocks* stretches out about $\frac{1}{2}$ of a mile, the course is N.E., distance $8\frac{1}{2}$ miles. The south point of Petty Harbour is distant from the north point $2\frac{1}{2}$ miles, between which lies the bay, running in 2 miles; at the bottom of this is a cove and fishery. About midway between the Bay of Bulls and Little Bay is a cavern, having an opening at its summit, through which, whenever the sea runs high, the water spouts through, forming a remarkable appearance, which may be seen far off; it is, therefore, significantly enough named the Spout.

From the north, or Lady Point of Little Harbour, Cape Spear bears N.E., distant $2\frac{1}{2}$ miles; it has a low and ragged appearance, and is the easternmost part of New-

foundland, and lies in latitude $47^{\circ} 30' 53''$ north, and in longitude $52^{\circ} 40'$ west. Vessels from the eastward, upon getting into soundings, and bound for St. John's, generally steer for this point. Between the cape and the entrance to St. John's are three bays; the first is called Cape Bay, and lies between Cape Spear and Black Head, the second is called Deadman's Bay, and lies between Black Head and Small Point; and the third is called Freshwater Bay, and lies between Small Point and Fort Amherst.

On Cape Spear is a revolving light, 275 feet above the level of the sea; it shows a brilliant flash, at intervals of a minute; visible 8 leagues off in clear weather.

ST. JOHN'S HARBOUR is one of the principal places in Newfoundland, being the seat of Government; and although its entrance is narrow, its harbour is excellent, and its situation readily known, both by the block-house built on Signal Hill, at the north side, and Fort Amherst on its south head, or point of entrance. The channel from point to point is only 360 fathoms wide; but it gets wider just within the points than between them, decreasing again as you approach the Chain Rock, for from the latter to the Pancake Rock, the distance is only 95 fathoms, these rocks both being above water, and steep-to: Chain is the northern rock, and Pancake Rock lies on the south side of the channel. Between the two latter rocks, and in the narrows, are *three small knolls*, with 18 to 24 feet on them.

On Fort Amherst, on the south head of the harbour of St. John's, is a brilliant fixed light; also a battery and signal-post.

In approaching the harbour of St. John's with a large ship, care must be taken to avoid the *Vestal Rock*, which lies about 50 fathoms off the southern, or Fort Amherst Point; over this rock are 18 feet water; the marks for it are, Fort William, or the old garrison, just open of the south head; and the outer Wash Ball Rock open to the eastward of the Cuckold's Head; these latter rocks lie close to the northern point of the harbour, and are always above water, being steep-to, and, therefore, not dangerous. The course is N.W. by W., the shore continuing hold until you get near to the Pancake, then give the south side a small berth; continue the same course, or rather more inclined to the westward, keeping Fort Amherst flagstaff open to the northward of Frederick's Battery flagstaff; you will, by these means, avoid the *Prosser*, a rock on the port side, running off the end of another rock, formed like a saddle, with 18 feet water in the hollow, and only 5 feet on its outside; yet it is steep-to, having not less than 5 fathoms close to it; so soon as you are within, and have passed the Prosser Rocks, you may steer up as you please, both shores being clear of dangers, and anchor in from 4 to 10 fathoms water, on a bottom of mud, and lying quite land-locked.

The winds from the S.W. to the southward, as far as N.E. by E., blow in, all other directions of the wind either baffle or blow out of the Narrows; with the latter winds you must warp in, for the convenience of doing which, rings are fixed in the rocks on each side. The anchorage within the Narrows has from 10 to 16 fathoms, and a little before you enter the Narrows there are 20 fathoms.

The tides rise 5 feet, neaps $3\frac{1}{2}$, but very irregular, being much influenced by the winds: and the variation is about 2 points west. It is high water, full and change, at about 7h. 50m.

FROM ST. JOHN'S HARBOUR TO BACALIEU ISLAND.

We recommend the mariner to be careful lest, if a stranger to the coast, he should mistake Kitty Vitty, a small place fit only for boats, lying about a mile to the northward of St. John's, for St. John's itself; at a distance it has the appearance of a good harbour. It must, therefore, be observed, that at the south side of Kitty Vitty is a round hill, shaped like a haycock, standing upon Cuckold's Head; while St. John's Harbour may be distinguished by Fort Amherst, which appears white; and by the flag-staves on the hill, over the north point of entrance: these will sufficiently denote the right entrance.

About a mile from Cuckold's Point is a small point or projection of the land; and $1\frac{1}{2}$ mile farther is Sugar-Loaf Point, tapering upward, and much resembling a sugar-loaf. At $2\frac{1}{2}$ miles farther is Red Head, between Sugar-Loaf Point and which is Logy Bay.

TORBAY.—At $1\frac{1}{2}$ mile from Red Head is the south point of Torbay, which is somewhat lower than the others. From this point to Green Cove, the customary place where vessels anchor, the course is W.N.W., about 2 miles, where you may ride in 14 and 12 fathoms, but it is much exposed to seaward. This bay is large, being a full league in extent. From off its northern point is a *flat rock*, where the sea breaks. A heavy swell sets from the eastward into the bay, so that it is not a good place to lie in.

From Flat Rock Point, which is low, dark land, the coast runs northerly to Black Head, a distance of $3\frac{1}{2}$ miles; the latter bearing N. $\frac{1}{2}$ E., distant 5 miles from Torbay south point.

CAPE ST. FRANCIS.—From Black Head to Cape St. Francis the course is N.N.W., distant a league. Cape St. Francis has a white appearance, and is itself low, but above it the land rises high. A little south of the cape is Shoe Cove, a place used in bad weather for splitting and salting their fish.* Off the cove there is good fishing; and with northerly, westerly, and southerly winds, you will lie safe within the cove.

About $1\frac{1}{2}$ mile east of the cape lie the *Brandy Rocks*, in a triangular position, the outermost being distant from the cape $1\frac{1}{2}$ mile; the sea breaks over them, and there is a channel between them and the cape, but too dangerous to be attempted. There are also other islets lying before the cove, a short distance off. These rocks add considerably to the safety of Shoe Cove.

There is also another small cove, fit for boats, to the northward of the cape, which may be used with the wind off-shore.

CONCEPCION BAY.†—Cape St. Francis, which we have already described, is the southern point of Concepcion Bay. From Cape St. Francis to the southern point of Bacalieu Island, which may be considered the other point or boundary of Concepcion Bay, the course and distance is N.N.E. $\frac{1}{2}$ N., $5\frac{1}{2}$ leagues. This is an extensive and deep bay, running to the south-westward, and comprehending many lesser bays and inlets.

BELLE ISLE.—At 4 leagues S.W. by W. from Cape St. Francis is Belle Isle, in length $5\frac{1}{2}$ miles, and in breadth about 2. This island is lofty, and its eastern side is nearly 3 miles off the main; there is, on this side, a beach, to the southward of which is good anchorage, in 30 fathoms, sandy ground; and a league farther, near the south part of the island, is also tolerable anchorage in from 15 to 30 fathoms. At the south end of the island is a small cove, called Lance Cove, where fishing-vessels sometimes resort to, and find good shelter for 5 or 6 vessels. A mile from the south part of the island lies a *rock*, over which is 3 fathoms water. At 2 miles S. by W. from Lance Cove lies a small low island, called Little Belle Isle; W.S.W. of which, distant $1\frac{1}{2}$ mile, is Kelly's Island, of middling height, and about $\frac{1}{2}$ of a mile in length.

Within Belle Isle, on the main, is Portugal Cove, the anchorage within which is not considered safe. To the southward is Broad Cove; and at the bottom of the bay is Hollyrood Harbour, in depth about $3\frac{1}{2}$ miles, in a cove, on the west side of which, is good anchorage in 8, 9, 10, or 12 fathoms water, and room enough to moor.

Following the coast, about $1\frac{1}{2}$ mile from Hollyrood entrance, is Harbour Maiu, about $1\frac{1}{2}$ mile in depth and $\frac{1}{2}$ a mile wide; it is an open place, but near the upper part you may anchor in from 7 to 10 fathoms water.

* In the *Nautical Magazine* for June, 1832, p. 190, will be found a copious description of the mode of fishing and curing in Newfoundland; together with the important duties to be performed by the cut-throat, header, splitter, and salter.—From the *British America*; by John McGregor, Esq. 1832.

† **CONCEPCION BAY.**—It is a fact worthy, perhaps, of a passing notice, that the land in and about the neighbourhood of Concepcion Bay—very probably the whole island—is rising out of the ocean at a rate which promises, at no very distant day, materially to affect, if not to render useless, many of the best harbours we now have on the coast. At Port de Grave a series of observations have been made, which undeniably prove the rapid displacement of the sea-level in its vicinity. Several large flat rocks, over which schooners might pass some 30 or 40 years ago with the greatest facility, are now approaching the surface, the water being scarcely navigable for a skiff. At a place called the Cash, at the head of Bay Roberts, upwards of a mile from the sea-shore, and at several feet above its level, covered with 5 or 6 feet of vegetable mould, there is a perfect beach; the stones being rounded, of a moderate size, and in all respects similar to those now found in the adjacent land-washes.—*Newfoundland Times*, 1846.

SALMON COVE.—A mile farther is Salmon Cove, the entrance to which is a mile wide. The course in is W.S.W., about $2\frac{1}{2}$ miles; it then divides into two branches, one to the westward, about a mile, the other southward, $1\frac{1}{2}$ mile; in either of these branches the anchorage is good, but the southern river is considered the better one, there being no danger in entering. In the western branch a *rock* lies at a small distance from the starboard shore, having on either side a passage; but the southern one is the wider of the two.

COLLIERS BAY.—To the northward, nearly a league, lies Colliers Bay, running inward south-westwardly, full 2 leagues; $1\frac{1}{2}$ mile from the entrance of which lies a *sunken rock*, nearly mid-channel, on both sides of which the channel is good; this rock is visible at three quarters' ebb. At $2\frac{1}{2}$ miles up the bay is good anchorage, in 10 fathoms water, on the eastern side, and opposite a small cove; into this cove vessels may go, and ride in 3 and 4 fathoms water. Higher up the bay is another cove, at the further distance of $1\frac{1}{2}$ mile, but it is both foul and shallow. Near the head of the bay the anchorage is good, in 8, 9, and 10 fathoms.

BRIGUS BAY is 2 miles to the northward of Colliers Bay, and seldom frequented but by small vessels, it being open, and too far up Concepcion Bay; it runs in from Brigus Head about $1\frac{1}{2}$ mile, and has anchorage in from 10 to 15 fathoms; or at the head of the bay, behind a small island, on the south side, small craft may lie secure from all winds, with 3 and 4 fathoms water, and moor to the shores. The south point of Brigus Bay may be known by its peculiar ragged appearance.

PORTGRAVE, OR PORT DE GRAVE BAY, lies to the northward of Brigus, and has within it Sheep's and Cupid's Coves; the latter is on the south side of the bay, and is a good place for two or three ships to ride in, with 4, 5, and 6 fathoms water, almost land-locked, and not having above one point open. Its north side is bold, and you may lie alongside the rocks, and take in your cargoes; the shore on the northern side is remarkably high, and called Spectacle Head. Sheep's, or Ship Cove, will accommodate small vessels, in 4 and 5 fathoms water, mooring head and stern, having their S.W. anchor in 22 fathoms, about $1\frac{1}{2}$ cable's length from the ship.

Portgrave is about $\frac{1}{2}$ of a mile to the westward of Ship Cove; the water within the islands is shallow, but without them the anchorage is 20 and 25 fathoms deep, where you will be quite exposed to south-easterly winds. Burnt Head is the south point of Portgrave Bay; from whence, $2\frac{1}{2}$ miles N.E. $\frac{1}{2}$ N., lies Bay Roberts Point, the southern point of the entrance to Robert's Bay, which is $1\frac{1}{2}$ mile broad, and runs in to the south-westward 5 miles. A mile above Bay Roberts Point is Blowedown Head, which is higher than any land near it; $\frac{1}{2}$ a mile within this is a cove.

BAY ROBERTS has no invisible danger at its entrance; you may borrow on either side, or go close to the island, which lies farther in on your starboard side; having passed which, you may run on about a mile, and lie land-locked in 9 or 10 fathoms. Between the island and the main vessels can anchor, but the ground is foul and bad; and there are two *sunken rocks*, one being near the inner part of the island, the other above the island and near the main. At 2 miles above the island is excellent anchorage, in the N.W. arm, or branch of the bay, on muddy ground; give the south point a good berth in sailing in, as some *rocks* under water lie near it, and the starboard shore shoals nearly $\frac{1}{2}$ a cable's length.

SPANIARD'S BAY is divided from Bay Roberts by an isthmus, or neck of land; this bay is deep and extensive, but open to the south-easterly winds; there is anchorage within it, nearly all over, especially at its head, in 7 and 8 fathoms water.

At 2 leagues N.E. from Spaniard's Bay are the islands of Harbour Grace; they are distant from Cape St. Francis about 5 leagues, bearing E. $\frac{1}{2}$ S. On one of these islands a lighthouse is erected on the brink of a precipice, the light is shown from the top of a square wooden house, and shows an effective and useful fixed light. This island is only accessible by ladders, and in fine weather. To the southward is Briant's Cove, a good place for fish, but not for shipping; there is a *rock* midway of the entrance; you may sail in on either side of this rock, and find good anchorage in 4 and 5 fathoms water. The ground within the rock is clean.

HARBOUR GRACE.*—The entrance to the harbour is to the northward of the

* On the 18th of August, 1852, the town of Harbour Grace was nearly destroyed by fire. Upwards of 100 houses, with the principal merchant stores, and the established church (which
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islands, for to the southward, and between them and the shore, the channel is narrow and the ground is foul: the course in will be nearly west. Almost mid-channel is the *Salvage Rock*; no danger is outside this rock; there is also another *rock*, called the *Long Harry*, lying near the north shore; both these rocks are above water, and always visible. When you are within the *Salvage*, go no nearer the west shore than just to open a passage on the west side of the *Long Harry*; the leading-mark for sailing in being the high point of the main, called the *Mosquito Point*, just open to the eastward of *Long Harry Rock*; this will carry you in with not less than 22 fathoms, quite up to the harbour, clear of all danger; but toward the eastern shore, you may stand over until you bring the western land-mark on with the cupola of the chapel; you will then be up to the north side of the bar, and must take care not to open these marks, especially if the mark in the cove at *Ship's Head* is open with the mark on the point of *Admiral's Beach*; but if you can bring the western land-mark at the back of the chapel on with the cupola, before the mark at the cove at *Ship's Head* comes on with the mark at the point of *Admiral's Beach*, then you will be in the narrows, and must not stand farther over to the eastward, than to bring those marks in one, and continue turning with these marks to the east and west until you bring the eastern land-mark at the back of the chapel on with the cupola, then you will be within the bar, and should stand well over to the eastward. About half-way down this harbour a broad *spit of sand* runs off from the southern shore, extending full $\frac{3}{4}$ over towards the chapel; this appears to be what *Mr. Lane* has called the bar: it has $1\frac{1}{2}$, 2, 3, and $3\frac{1}{2}$ fathoms in some places over it; but there is a channel between it and the northern shore, with 4 and 5 fathoms water: to sail through which, bring *Otterbury Head* on with the point of the beach at *Ship's Head*, this will also lead to the northward of the island of the *Harbour Grace*. A white *rock* on the beach at the west end of *Father Ewer's House*, near the *Catholic Chapel*, will clear the east end of the spit; the western post of the said *Father Ewer's* gate on with the opening between the spire and the west end of the *Catholic Chapel*, will clear the west end of the spit; and the outer edge of the *Long Harry* on with the extreme point of the northern shore, will clear the shoal on its northern side. This is a very good and convenient anchorage, with room enough for a vessel to turn in or out of the narrows; and the marks here given by *Lieutenant Pierce*, are very easily to be distinguished, and will clear all dangers. The middle mark at the back of the chapel on with the cupola, and the mark at *Ship's Head* on with that at *Admiral's Beach*, lead on the shoalest part of the bar.

To the northward of *Harbour Grace* is *Carbonierre Island and Harbour*; before you reach which, is *Mosquito Cove*, a place between *Harbour Grace* and *Carbonierre*, little frequented, although the anchorage is good, it not being convenient for the fisheries.

CARBONIERRE ISLAND lies about 16 miles from *Cape St. Francis*; its southern end is low land, but upon it stands a small fort, built for the defence of the fishermen. The island is bold-to, so are the shores of the harbour, but off the S.W. end of the island are several *rocks* under water; the passage therefore, between the island and the main, should not be attempted. On the north side, opposite *Carbonierre Island*, are two small coves, where the planters live who keep fishing-boats; the northern of these is called *Clown's Cove*, fit only for boats; the other is called *Crocker's Cove*, and is separated only from *Carbonierre Bay* by a small point of land, named *Crocker's Point*. Off these coves are several *rocks*, both above and under water; therefore, in sailing either in or out of the bay of *Carbonierre*, these must have a berth; and after you reach *Otterbury Point* you may stand in to either shore, both being bold-to, until you near the head of the harbour: this is a good place for riding in, for catching and curing fish, having plenty of cattle, good pasturage, and, in the summer, excellent milk and butter. It is wide, and with water of various depths for anchoring every where.

At 2 miles N.E. by N. from *Carbonierre Island* is *Salmon Cove Head*, high and steep; behind which is a cove, where abundance of salmon are caught; an island lies in the midway of the channel, but the cove is only fit for boats.

GREEN BAY.—At 4 miles farther north is *Broad Cove Head*; and at $3\frac{1}{2}$ miles farther is *Green*, or *Western Bay Point*; off the shore, and about a mile to the northward of *Broad Cove*, is anchorage in from 10 to 15 fathoms. At the entrance to

was the most handsome edifice of the kind on the island) were totally destroyed. Upwards of 600 persons were at once left houseless. The damage was estimated at upwards of £100,000. —*Naut. Mag.*, vol. i., p. 605.

Green Bay is anchorage in 15 and 16 fathoms, but it would be dangerous to go far into the bay, which is quite open to the eastward. At the bottom of this bay is a place where the Indians dig ochre to paint themselves.

At $4\frac{1}{2}$ miles to the north-eastward of Green Bay is Devil's Point Cove, a place of little note, and farther on is Flamborough Head, black and steep-to; there is no good place of shelter hereabout, nor from Carbonierre to the island Bacalieu, except with the wind off shore.

BAY VERDE is about $\frac{1}{2}$ a mile to the westward of the head, and up to the cove is $\frac{3}{4}$ of a mile; the entrance is not above a cable's length across, and vessels lie about $\frac{1}{2}$ a cable's length from the head of the bay, in 5 fathoms water, having a cable fastened to the shore, and an anchor out astern; six or seven ships can lie in this manner, but S.W. winds blowing right in, would make that a dangerous situation: it is also a bad place for either wood or water; but the great quantities of fish which resort here, occasion it to be much frequented. It is a place easily known by Bacalieu and the projecting land, called Split Point. Bay Verde Head itself will serve to point out its position, for these three heads (Bay Verde Head, Split Point, and Bacalieu Island,) appear prominent bluff land, very similar to one another, as you come from the southward; and there is no hidden danger in entering the bay.

The island Bacalieu is high land, nearly 4 miles long and $1\frac{1}{2}$ broad, it is distant $1\frac{1}{2}$ mile from the main, and between is a good channel: nearly midway, between its southern point and Split Point is a *sunken rock*, over which, in blowing weather, the sea generally breaks, although it is 7 fathoms under water, and steep-to all round.

From Split Point, about $4\frac{1}{2}$ miles, is the Point of Grates, having rounded which, you will open Trinity Bay.

FROM BACALIEU, OR BACALHAO ISLAND, TO CAPE BONAVISTA.

TRINITY BAY is, like Concepcion Bay, wide and extensive, and forms itself south-westward; like that also, it contains many lesser bays and harbours within it; these will be regularly described in rotation. Point Grates is the south-eastern point of the bay; from which, distant about 2 miles, is Break-heart Point, and between them is a kind of bay, where boats, with an off-shore wind, ride in safety; within this bay is a *ledge of rocks* above water. To the southward of Break-heart Point is Scurvy Island, and between this island and Sherwick Point is a bay running in S.E. about $\frac{3}{4}$ of a mile; the course from Break-heart Point to Sherwick Point is S.W. by W., $\frac{3}{4}$ miles. Off the latter is a *rock* above water; this forms the northern point of Old Perlican; vessels cannot go between the island and point, although the passage appears good and open, because the ground is altogether foul and rocky; always, therefore, run in to the southward of the island, and, when you have passed it, anchor in 4 or 5 fathoms: this cannot be considered a good harbour, as the ground is bad for holding, and with the wind at N.W. you will then be obliged to buoy your cables.

From Old Perlican to Salvage Point the course is W. $\frac{3}{4}$ N., distant 5 miles; Salvage Point requires a good berth, having a *reef of rocks* running out from it nearly a mile; the point itself is low.

From Salvage Point to Hunt's Head the course is W. by S., distance $6\frac{1}{2}$ miles; and a mile to the eastward of the head is Hunt's Harbour, fit for small craft only; 2 miles off which is *Hunt's Harbour Rock*, over which the sea generally breaks; bring King's Head open of the Sugar Loaf, and you will clear it to the northward. At 2 miles farther is King's Head, and from King's Head to the Sugar Loaf the course and distance is S.W. $\frac{1}{2}$ W., about 3 miles.

Eastward of the Sugar Loaf is Sillee Cove, fit only for boats, and unsafe for vessels.

NEW PERLICAN.—From the Sugar Loaf to the north point of the entrance of New Perlican, the bearing is S.W. $\frac{1}{4}$ W., distance 2 miles; and a mile farther is the harbour, small, but tolerably good, within which you may ride land-locked, in from 5 to 10 fathoms; the shores are bold-to, and free from danger; the entrance is nearly 2 miles wide, being bounded by Smutty Nose Point on the east, and Gorlob Point on the west; but as you advance the harbour becomes narrower, so that at the anchorage it will scarcely be $\frac{1}{2}$ a mile broad.

HEART'S CONTENT.—At 3 miles from New Perlican is Heart's Content, a good harbour, fit for any ship, with excellent anchorage toward the north shore, in from 8 to 12 fathoms water. A league farther is Heart's Desire, fit for boats only; and $3\frac{1}{2}$ miles beyond that is Heart's Delight, another cove, adapted for small craft only. From Heart's Delight, about 3 miles, is Long Point, projecting considerably into the bay; and a league farther is Witless Bay, by no means a place of safety, being too much exposed, and the bottom rocky. Between Long Point and Witless Bay are two small islands, which you leave on your port side.

A mile from Witless Bay is Green Harbour, where vessels may anchor in from 7 to 10 fathoms; 3 miles farther is Hope-all-a-head; 2 miles beyond which is New Harbour, a place of shoal water, and only fit for boats.

DILDO HARBOUR.—At $2\frac{1}{2}$ miles from New Harbour is Dildo Harbour, within which is very good anchorage, in a cove, at the northern side of the entrance, in from 8 to 20 fathoms water, good clean ground. At 3 miles from thence is Chapel Bay, the mouth of which is a mile broad, and the bay about 3 miles deep; here, behind a small island, about 2 miles in, is good anchorage, in from 8 to 12 fathoms. About 3 miles to the northward is Long Cove, running nearly in the same direction to Chapel Bay; and 7 miles farther is the point of Tickle Harbour Bay, which runs inward, in a south-westerly direction, full 8 miles; there is no danger in the way; and, though little frequented, the anchorage is safe.

BAY OF BULLS.—To the northward is the Bay of Bulls, running in a N.N.-Westerly direction to within 2 miles of Chance River, in P'acenia Bay; there is very good anchorage in various parts of this bay, in 12 and 10 fathoms water, particularly on the western side, in a cove, about $1\frac{1}{2}$ mile from the entrance, with from 10 to 15 fathoms, sandy ground; to the N.E. is Bull Island; and 5 miles farther Copper Island; both these lie very near the shore. We now open Deer Harbour, an extensive place and good for anchorage, but barred with many *shoals*; the first *shoal* lies midway between Tickle Point and Deer Island, having 6 fathoms on its shallowest part, and, therefore, not dangerous; but $\frac{1}{2}$ of a mile farther in is a *bank*, with only 2 and $2\frac{1}{2}$ fathoms water; bring the point of the N.E. cove open of Shallop Cove Point, and you will go clear to the westward in 7 fathoms water. There is also another *shoal* lying off the point on the outside of Shallop Cove, on which there are $2\frac{1}{2}$ fathoms: this will be avoided by just opening the point of Deer Island with the first point on the main, within Deer Island; and after you have passed Harbour Island, you may anchor on good ground, in from 10 to 26 fathoms. The entrance of Deer Harbour bears from the north point of Bacalieu Island W. $\frac{1}{2}$ S., distant about 13 leagues.

Full $2\frac{1}{2}$ miles N.E. from the entrance to Deer Harbour is Jones's Harbour, the mouth of which is not above $\frac{1}{4}$ a mile wide, and the channel in is, in several parts, still less; it runs in $2\frac{1}{2}$ or 3 miles, and has good anchorage in from 5 to 24 fathoms water. To the southward is a high and steep island, called Jones's Island; about 4 miles from which is Bald Head; and 2 miles farther Ganny Cove: its entrance is confined, being not more than $\frac{1}{4}$ of a mile wide; there is, nevertheless, good riding within it in 10, 12, and 15 fathoms; about a cable's length off the north shore, just at the entrance, lies a *sunken rock*, and about a mile S.S.E. from the south point of Long Island, is another *rock*, by some called White Island, just appearing above water; this rock bears S.W. from Random South Head.

Random North Head lies W. by N., distant $9\frac{1}{2}$ leagues from the north end of Bacalieu Island, and about $4\frac{1}{2}$ leagues N. by W. from New Perlican.

RANDOM SOUND lies to the westward, and comprehends several arms and harbours: thus Random and Smith's Sounds unite, and form Random Island, the channels being long, narrow, and circuitous; at the junction of the two sounds is a small island, with a *bar* of only 2 fathoms water, the passage being not a mile broad. About 3 leagues from Random North Head lies Hickman's Harbour, where you will find good anchorage in 15 fathoms. Random North Head bears from Random South Head N.E. $\frac{1}{2}$ E., distant 3 miles. When you are within the entrance of Random Sound there is a branch runs in towards the S.W., about a mile within which is Fox Cove, fit for boats; and 2 miles farther Little Heart's Ease, a similar cove running in $\frac{1}{2}$ of a mile, then dividing into two branches; the western one has 4 and 5 fathoms within it, but the eastern branch is shallow, and adapted for boats only. There is also an anchorage, 2 miles farther, on the same side, in a cove with an island before it, with 8 fathoms; and

not far from this is another cove, on the northern side, where a vessel may ride in 7 fathoms.

SMITH'S SOUND has generally deep water, and is, in most places, a mile wide, until you get near the head. Shut-in Harbour is on the starboard side; it is nearly at the entrance, and has no safe anchorage, the ground being : y; 3 miles further up is Pope's Harbour, which is also encumbered with rocks, a shoal lying near the middle of it. The direction of the channel is westward about $7\frac{1}{2}$ leagues. To the eastward of Random Island are Duck and Green Islands, both lying a considerable distance from the main; the latter is high, and may be seen so far as Trinity Harbour, it bears from Bonaventure Head S.W. $\frac{1}{2}$ W., distant about 6 miles; and Bonaventure Head bears from the entrance of Smith's Sound E. by N., distant 5 miles. To the north-westward of Green Island is Anthony Island and Ireland's Eye; the latter is $3\frac{1}{2}$ miles in length, and lies in a S.W. and N.E. direction, making the port side of the entrance to Smith's Sound. The northern point of Ireland's Eye bears from Bonaventure Head nearly S.W., distant $5\frac{1}{2}$ miles.

There is a small place of anchorage called Ryder's Harbour, formed by a little island near the main, and bearing from Green Island W. $\frac{1}{2}$ N., distant 4 miles; the passage to it is round the west end of the point, off which are some scattered rocks, both above and under water; within this harbour are 3 fathoms water, and about $\frac{1}{2}$ of a mile from Ryder's Island the N.W. arm branches off, running westward a mile, and being about $\frac{1}{2}$ of a mile wide; here are 7 fathoms and good anchorage. From Bonaventure Head to Port Bonaventure is 2 miles; but when you are a mile off, and to the southward of the head, the harbour to the Admiral's Stage will lie about N. by W.

PORT BONAVENTURE'S best entrance is between two small islands, but you may go on either side of them in 3 and 4 fathoms water; with a leading wind there will be little danger, and when you are within, and have passed these islands, anchor in 4 and 5 fathoms; southerly winds here send in a very heavy sea; there is, however, a secure place for boats within a point behind the Admiral's Stage, appearing like a great pond, where 100 boats may lie, even with bad weather, in safety.

From Bacalieu north point to Bonaventure Head, the course and distance is N.W. $\frac{1}{2}$ W., $22\frac{1}{2}$ miles. Bonaventure Head is remarkably high and steep.

From Bonaventure Head to the entrance of Trinity Harbour, the course and distance are N.E. $\frac{1}{2}$ N., $4\frac{1}{2}$ miles, and from Bonaventure Head to the Horse-chops E. $\frac{1}{2}$ N., 8 miles.

TRINITY HARBOUR is considered one of the best and largest harbours in all Newfoundland, having several arms and coves, where some hundred ships may ride land-locked. It is a place which you may safely turn in or out, being bold-to on each side, and having no danger but what is visible; except when going into the S.W. arm, where the Admiral's Stage usually is, there is a shoal, called the *Muscle Bank*, which shoots off from the point within the small island on the port side going in, and extends over N.N.W., about $\frac{1}{2}$ the breadth of that arm. Being within that bank, which will discover itself by the colour of the water, you may edge over close to the south shore, or keep your lead going to avoid the Muscle Bank, giving it a little distance; the mark for avoiding it is the house, standing over the steep perpendicular rock, situated between Tavernor's Point and Ship Cove, open of the Neddick; keep this mark on, until you are half-way over to the Neddick, then haul toward the S.W. branch, taking care to avoid the south shore, till you shut in Tavernor's Point with the Neddick; you will then go within the Muscle Bank. You may anchor in from 14 to 10 fathoms, and approach near to the stage on shore, so as to make a stage with top-masts to your stage on shore, to load or unload your ship. This will be found a most excellent harbour; for, after you are in the S.W. arm, you will perceive another branch running up to the N.W., which is continued by another to the S.W.; but there is a bar, or ledge, at the entrance of the S.W. arm. The N.W. arm is also a large place, having good anchorage for 500 sail of ships. Besides the before-mentioned arms, the main harbour turns up to the north.

Ships being within the harbour's mouth, may safely ride in a large cove on the starboard or east side, land-locked, on good ground; here the planters live. Over against that cove, on the port or west side, are two other coves; the southernmost of them is called the Vice-Admiral's Cove, very convenient for curing fish; and above, or

to the northward of that, is a large cove, or arm, called Gots' Cove, where there is room enough for 300 or 400 sail of ships to ride, all on clear ground; there, neither winds, sea, nor tide can hurt you: and in this place ships may lie undiscovered until the weather becomes clear and open.

There are several other anchoring places in this harbour with good clear ground. The bottom every where is tough clay, with 4 and 5 fathoms water, within 2 boats' length of the shore; and 6, 7, 8, 9, 10, 12, and 14 fathoms, and in some places more, in the middle of the arms and channels. You may turn in or out readily, observing your tide, which rises about 4 feet, and sometimes more.

ROBINHOOD'S BAY.—Sherwick Head, which is the eastern point of Trinity Harbour, forms also the south-western boundary of Robinhood's Bay, the entrance to which is a mile wide, and the bay extends northward nearly 2 miles; here vessels frequently ride and fish, in from 7 to 17 fathoms water; at the farther, or upper end of this bay are some *spots of shallow water*, but at its entrance, and between Sherwick and Fox Island Points, there is no danger whatever.

SALMON COVE and **ENGLISH HARBOUR** lie to the eastward of Robinhood's Bay, being only divided from it by a narrow neck of land, called Fox's Island. The former of these runs in northerly, and is considered a good fishing place; it is clear of dangers, and has a good depth of water, from 17 to 10 and 8 fathoms; the eastern shore is bold-to, and at the farther end of the cove there is a small run of water, which extends about 2 miles to the northward.

ENGLISH HARBOUR is situated at the south-eastern entrance of Salmon Cove; it is a clean bay, where you may ride in 4 and 5 fathoms water. From hence the coast rounds to the eastward to the Horsechops, a distance of more than 3 miles; it is all high land, steep-to and without danger. To the north-eastward of Horsechops is Green Bay, open, and entirely exposed to the southward; at the eastern part of this bay is a small sandy beach with a rivulet of water; this place is little frequented, and is neither convenient for ships to fish or ride in. When you have passed this bay, there is no sheltering cove or place until you reach Ragged and Catalina Harbours.

RAGGED HARBOUR is so named from the rough and craggy appearance of the surrounding rocks, which render it unsafe for either boats or ships to enter; but for those who intend going there, we shall observe, they must go to the northward of the *reef of rocks* at its entrance, running on north, until the harbour comes quite open, then you may steer in between the Round Island near the main, and a large *black rock*, being the outermost of the ragged ones before mentioned; sail on until you are to the westward of them all, or until you get the south head of Catalina to appear between the westernmost rock and the main, then anchor. A river of good water is at the head of the harbour.

CATALINA HARBOUR is nearly 2 miles to the northward of Ragged Harbour, and is in the latitude of 48° 31' 15" north, bearing from the north point of Bacalieu Island nearly north, distant 24 miles. It is a good harbour for small vessels, and may be known by a singular green island at the south point of its entrance; nearly $\frac{1}{2}$ a mile to the north of this island is the *Brandy Rocks*, a ledge, over which the sea frequently breaks; you may go on either side of these rocks, giving the little island a berth, or with a leading wind between the island and the main, though this passage is exceeding narrow, in 4 and 5 fathoms. Just within the entrance of the harbour is *Charlton Rock*, or *Shoal*, lying nearly mid-channel, over which are only 8 feet water; you must avoid bringing the north point of Green Island on with Burnt Head, the south point of the harbour, for that will carry you right upon the rock; there is a passage between the island and the rock, and also between the rock and the north shore, only steering nearer the main, about $\frac{3}{4}$ over.

LITTLE CATALINA BAY lies inward on the northern side; from Catalina Harbour to Little Catalina the course is about N.E., $1\frac{1}{2}$ mile; and thence to the north head of the bay E.N.E., a little easterly, $3\frac{1}{2}$ miles; when within the harbour you may anchor close to the shore in 4 and 5 fathoms, land-locked; or to the southward of the Little Green Island in $3\frac{1}{2}$ fathoms, or by running up 2 miles farther, obtain fresh water. In the S.W. arm, or branch of the river, where there is anchorage in 5 fathoms, the harbour runs westerly. Sometimes the water in this harbour will suddenly rise 3 or 4 feet, then fall again, and in certain seasons it will often do so two or three times in 3 or 4 hours. It abounds with salmon, and the herb, Alexander, grows luxuriantly on the

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little island. Near a small cove at the N.W., is a sort of mineral, of a glittering nature, generally called fire-stone. Excellent willicks may be found on the rocks.

From the south to the north head of Catalina the course is N.E. $\frac{3}{4}$ E., distant $5\frac{1}{2}$ miles, and between them are from 13 to 5 fathoms water; the whole was is a kind of broken ground, and in blowing weather the sea frequently breaks high over it.

From the north head of Catalina to Flower's Point, the course is N.N.E. $\frac{1}{4}$ E., distant $2\frac{1}{2}$ miles; and a mile to the eastward of the point lie some *sunken rocks*; you may go between Flower's Point and these rocks, in 6 fathoms water, but it is more advisable to pass on the outside of them; this you will readily do by bringing Gull Island open of Spiller's Point, or by keeping the south head of Catalina open of the north head.

From Flower's Point to Bird's Island is 2 miles; within Bird's Island is a small bay where ships can occasionally ride, in one branch which runs up toward the west, and in the other, amidst some rocks, which are above water. Bird's Island Bay extends so far as Cape L'Argent.

From Flower's Point to Cape L'Argent is $3\frac{3}{4}$ miles; it is rather a low rocky point, having also a *large rock* above water lying off it.

From Cape L'Argent to Spiller's Point is $1\frac{1}{2}$ mile; between these points the lead falls into very deep water. Spiller's Point is steep and bold-to, but not very high, with a *rock* above water near it; over the point you may discern the high land of Port Bonavista a great way off at sea.

From Spiller's Point to Cape Bonavista the course is north, distant almost a league; between them is a deep bay, which might be mistaken for the harbour of Bonavista, from the head of which it is only divided by a neck of land, 2 miles over, and from Red Head Bay, it is not above a musket shot.

Hitherto the allowance made for the variation of the compass has been two points west, which it is presumed will be found sufficiently near to the truth for all the purposes of navigation; but from hence, to the northward, it appears to have generally increased. The Admiralty surveyors found the polarity of the needle subjected to several localities at different parts of the coast, and becoming less as you get embayed. At the capes which form Bonavista Bay, the variation in 1820 was $30^{\circ} 28'$ west, at Barrow Harbour $28^{\circ} 30'$ west, and at Happy Adventure only 28° .

FROM CAPE BONAVISTA TO CAPE FREELS (NORTH)*

Variation 28° west.

CAPE BONAVISTA is in latitude $48^{\circ} 42'$ north, and longitude $53^{\circ} 8'$ west. On it there is a revolving light, showing a red-and-white light alternately, at intervals of 2 minutes; it is elevated 150 feet above the level of the sea; and kept open of Spiller's Point, will keep vessels clear of the Flowers Rocks.

The cape appears from a distance of a bluish colour, and is a steep rocky point, having 4 fathoms close to the shore. Somewhat less than $\frac{2}{3}$ of a mile N.N.E. from the extremity of the cape lies Gull Island, which, though small, may easily be recognized, by being of moderate height, and elevated in the middle, making something like a round hat with broad green brims, and visible 4 or 5 leagues off when the weather is clear. N.N.E. $\frac{1}{4}$ E., distant $3\frac{1}{4}$ miles from Gull Island, is the *Old Harry Rock*, having only 13 feet water over it; from this a *reef or bank* extends to the N.E., nearly 3 miles, having several dangerous spots upon it, of only 18 feet and 3 or 4 fathoms; the outer edge of this danger is called the *Young Harry*, and lies in latitude $48^{\circ} 48'$ north, and longitude $53^{\circ} 6'$ west; at its northern extremity is 10 fathoms water, and a little farther off 45 fathoms; between the Young Harry and the middle ground of 18 feet, are 12, 20, and 50 fathoms; to the northward of the middle ground are 60 and 40 fathoms, to the eastward 19 and 20 fathoms, to the southward, and between it and the Old Harry, 26, and 31 fathoms; at the north part of the Old Harry are 11 fathoms, to the westward 30

* So called to distinguish it from a cape of the same name situated on the southern part of Newfoundland, near St. Mary's Bay.

fathoms, to the S.W. 9 fathoms, and a little farther S.W. 57 fathoms. Abundance of fish are caught by the boats which frequent this bank, but it is very dangerous for shipping. The sea commonly breaks over Old Harry, unless in fine weather and the water be very smooth; but the other part of the shoals show themselves only in, or immediately after, heavy gales on the shore.

In order to avoid the Old Harry, you should bring Gull Island on with the Green Ridge, which lies considerably inland; but you must beware, for this mark will carry you too close to the Young Harry, Captain Bullock, who surveyed this part in 1820, says, "Vessels running along shore; to avoid these rocks, must be careful in keeping Cape Bonavista open with the westernmost extremity of a high range of land to the southward, called the Inner Ridge; these dangers, together with the *long ledge*, called the *Flowers*, already noticed, render it very imprudent for a mariner to attempt making land hereabout in thick or boisterous weather; indeed, at any time, the island of Bacallieu is the best and safest land-fall for the stranger that is bound to any part of Bonavista Bay."

BONAVISTA BAY.—This extensive bay is formed, on the south, by Cape Bonavista, and on the north by Cape Freels; these capes lie N. $\frac{3}{4}$ E. and S. $\frac{3}{4}$ W. from each other, and comprehend a distance of 37 miles, between which the coast is much indented with bays and inlets of the sea, most of which are navigable, but difficult, rocky, and dangerous. The land, on the south, is generally high and mountainous, and the shores steep and iron-bound; the north side is low and marshy, from which the water runs off shoal to a considerable distance; the whole bay abounds with small islands, and is, on every side, encompassed with dangers. The harbours, sounds, and inlets, are deep, extensive, numerous, well sheltered, and safe, but they are generally so deeply embayed, the passages into them so intricate, and the surrounding land so similar in appearance, that few, except those to whom the navigation is familiar, ever attempt to enter any of them. Of those which seem to offer the best refuge to strangers, who from necessity should be compelled to seek a place of shelter, the following appear best calculated to suit his circumstances, and are recommended by Captain Bullock, in his late survey;—Barrow Harbour, or Great Chance Harbour, on the south; and New Harbour, or Cat Cove, on the north side of the bay; but the extreme narrowness of the entrance to New Harbour is a great impediment, and renders Cat Cove the most preferable.

PORT BONAVISTA, or BONAVISTA HARBOUR, lies within and about 3 $\frac{1}{2}$ miles to the south-eastward of Cape Bonavista, and vessels intending to rendezvous there, may either pass to it, between Gull Island and the cape, or between Gull Island and the Old Harry Rock, or to the northward of the Young Harry altogether; if the former, between Gull Island and Bonavista, the passage is about $\frac{1}{2}$ of a mile wide, and both the cape and island steep-to, having 4 fathoms water close to each side, and 16 or 18 fathoms mid-channel; but it will be advisable not to go too near the Gull Island, on account of a *rock* under water, which lies about 300 yards off the S.E. part of the island. Having passed through this channel, and finding yourself to the westward of the cape, you will see Green Island, distant about $\frac{1}{2}$ a mile from the cape; large vessels commonly leave this island on their port side in their passage to Port Bonavista, going between Green and Stone Islands; the channel is full $1\frac{1}{2}$ mile wide, and with 12, 16, and 18 fathoms water in it, and no danger except a *sunken rock* of 3 fathoms water, which lies about 200 yards to the N.E. of Green Island; or they may go to the westward of Stone Island, and run on southerly until they open the points of the harbour, and having passed Moses Point, sail to the southward of Swerry's Rocks; these are always visible, and have no passage between them and the point; here they may anchor in 10 or 8 fathoms.

The inner passage, between Cape Bonavista and Green Island, is frequently attempted by small vessels; the channel is in some parts narrow, and the ground foul; about a mile to the south-eastward of Green Island is the *ledge of red rocks*; you may go between these and the land into Red Cove; there are 6 fathoms water, and in the cove 4 $\frac{1}{2}$, 4, and 3 fathoms; but the ground is all foul; there is a passage also to the southward of these rocks, and between them and the western head, in which are 6 fathoms. A little to the eastward of western head is a small *rock* under water; it lies about a cable's length from the shore, and the sea commonly breaks over it, but boats can go between it and the shore. To the southward is Red Head, or Point, and farther on is Moses Point; between these is another opening, called Bayley's Cove; you may, in

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case of extreme necessity, run in here and anchor, but the ground is rocky and foul throughout; there was, on the north side of this cove, a stage for fishing. Moses Point is the northern point of Bonavista Bay; this place is a very eligible situation for carrying on the fishery; but it is so open to the weather, that with north-westerly gales, following a continuance of strong winds from seaward, the waves break right athwart the harbour's mouth, and sometimes many of the fishing-boats founder at their anchors, and not unfrequently many of their stages are destroyed. Vessels, during the summer months, commonly moor under Swerry Head in 8 or 10 fathoms; but even here, and every other part of this harbour, the ground is so rocky and uneven, that you will be obliged to buoy up your cable.

BLACK HEAD BAY.—This is a wide and deep bay, comprehended between Black Head to the eastward, and Southern Head to the westward. Black Head bears from Cape Bonavista W.S.W. $\frac{1}{2}$ S., distant 5 miles; Southern Head bears from Cape Bonavista W. $\frac{1}{2}$ N., distant 11 miles; and Black Head and Southern Head bear from each other E.S.E. $\frac{1}{4}$ S. and W.N.W. $\frac{1}{4}$ N., being nearly 7 miles apart. On the western side of Black Head Bay is KING'S COVE, distant about 4 miles from Southern Head; this is also a fishing establishment, but still more objectionable, as a place of shelter, than Bonavista, for this is directly open to seaward, the ground is all foul.

KEELS.—This is another establishment for the fisheries, and situated in one of the coves about midway between Southern and Western Heads; between these two heads are four other coves: but neither Keels nor any of these coves, are fit or good places for anchorage, especially with ships of burthen.

From Western Head the land bends W.S.W. $\frac{1}{2}$ S., and leads to numerous coves, bays, and arms of the sea, most of which have deep water and places of anchorage. We shall here enumerate the principal of these, with their respective situations; but, as many of them are too deeply embayed for general navigation, we shall not extend our directions to a minute or particular description of them all, but confine ourselves to such only as are situated in prominent parts of the bay, and are mostly fitted for general use, and commonly frequented.

We have already stated, that from Western Head the land turns W.S. Westward, and leads to Plate Cove, Indian Arm, and Southward Bay.

PLATE COVE is situated on the coast, about $7\frac{1}{2}$ miles distant from Western Head; its entrance, between Arrow Point and Plate Cove Head, is $\frac{3}{4}$ of a mile wide, from whence it bends in more than a mile to the southward; at its eastern extremity is a run of fresh water, but the bottom is foul and rocky; it is therefore not much frequented.

INDIAN ARM lies about S.W. by W. from Plate Cove Head, distant 3 miles; it is a narrow inlet, running in nearly S.W., about 2 miles, and terminates in a rivulet of fresh water.

SOUTHWARD BAY is separated from Indian Arm only by a narrow neck of land; this is an extensive branch of the sea: its entrance between Red Head and Kate's Harbour Head, is a full mile wide, with 30, 50, 80, and 90 fathoms water, mid-channel: from hence it bends to the south-westward $7\frac{1}{2}$ miles, becoming narrower as you advance, but with deep water and no danger. On the western side there is an opening called Hayes Cove; it lies about 2 miles from Kate Harbour Head.

BACON-BONE ROCK.—It will be proper here to remark, that vessels intending to seek either of these places, must beware of *Bacon-Bone Rock*, a danger of only 18 feet water over it; this lies W. $\frac{1}{2}$ N., distant a mile from Western Head, and directly in the fairway of the navigation. To avoid this danger, do not shut in Southern Head until Little Denier comes on with the outer Shag Island.

KATE HARBOUR lies to the westward of Plate Cove; its entrance is $\frac{3}{4}$ of a mile wide, and the harbour runs in about $1\frac{1}{2}$ mile; the depth of water is 36, 29, and 27 fathoms mid-channel, decreasing as you advance to the farther end. There is a *rock* under water off its entrance, with 7, 8, and 9 fathoms round it; this lies nearer to Kate's Head, but there is a passage between them, and also a still wider channel on the western side of the rock.

SWEET BAY.—This is another extensive inlet, lying to the westward of Kate Harbour; its entrance is between Cutler's Head and Chance Point, and leads also to Maidenhair Cove and Little and Great Chance Harbours. Sweet Bay is the eastern-

most inlet; which having entered, and passed Cutler's Head, which is rocky and steep-to, you will see Turfpook Island, which is small and narrow; about $\frac{1}{2}$ a mile to the S.W. of this is Woody Island, and between them a *rock* under water; there is a passage on either side of these: and when you get beyond Woody Island, the bay becomes about $\frac{3}{4}$ of a mile wide, with 60 fathoms water midway; advancing still farther, you will observe several islands in your passage. There is also a *rock* under water on your starboard side, $\frac{3}{4}$ of a mile beyond Woody Island; it lies abreast of a little island which is mid-channel; farther on is Wolf Island, between which and the main there is no passage; off this lies Gooseberry Island, between which and Wolf Island there is 30 fathoms water, but the channel is narrow, and that on the eastern side of Gooseberry Island is much wider. Sweet Bay here divides into two branches; that to the eastward is called the S.W. Arm, and has directly before its entrance Hunt's Island, the channel to the eastward of which has 10, 12, and 14 fathoms water, and that to the westward 7 and 9 fathoms; you will then see on your starboard side a small island: you may pass it on either side, and having so done, will drop into 24, 22, and 20 fathoms water; the head of the arm is foul and rocky. The N.W. Arm is divided from the S.W. Arm a little below Hunt's Island, and at the farther end of Wolf's Island is nearly a mile wide, from whence it runs south-westerly $3\frac{1}{2}$ miles, with good depth of water, and clear of dangers. At the bottom is a sandy beach and a small rivulet.

GREAT CHANCE HARBOUR.—This is an excellent and convenient place of anchorage, the entrance to which lies W. $\frac{3}{4}$ S., distant $9\frac{1}{2}$ miles from Western Head. Vessels sailing for this place, should recollect the mark already given to avoid the *Bacon-bone Rock*; having passed this danger, you may sail on directly for the harbour: the course will be W. by S., until you get abreast of Chance Point; you will now guard against a *sunken rock*, at the southern part of the entrance, which has only 6 feet water over it; to avoid and go clear of this danger, be careful not to shut in the western Mustard-bowl Island with the eastern one: these are situated on the port side of the channel; having passed the eastern island, stand boldly in, approaching each side as nearly as you like, and anchor any where above the narrows, in from 11 to 5 fathoms; the ground is good and holds well; you will lie sheltered from all weather, and may procure wood and water with great facility. Chance Point and Cutler's Head are both steep-to; off the former, and directly in a line between the southern part of Long Islands, there is a *spot of ground* with only 7 fathoms water; during heavy gales from the seaward, this will show itself by the sea breaking over it, but in fine weather it is not dangerous. N.E., a little northerly, distant almost a mile, is the *Chance Gull Rock*, steep-to, and always visible. To the westward is Deer Island, $1\frac{1}{2}$ mile long, but narrow; there is a good channel between it and the main to Chandler's Reach.

CHANDLER'S REACH is the channel leading to Goose Bay and Clode Sound; the course through which is W. $\frac{1}{2}$ S., which, from the N.W. point of Deer Island, will take you to Connecting Point; this is the point of the peninsula that divides the former from the latter.

GOOSE BAY runs in south-westerly, about $7\frac{1}{2}$ miles; and by keeping in mid-channel you will meet with no danger, but have 47, 40, and 36 fathoms water, until, having passed Lubber's Hole, the depth decreases to 12, 13, 10, and 8 fathoms, when you will see a small island, situated to the westward of Goose Head; behind, and to the westward of this, you may anchor in from 4 to 7 fathoms, or, farther to the southward, in $5\frac{1}{2}$ fathoms; in most of these inlets you will lie perfectly safe, and entirely land-locked. Fresh water and wood are plentiful, and easily obtained.

CLODE SOUND is a fine branch of the sea, running in from Chandler's Reach full 20 miles; it has many places of very good anchorage, and without any danger; vessels may find perfect safety on the northern shore, at Brown's Cove, or, farther in, at Long Cove; or at Cutter Cove; or on the southern shore, at Bunyan's and Love Coves; or, passing the Platter Rocks, and steering westward, at Freshwater Cove; the mid-channel has all the way deep water, and there are no rocks except near the shores.

LION'S DEN.—This is an opening lying at the N.W. end of Chandler's Reach; to enter which you must sail to the northward of the Deer and Cluster Islands, and pass the narrows, which is about $\frac{1}{2}$ of a mile wide, and has 24 fathoms water in it; having passed the entrance about a mile, there is *sunken rock*, round which are 4, 5, and 6 fathoms; you may then perceive the inlet to branch off into two divisions:

that to the N.W. is very narrow, and has a rocky islet at its entrance; but that which runs to the S.W. is broader, and has 11, 14, and 10 fathoms water in it; it runs in from the sunken rock about $1\frac{1}{4}$ mile, and at its farther end becomes shoal, narrow, and rocky.

THE LONG ISLANDS are four in number, having narrow channels between them, some of which are enumbered with rocks and dangerous; the eastern island is the largest and broadest, the next to it is the longest, the two western ones are smaller and narrower; they form the northern boundary of the passage from Western Head to Chandler's Reach; and also the southern boundary to Swale Tickle and Newman's Sound. Off the north-eastern point of the largest Long Island, lies a *sunken rock*; it is close to the land, and therefore may easily be avoided; this point bears from Western Head nearly W. by N., distant 6 miles.

NEWMAN'S SOUND is a large arm of the sea, running in W. by N., having at its entrance Swale Island, which is nearly $4\frac{1}{2}$ miles long, and not one broad in the widest part; this divides the entrance into two channels: the southern passage is called the Swale Tickle, and the northern one goes by the general name of Newman's Sound. To sail from abreast of the Western Head into the Swale Tickle, you should steer W.N.W. $\frac{1}{2}$ W. To sail from abreast of the Bonavista Gull Island, steer W.N.W. $\frac{3}{4}$ W., 24 miles, and it will carry you a little to the southward of Little Swale Island, and in the fairway of the passage; but in advancing through this channel, there are several obstructions, and the passages from thence into Newman's Sound are so narrow, that it will always be advisable to go to the northward of the Great Swale Island. To do this, having rounded the Gull Island, steer W.N.W. $\frac{1}{2}$ W., 23 or 24 miles, you will then have the sound open, and can proceed accordingly; it is full $1\frac{1}{2}$ mile wide, and extends nearly in a W. by N. direction, from the N.E. point of Swale Island 11 miles, having several places of good anchorage. Those on the southern shore are South Broad Cove, Minchin's Cove, and Standford Cove.

SOUTH BROAD COVE is situated $2\frac{1}{2}$ miles beyond the western point of Swale Island, and is a place of great safety; the passage in is to the south-westward, and you will ride well sheltered, in 10 fathoms, free from any danger. There is a small island, which you will leave on your port side.

MINCHIN'S COVE is to the westward; to go to this place, there is a long narrow point of land running out to the northward, which you will round, and turning southerly, the cove will appear open: here you will lie in 5 fathoms, opposite a sandy beach. To the westward is Mount Standford, off the point of which lies a small island, reaching half-way over the passage, making the channel in this part very narrow; the best course through is to the eastward of this island, in 9 fathoms; here an opening appears to the eastward, called Buckley's Cove, fit for small vessels; the coast now winding to the westward, forms a broad bay, with 20, 26, and 27 fathoms water in it, free from any danger, and shallowing on each side towards the shores. At the south-western part of this is Standford Cove, having a sandy beach, the approach to which shallows gradually.

The anchorages on the northern shore are, North Broad Cove, Great and Little Happy Adventure Coves, and Barrow Harbours; of these Captain Bullock gives nearly the following description:—Barrow Harbour is tolerably safe, and the most convenient harbour on the south side of Bonavista Bay; it is situated on the southern side of the peninsula which divides Newman's Sound from Salvage Bay, and is formed by three large islands,—Keat's, Goodwin's, and Richard's Islands; that part between Goodwin's Island and the main is the entrance, about 500 yards wide, and not difficult of access. The harbour is a full mile in length; the outer part is rocky and not well-sheltered, but the inner part is completely land-locked, and has good holding ground. Vessels taking their departure from Gull Island, Bonavista, should steer N.W. by W. $\frac{3}{4}$ W., about 22 miles. But if coming from the northward, their course from the Eastern Gooseberry Rock, towards Barrow Harbour, will be S.W. $\frac{1}{2}$ W., 18 miles; Gooseberry Rock appears just above water, and lies in latitude $48^{\circ} 57'$ north. In this course they will have to avoid the *Malone Rock* and *Ledge*, the latter being a *shoal*, lying S. $\frac{3}{4}$ W., distant a mile from the rock, which is always above water: this shoal has never less than 4 fathoms over it, so that, in fine weather, no danger whatever is to be apprehended. In sailing on, and approaching Little Denier Island, which is almost opposite the harbour's mouth, and lies in latitude $48^{\circ} 41'$ north, you must be particu-

larly careful of the *Outer Rock*, lying N. $\frac{3}{4}$ W. of Denier, distant $\frac{3}{4}$ of a mile; this has only 4 and 6 feet upon it, but fortunately the sea constantly breaks over it, thereby pointing out its situation, and enabling the mariner to guard against, and steer clear of the danger. Having reached the Little Denier, it will be better to go on its northern side, for between Little Denier and Richard's Island, there lies a *dangerous reef of rocks*, called the *Brandishes*; these extend nearly in a line, but at various distances, almost half-way over the channel; upon these rocks are from 12 to 17 feet, with narrow channels of 7 and 8 fathoms between them; to navigate this passage, therefore, requires a pilot. To clear the Brandishes, you should keep Wedge Point a little open to the southward of Smoky Ridge, which is a range of high lands at the top of the harbour, until you bring Broom Head on with the Middle Shag Island; the passage then will be open, and without obstruction, until you get near to Wedge Point; off which, only 70 yards, lies a *sunken rock*, with 8 feet water: you may then sail up Pudner's Cove, until you are entirely shut in from the sea, then you can anchor, in from 10 to 18 fathoms. Some vessels prefer anchoring in Garland's Creek; but without running well up, the ground is foul. There is a small fishing establishment at this place: good water may be had at Pudner's Cove, and plenty of fire-wood; this, about the sea-coast, is of the smaller sort, but inland it grows much larger. The land about Barrow Harbour is higher than the neighbouring shores, and, consequently, may be the more readily recognized by its projection.

SANDY COVE lies farther up Newman's Sound, and has good anchorage; it may readily be known, having the only sandy beach on the north side of the sound; there is no danger in entering, and it is perfectly safe, the depth of water being from 10 to 20 fathoms. In sailing to this place, and keeping along the northern shore, between Barrow Harbour and Sandy Cove, you will meet with a *rocky isle*, called *Half-way Rock*; it is steep-to, and has 4 fathoms close to it: there is also a deep-water channel between it and the main, but keep outside, and pass to the southward of it, and there will be no danger.

GREAT AND LITTLE ADVENTURE COVES.—These are two snug little coves, lying about $\frac{3}{4}$ of a mile above Sandy Cove, and on the same side of Newman's Sound; but, from the narrowness of their entrances, they are fit only for small vessels. Between these coves, and off a point of land which separates them, lies a *sunken rock*, about 80 yards from the shore, with only 4 feet over it. Off the entrance to Great Adventure Cove lies Sydney Island; the passage in is to the northward of this island, for between the island and Harbour Head there is no passage.

NORTH BROAD COVE.—The entrance to this place lies $1\frac{1}{2}$ mile from Harbour Head, and is on the northern shore; it is a convenient and well-sheltered anchorage, and may be easily known by a round island lying at its western side, named Black Duck Island. Sailing into the cove, you should keep the island on board until you make a tickle* between it and the western shore, to avoid a *sunken rock* at its eastern side; after which, it is advisable to keep as close as possible to the eastern shore, for there is a *dangerous rock* lying mid-channel: being inside of this rock, you may anchor in from 10 to 25 fathoms, muddy ground. Wood and water may easily be obtained.

In advancing farther up Newman's Sound, there are some other *dangerous rocks* lying off the northern shore, one of which is called the *Shag Rock*, and lies $\frac{3}{4}$ of a mile beyond Black Duck Islet; and a mile farther on is the *Hall's Rock*: both these are under water, and distant about a cable's length from the land; they have 4 and 5 fathoms close to them, and a passage between them and the shore, of 6 and 7 fathoms: therefore, in sailing up Newman's Sound, the northern shore should always have a good berth: keep nearly $\frac{1}{2}$ a mile off, and you will avoid them all.

SALVAGE BAY lies on the northern side of the promontory which divides it from Newman's Sound; it has several runs of fresh water within it, but no place of good shelter.

DAMNA HARBOUR lies to the northward of Salvage Bay; between them are several small *islands* and *rocks*, the largest of which is named the Baker's Loaf, and is a narrow island, about $\frac{3}{4}$ of a mile long. To go to this place from Gull Island, Bonavista, you should steer W.N.W. $\frac{3}{4}$ N., about 7 leagues, and round the Shag Islands;

* Tickle—a narrow passage between the islands and rocks.

proceed thence to the northward of the Baker's Loaf, or steer N.W. by W. from the Gull towards Ship Island, which may readily be known by a remarkable bald point, like a sugar-loaf; then W. $\frac{1}{2}$ S. from Ship Island, $5\frac{1}{2}$ miles, will bring you to the entrance of Damna Harbour: this place is well adapted for the reception of small vessels, but its very narrow entrance disqualifies it for ships of burthen. There is a *rock* off the southern part of the entrance, and another off the northern side of the island, which lies in the middle of the harbour. There is good anchorage all round the island, in 4 and 5 fathoms, sandy bottom. Fresh water is easily procured, but the wooding is scarce.

MORRIS'S COVE.—This lies on the north side of Morris's Island, and is considered to be a safe anchorage. In sailing for this place, Captain Bullock advises the mariner to keep Ship Island well on board, on account of a dangerous *reef* which extends from Flat Island nearly $\frac{3}{4}$ of the way towards Ship Island, on some parts of which are not above 17 or 18 feet. Proceed, therefore, to the northward of Ship Island, passing at not more than $\frac{1}{2}$ a mile distance; and when you are well inside, avoid shutting in Lackington Rock with Varket Island: this latter will be known by its appearing like two singular hummocks, on account of there being several *clusters of rocks* between Ship and Horsechop Islands; steer for Varket until you get abreast of Lackington Rock, then keep Lackington Rock on the northern extremity of Ship Island, until the Varket bears north, in order to clear the *two sunken rocks* off the end of Morris's Island. You may then steer directly for the cove, which you can enter without fearing obstruction, and anchor in any part thereof, in 25 to 5 fathoms; but the western side of the cove is to be preferred. Wood is plentiful here, but water in the summer season rather scarce.

BAY OF FAIR AND FALSE.—This place may contain several good anchorages; but it is so filled with small *islands and rocks*, that no description we could give would be of any use to the mariner. A cluster of large islands extends off the frontage of this bay, full 20 miles, or so far as Offer Gooseberry Island; between these are passages innumerable, with deep water; there is also a wide channel, running from Fair and False Bay, and Morris's Island, to the northward: this leads to Bloody Bay, which then turns westward, and is divided into various branches, forming the N.W. Arm, the Middle Arm, and the N.E. Arm; this latter being a peculiar and extensive channel, running in one direction, southward, almost to Newman's Sound, and in another almost to Damna Harbour: all these are navigable, and afford places of good anchorage, and plenty of both wood and water. There is also an open strait from Bloody Bay to the eastward, through Bloody and Cattel's Reaches, and out to the northward of Offer Gooseberry Island. Other channels branch off to the northward from Bloody and Cattel's Reaches, and between the Lakeman's Islands, running into Pitt's Sound, Locker's, and Content Reaches, and thence to Freshwater Bay. Within these, and on the northern shore, are Hare, Locker's, Trinity, Indian, and many other lesser bays, coves, and inlets, abounding with good anchorages, and calculated to afford shelter for shipping of all descriptions, in cases of necessity: these are, at present, but little known, and frequented only by the constant traders; we shall, therefore, proceed to those which are the usual places of resort, and are better situated for the purpose of fishing.

Vessels coming from the south-eastward, and bound to the northward, for New Harbour, Greenspond Tickle, Cat Cove, the N.W. Arm, or anchorages adjacent, frequently take their departure from Cape Bonavista; in which case, their course will be N. by W., to clear the Eastern Rock, which lies E.S.E., distant $1\frac{1}{2}$ mile from Offer Gooseberry Island, and is situated in latitude $48^{\circ} 57'$ north, and longitude $53^{\circ} 32'$ west. From thence they should steer N. $\frac{3}{4}$ E., to Copper Island, at the mouth of Greenspond Tickle. Here pilots may frequently be obtained to conduct you to this, or any of the adjoining anchorages. There is good holding ground between Greenspond Island and the main; but the water is generally so deep, that a vessel is liable to be drifted on shore in the act of weighing; nor is there sufficient room to veer out a lengthened cable, in heavy gales from the S.W., to which quarter it is much exposed.

Ships coming from the eastward, or round Cape Freels, must be careful to go clear of the *Charge Rock*, which lies S.E. $\frac{3}{4}$ S., $2\frac{1}{2}$ miles from Gull Island of Cape Freels; this has only 6 feet water over it, and is circumscribed by a large spot of rough fishing ground, with from 8 to 30 fathoms upon it. From the Gull Island of Cape Freels you

may run immediately for the Stinking Islands, taking care not to open Cape Freels to the eastward of the former; this will carry you inside the danger. You should keep a good look-out for the mid rocks, which appear just above water, and lie 2 miles N.N.E. $\frac{1}{2}$ E. from the Stinking Islands; but vessels not bound up the bay, are strictly recommended to keep outside of them all; for should the weather become suddenly thick and foggy, a circumstance by no means unusual, more especially with an easterly wind, you will run great hazard of getting bewildered among the innumerable *rocks* which are scattered so profusely about this part of the coast, and from which neither compass nor chart can extricate you. In the winter months, when north-easterly gales are generally heavy and continuous, the sea breaks exceedingly high over several spots of the Stinking Banks, which lie E. by N. from the islands, distant about $2\frac{1}{2}$ miles. In two places there are only 7 fathoms over these banks; and in such weather, although a ship would not strike, she would be in great danger of foundering in the tremendous sea which would then frequently break over her; but when the weather is settled, and the sea smooth, they are by no means dangerous.

Having rounded the Stinking Islands, and wishing to sail into New Harbour, or Cat Cove, you may, with propriety, steer S.W. by W. $\frac{1}{4}$ W. directly for Offer Gooseberry Island, until you bring Pouch and Flower Islands to touch each other; you will then be 2 miles outside of the three rocks, which lie $1\frac{1}{2}$ mile to the southward of Flower Island: the outer rock has 3 fathoms over it, the middle rock 14 feet, and the inner rock only 11 feet. You will now alter your course to W. $\frac{1}{4}$ S., keeping the white face of Chalky Hills a little on the starboard bow, which will take you clear of Copper Island dangers; then, should the inclemency of the weather prevent your getting a pilot on board, you can continue this course until you bring Shoe Cove Point, which may be distinguished by its semblance to white marble, to bear N.W. $\frac{1}{2}$ W.; then shape your course W.N.W. for Indian Bay.

NEW HARBOUR is situated on the eastern side of Indian Bay, about 2 miles from the Shoe Cove Point; this place, during easterly winds, will be quite inaccessible, on account of its narrow entrance; in this case, you must proceed onward, about 4 miles, for Cat Cove.

CAT COVE.—In order to reach this place, you will proceed between Silver Hair and Brown Fox Islands and main; and as you approach the latter, the channel narrows, and you will have a narrow island on your starboard side; this is Cat Island, behind which is Cat Cove; you will have no difficulty in distinguishing this island, it being the only part that is covered with LIVE woods, for the surrounding forests have all been destroyed by some general conflagration. Off the upper part of Cat Island lie two high *green rocks*; you must go round these, for the water is too shoal to go between them: having done so, you may run on until you get some distance inside the upper point of the island, when you may anchor in from 5 to 13 fathoms, with a hawse open to the N.W., the winds from that quarter being most heavy and squally. In working in, you may stand close to either shore, except off the point of the island, as there is a *sunken rock* within 100 yards of it, with not more than 10 feet water over it.

NORTH-WEST ARM.—This is situated on the main, in latitude $49^{\circ} 7'$ north, and is the place of safety nearest to Cape Freels; but its entrance is very difficult, on account of the number of islands that surround it, and these islands are almost undistinguishable one from the other, from their similarity of appearance. In coming from the southward for the North-West Arm, the greatest danger you will have to encounter is the *Northern Rock*, which never has less than 22 feet over it; this lies N.E., distant $1\frac{1}{2}$ mile from the Copper Island; this island you will easily recognise by its having no wood upon it, and by its height. In fine weather and a smooth sea, vessels may pass over the rock in perfect safety; but in hard gales, the waves beat over it incredibly high. To avoid it, be careful to open Fool's Island, which is somewhat higher and more prominent than the rest, and which is covered with trees, except about the summit, to the westward of the Western Pond Rock, until you get Butterfly Island to touch the inner part of Flower Island, or until Puffin and Copper Islands touch each other; then, leaving the Pond Rocks on your starboard side, steer in for Fool's Island; it is advisable to keep this island well on board, for there is a *sunken rock* lying mid-channel, exactly between it and Partridge Island Rocks; this danger has only 18 feet water over it; but no mark can be given to avoid this rock. The course then up the arm will be N.W. $\frac{1}{4}$ W., and so soon as you get inside of Odd Island, you may anchor, on muddy ground, in from

7 to 9 fathoms, Fool's Island Hill bearing S.E. to S.E. by S. During the dry summer months vessels are under the necessity of sending from hence to Loo Cove for water; and wood is not to be procured, unless at the distance of 12 miles.

GREENSPOND TICKLE.—Greenspond is a square island, about a mile in breadth each way, the centre of it lies in latitude $49^{\circ} 4'$ north. A reef of rocky islets runs off its southern part all the way Puffin Island. Greenspond Tickle lies on the south-eastern part of the island, and is of very little importance, being incapable of receiving any vessel whose draught of water exceeds 14 feet: the dangers, in going to this place, are the *Northern Rock*, the *Cook-room*, and *Harbour Rocks*; but it will be almost impossible to get into this harbour with an adverse wind, or even with a fair one, without the assistance of a pilot.

Ships sometimes run in, and anchor between Greenspond Island and the main, but the channel is narrow, the water very deep, and it lies too open to the S.W. winds to be considered a place of safety. In order to sail into it you must get to the westward of Copper Islands; in so doing, be careful of the Midsummer Rock, which lies nearly W. by S. $\frac{1}{4}$ S., distant a mile from Copper Island, and has only 5 and 6 feet over it: observe, when you shut in Silver Hair Island by Shoe Cove Point, you will be within side of the danger; it is also necessary to give Newals and Ship Island a wide berth, as the water shoals off them to a considerable distance.

CAPE FREELS TO THE STRAIT OF BELLE ISLE.

Variation allowed $2\frac{3}{4}$ points west.

CAPE FREELS lies in latitude $49^{\circ} 15' 30''$ north, and in longitude $53^{\circ} 31'$ west. It is formed of three points,—the South Bill, the North Bill, and the Middle, or Cape Freels. There are many *shoals* and *rocky dangers* about them all, therefore a wide berth should be given them at all times. Over these points is some high land, commonly called the Cape Ridge, which is visible at a considerable distance.

FUNK ISLAND.—N.E. $\frac{3}{4}$ E. from Cape Freels, distant 31 miles, lies the Funk Island. This is little more than a sterile rock, and cannot be seen farther than at the distance of 10 or 12 miles; but it will always be distinguished by the great number of birds which continually hover over it. About 200 yards north of Funk Island is a large rock above water, and N.W. by W., 180 yards from this, are still larger rocks; they are all barren, and only the resort of sea birds, that inhabit and breed there. Between these rocks are 18, 37, and 42 fathoms water, with a clear passage; but between the eastern rock and Funk Island there is a *dangerous sunken rock*, of only 10 feet water, over which the sea generally breaks; near this sunken rock are 14 and 16 fathoms, and between it and Funk Island, 30, 25, 56, 38, 24, and 17 fathoms: off the western point of Funk Island are some rocks, and at its eastern part a sort of creek, with 5 fathoms in it. It is also reported, that a *ledge of rocks* lies S.W. from Funk Island, distant about 7 miles.

BRENTON ROCK.—Between the Wadham and the Funk Islands a *dangerous rock* was discovered, on the 28th of September, 1836, by Captain Evan Piercy, of the brig *St. John*, during a heavy gale of wind, whilst employed in the autumnal circuit, with the Honourable Judge Brenton and Nicholas Slabb, Esq., Deputy Sheriff, &c., on board. Breakers were distinctly seen upon a rock, bearing, by compass, W. $\frac{1}{4}$ S., a little southerly, from the Funk Islands, distant about 7 miles. This bearing was taken on a fine clear evening; and it was the opinion of all on board, that the rock, though not appearing above water, would take up any vessel. The position given it is about latitude $49^{\circ} 41'$ north, and longitude $45^{\circ} 15'$ west; but it appeared by no means exact, and it must be considered, as yet, uncertain. Navigators must, therefore, be the more cautious how they use the channel between the Wadham and Funk Islands.

About N.N.W., 7 miles from Funk Island, is said to be a *rock*, but it was not discovered by Captain Bullock, who carefully sought for it. There is also a *shoal*, called the *Cleopatra*, said to lie N.W. by W. $\frac{1}{2}$ W., distant 20 miles from Funk Island, and about 11 miles eastward of Fogo Island. Both these latter positions are doubtful.

DUREL'S LEDGE, OR SNAP ROCK.—This is a *dangerous reef*, and said to lie about 7 leagues N.W. by N. from Funk Island; the sea breaks over it continually; and

nearly N.W. by W., distant 3 leagues from Durel's Ledge, is another *danger*, called *Cromwell's Ledge*; it is supposed to bear E.S.E. $\frac{1}{4}$ E., distant 10 or 11 miles from Little Fogo Islands.

N.N.W. $\frac{1}{2}$ W. from Cape Freels, distant $6\frac{1}{2}$ miles, is the Outer Cat Island; it is connected to the main by a *sandy reef*, which is impassable for shipping, and forms the southern point of Deadman's Bay; a little before you come to the Outer Cat, you will see a remarkable hill, called the Windmill Hill, and near it the Little Cat Island. In sailing to or from Cape Freels, the shore should have a good berth, although there are soundings all the way, and they decrease gradually towards the shore. Deadman's Bay is formed by the Outer Cat Island to the southward, and Deadman's Point to the northward; the soundings within it are regular, and the bay without rocks, unless close to the shore; but it is totally unsheltered, and open to all easterly winds.

Having passed Deadman's Point, you will approach the Penguin Islands; these are two in number, and bear from Cape Freels N.N.W. $\frac{1}{4}$ W., distant 14 and 15 miles; between them the passage is clear, with from $5\frac{1}{2}$ to 7 fathoms water; but vessels should not go within them and the shore, for there are several *rocky reefs*, which render it particularly dangerous.

RAGGED HARBOUR lies to the north-westward of the Penguins, distant 6 miles: the main land hereabout is low and sandy, and the passage, from the eastward, rocky and dangerous; it should, therefore, not be attempted by a stranger, or without a pilot. To the north-westward is Ladle Cove Island; and 7 miles beyond that is Rocky Bay. Rocky Bay lies in about latitude $49^{\circ} 25'$ north, and longitude $54^{\circ} 12'$ west. At its entrance, which is wide, lie three islands, Noggin Island, Green Island, and farther south is White Island; you may pass between each of these in 7 fathoms; between Rocky Point and Green Island in 7, 8, 13, or 10 fathoms; and between Green Island and White Island in 13 and 14 fathoms; between Noggin Island and the western point of the bay, there are $3\frac{1}{2}$, 7, 12, 9, and 4 fathoms; the bottom of these bays, for there are three openings, is rocky, and vessels cannot go far into them.

THE WADHAM ISLANDS.—These are a cluster of islands lying to the north-westward of Cape Freels, in about the latitude of $49^{\circ} 35'$ north. They consist of seven scattered islands, separated from each other by channels from 1 to $1\frac{1}{2}$ mile wide; the largest of these is called Peckford's Island, which is $1\frac{1}{2}$ mile long, lies in the direction of north and south, and bears from Cape Freels nearly N. $\frac{1}{2}$ W., distant 21 miles. From its southern part towards the land about Ragged Harbour, there are a number of *rocky islets and reefs*, with channels between them, rendering the navigation of this part extremely hazardous. N.N.W. $\frac{1}{2}$ N., $1\frac{1}{2}$ mile from Peckford's Island, is White Island; but a passage between them should not be attempted, for there are several *small rocks* lying off the north and north-western part of Peckford's Island, some of which stretch out almost as far as White Island. N.W. by W. from Peckford's Island, about $4\frac{1}{2}$ miles, is Copper Island. Duck Island lies W.N.W. $\frac{1}{4}$ N., $2\frac{1}{2}$ miles from Peckford's Island, and about a similar distance S.S.E. $\frac{1}{4}$ E. from Copper Island. There are also some *small rocks* lying off the N.W. end of Duck Island, which, being visible, can always be avoided with ease.

S.S.W. ROCK.—This is a small *detached rock* above water, bearing from Offer Island S.S.W., distant $2\frac{1}{2}$ miles; it is in latitude $49^{\circ} 33'$ north, and in longitude $53^{\circ} 46'$ west; near it are 13, 17, and 21 fathoms. About N.N.E., distant 2 miles from the S.S.W. Rock, is a small island; and a little more to the eastward is Offer Island; this is the most easterly of all the Wadham Islands. There is yet a *rock* to describe, which lies E.S.E. $\frac{1}{4}$ E. from Offer Island, distant about $1\frac{1}{2}$ mile, called the *E.S.E. Ground*; this is dangerous, and must have a berth in passing either north or south of it. About $\frac{3}{4}$ of a mile S. by W. from Offer Island lies the *Tom Cod Rock*, also dangerous.

THE FOGO ISLANDS lie to the north-westward of the Wadham Islands. Great Fogo is a large island, 4 leagues long and 9 miles broad; off its south-western point lie the Indian Islands; and N.E. by N., $3\frac{1}{2}$ miles from the body of the Great Fogo, are the Little Fogo Islands. Numerous other *rocks and small islands* are scattered about them.

FOGO HARBOUR.—This harbour is very secure, with good anchorage, in any part above the Harbour Rock. It has two tickles (so called in Newfoundland), or narrow passages between islands and rocks; these may be entered with any wind except from the south to the S.W., which winds blow out of both. To enter the eastern tickle, you should borrow on Rag's Island, keeping the extreme of Fogo Island nearly

open of Lane's Island, until Gappy's Island comes open of Sim's Island; you will then clear the *shoals* off Pilly's Point. To avoid the Harbour Rock, bring Messrs. Slade and Cox's flag-staff on with the eastern chimney of their dwelling-house; it will be necessary to get this mark on before Boatswain's Island closes with Bullock's Point. In coming from the westward, it is advisable to make free with Fogo Island, in order that you may distinguish the small islands that form the tickle, which, if passed with westerly winds, can seldom be regained, owing to the constant set there is to the eastward. Having passed Little Motion, keep the extreme point of the head over the Narrows Point, until you get past Bullock's Point, when the above directions will clear all the harbour's dangers.

Coming from the eastward, and bound to Fogo Harbour, you must be careful to avoid the *Dean's Rock*, which is a *sunken rock*, and lies between Joe Batt's Point and the harbour. Steer W.N.W. until Brimstone Hill, a remarkable round mountain, appears in the centre of the harbour; then steer for the east tickle, which may be known by the lantern on the top of Sim's Island, making the west side of the tickle. Give a good berth to the point on the starboard side, and run right up the harbour, keeping near the south side, and you will carry from 5 to 3 fathoms through. Immediately you get round the point, steer S.W., to avoid the Harbour Rock, and follow the directions given above for anchoring. The middle tickle appears the widest, but it is fit only for boats; the other two must be adopted as best suits the wind.

LITTLE FOGO ISLANDS lie nearly N.E., distant 4 miles from Joe Batt's Point. There are numerous *rocks* about them, both above and under water, making this part of the coast exceedingly dangerous. A little to the eastward of Little Fogo is a small *rock* just above water, called the *North-Eastern Rock*; and somewhat in this direction, distant 10 or 11 miles, is said to lie *Cromwell's Ledge*, the exact position of which is not well determined, although it is considered extremely dangerous. Northward of Little Fogo are the *Turr Rocks*; and from hence, in the direction of the western side of Great Fogo Island, are the *Storehouse Rocks*, the *Seals' Nests*, *Gappy* and *Stone Islands*, the *Jigger* and *Black Rocks*, and various other dangers, all having deep water round them, and tending to increase the difficulty of the navigation.

About 4 miles E.N.E. of Little Fogo Islands lie the *Ireland Rocks*, on which the sea always breaks. This is the north-easternmost rock of the Fogo Reefs; it lies in latitude $49^{\circ} 52'$ north, and longitude $54^{\circ} 4'$ west. From this rock the *reefs* extend nearly 13 miles, in a west direction, to *Fogo Head Rock*, which lies about a mile north-westward of Fogo Harbour. There are several deep-water channels between the reefs and islets, which might be taken by those well acquainted. The *Barrack Rocks* lie S.E. by S., 4 miles from the Little Fogo Islands, and 5 miles eastward of the N.E. part of Fogo Island; they extend N.W. and S.E., a full mile, and part of them are above water. The *Inspector Rock* lies 2 miles south-eastward of the Barrack Rocks, and $7\frac{1}{2}$ miles N.E. $\frac{1}{2}$ E. from Cape Fogo; on this rock the sea generally breaks.

CHANGE ISLANDS TICKLE.—This harbour is accessible when Fogo Harbour is not; it is very secure, and has good anchorage, with 6 or 7 fathoms, muddy bottom. It carries on a successful fishery. In general the islands about it are low and marshy; but there is abundance of fire-wood, though water is scarce. The passage is between the Ruth's Rock and the Tobacco Islands, the mark being, Brimstone Head kept between both, which will clear all the dangers on the northern shore, and also off Skinness Harbour; or you may bring the tickle to the westward, between the points of the land, and steer directly through in great safety.

TOULINQUET HARBOUR.—This harbour is sheltered from all winds except those from the north to N.E., when, in heavy gales, it becomes dangerous. In entering either by the eastern or western channels, you must take the greatest care to avoid the *White Ground*; to clear which, you must bring Messrs. Slades' dwelling-house open of Sim's Island, and keep it so until French Head opens through the eastern passage. This is very commonly called Burnt Island Tickle, and should not be attempted unless you are thoroughly acquainted with the navigation, or in cases of great emergency. The anchorage is mostly foul; but the best and most secure is about 5 or 6 fathoms off Colburn's Stores. Both wood and water are scarce. If the mariner should be here either early or late in the year, Back Harbour, which is off the western side of the table-land, will be found a preferable place of shelter; and a few small vessels may ride there with much safety. You may proceed on either side of Gull Island,

lying with the western head open of Batux Island. The islands about the harbour of Toulinquet are moderately high, and bounded by dark-coloured slate cliffs; it may readily be known by the Gull Island, or table-land.

FURTUNE HARBOUR.—This harbour lies between the Bay of Exploits and New Bay; it is good when attained; but the entrance, which is the western tuckle, is extremely narrow and dangerous, on account of the high land around it, from which all winds baffle, except those blowing directly in. Water is scarce in the summer-time; and it is only inhabited during the fishing-season.

TRITON HARBOUR (GREAT TRITON ISLAND.)—The entrance to this harbour is between the Great and Little Denier Islands. In entering, you will see Francis Island, which has a reef running to the south-westward, to which you must give a berth; but both the Denier Islands are bold-to, and free from danger. Little Denier Island lies S.W., $3\frac{1}{4}$ miles from the Sculpia Rocks, on approaching which, the harbour opens of the high land of Great Denier. Its shores are exceedingly bold, and therefore it is always to be preferred to Cutwell Harbour. Its great depth of water will be avoided by running into Inspector's or Scrub Cove, where vessels may moor with hawsers to the trees in perfect security. Water is plentiful, except in very dry seasons.

The tides here, and also upon all the eastern coast of Newfoundland, have nearly the same rising, the springs being about 6 feet, neaps 4 feet; but these are much influenced by the winds.

CUTWELL HARBOUR (LONG ISLAND.)—This harbour has a spacious entrance, sufficient for the largest ships to beat into, with secure anchorage in 10 to 5 fathoms, sand and mud; the best anchorage is W. by N., 3 miles from the southern head. The arm runs in full $1\frac{1}{2}$ mile above the narrows, in which there is abundance of wood and water; and it is well adapted for heaving down and re-fitting vessels. At the entrance is *Foolscap Rock*, the marks for which are, Copper Island seen through Indian Tickle, and Mark Island on with the White Point. To clear the Foolscap Rock, keep the extreme of Southern Head touching the north end of Hurdrix Island, until Green Bay, Gull Island, opens to the westward of the Stag Rocks. The only dangers within the heads are the *rocks* on the eastern shore; and most of these are visible at half-tide.

NIPPER HARBOUR.—This harbour lies to the north-eastward of Green Bay, about $4\frac{1}{2}$ miles, and is fronted by several small islands, between which are several small channels; but the best and safest is between them and the northern shore, in which the water is deep, and the shores bold. The harbour is rather confined and small, and therefore only fit to accommodate small vessels: but it is the most safe and secure on the shore of Cape St. John, and has excellent anchorage in from 7 to 14 fathoms water; the land about is high and barren, but it is well supplied with water, and may easily be distinguished by the islands which lie off it.

THE ISLAND OF TOULINQUET lies to the westward of Fogo, and has several small islands about it: here is situated what is called Toulinquet Bay; and to the south-westward of Toulinquet Island is the harbour of Herring Neck, which is said to be a spacious, fine harbour, and fit for any vessels.

CAPE ST. JOHN.—From Toulinquet Bay to Cape St. John the course is N.N.W., distant $10\frac{1}{2}$ leagues. This is a high and rugged point of land, in latitude $49^{\circ} 58'$ north, and longitude $55^{\circ} 29'$ west, and may readily be known by the small high round island to the south-eastward, distant from the northern pitch of the cape about 5 miles; this is called the Gull Island, and is the third of that name on this side of Newfoundland. Perhaps it will be better we should hereafter distinguish this as the Northern or St. John's Gull; that near Cape Freels, as the Middle or Cape Freels Gull; and the one lying off Cape Bonavista, as the Bonavista or South Gull. Cape St. John is the point where, by treaty, the French fisheries begin; their boundary continues thence northward, and round the western coast, so far as Cape Ray.

The *Bishop Rocks* lie nearly 2 miles to the southward of Cape St. John, over which the sea breaks in bad weather. On the coast to the southward of the cape are several fishing harbours, particularly Shoe Cove, Tilt Cove, and Snook Harbour; the latter is the best with south-easterly winds.

Between the Fogo Islands and Cape St. John the charts commonly represent various deep bays and inlets, several of the harbours of which have been already described. There can be little doubt the Great Bay and River Exploits, and the Bay of Notre Dame, afford many other places of good anchorage, and of easy access, which, when fully explored, may become hereafter frequented, better understood, and prove highly beneficial.

LA SCIE.—About 5 miles to the westward of Cape St. John is the little Harbour or Cove of La Scie, to sail into which there is no danger whatever; but it is open to N.N.W. winds, which throw in a heavy sea. The best holding ground is just within a little cove on the starboard side, in 15 fathoms, muddy bottom; but further in the ground is not so good.

GREAT AND LITTLE ROUND HARBOURS.—The former of these is a good and convenient place for vessels engaged in the fishing trade; there is no danger in sailing in or out, both shores being bold-to. The anchorage lies within the two inner points, where vessels may ride in 4 or 5 fathoms water, secure from the weather, and entirely land-locked. Little Round Harbour, which lies round a point to the north-eastward, about $1\frac{1}{2}$ mile distant, is merely a cove, and totally unfit for shipping.

PACKET HARBOUR is to the north-westward of Confusion Bay, and about 5 miles N.W. by N. from Great Round Harbour; its entrance bears from the channel between the Horse Islands nearly S.W. by S. It may be known by its southern head, which is a high and rocky mountain; the northern head is somewhat lower, and there are *three rocky islets* lying directly off its point. Both points are bold-to; but a little to the southward of the three rocky islets is a small *shoal*, with $2\frac{1}{2}$, 3, and 4 fathoms upon it. The channel between it and these rocks has 7, 8, and 9 fathoms, and the water across the entrance is from 8 and 9 to 19 and 20 fathoms; a similar depth continues more than $\frac{1}{4}$ of a mile in, where the harbour divides into two channels, the one running northward, and the other west and S.W. The northern arm is about $\frac{1}{4}$ of a mile long, and has 20, 18, and 19 fathoms at its entrance, becoming shallower as you advance. Vessels running in here should keep the starboard shore on board, for about $\frac{2}{3}$ up the channel on the port side is a *rocky shoal*, a small part of which occasionally appears above water; on the other part of this shoal are from 3 feet to 4 fathoms. Having passed this shoal, steer up mid-channel, and anchor in 5, 7, or 8 fathoms; the northern part near the land becomes shallow: and a rivulet here falls into the bay, which is said to issue from some extensive lakes about 2 miles inland. The south-western channel is somewhat narrower than the northern one, but is quite free from danger; the shores on both sides are steep-to and bold, and you will have 12, 10, 9, 8, and 7 fathoms for $\frac{1}{2}$ a mile in; it then shallows to the head of the bay, where there is a sandy beach and a river running southward: this is a snug and secure place for vessels to run into whenever occasion may require. To the northward of the northern point is a mountain, called Signal Hill, commonly having a signal-post upon it, and serving to point out its situation.

When the wind is between N.W. and S.W. the entrance to Packet Harbour should not be attempted, as then the squalls off the land are both heavy and changeable; and to miss stays when in the narrows would be dangerous. If apprehensive of bad weather, it would be better to make for Round Harbour.

ST. BARBE, OR HORSE ISLANDS, are situated nearly equi-distant between Partridge Point and Cape St. John, bearing from the latter N. by W. and N.N.W., distant about 5 leagues; these are two islands, and form a circuit of nearly 2 leagues, appearing moderately high. There is a *rock* above water lying to the northward of the easternmost, distant $1\frac{1}{4}$ mile; and on the east side of the same island there are some *sunken rocks*, which stretch out in some places near a mile from the shore; at the S.E. part of this island there is a little cove, fit only for boats; there is a safe channel between these islands, with 40 to 48 fathoms, black mud, but it is seldom attempted; the eastern island is the largest.

Following the shore of Newfoundland, to the north-westward of Cape St. John, there are two bays, called Mings Bight and Bay Verte; but although these may be places of good anchorage, they are little frequented by shipping.

HARDY HARBOUR lies about 3 miles N. $\frac{1}{4}$ E. of Packet Harbour, having Woody Island lying before it: fishing is carried on here, but with strong sea winds it is inconvenient.

The north side of Wood Island is rocky to near 2 cables off. The Mings Islands lie 5 miles north-westward of Wood Island: they consist of two large *rocks*, and lie off the N.W. point of Mingo Bight, having a passage between. The Sisters' Rock lies nearly 2 miles N. by W. of the Mings Islands; on it the sea always breaks. About $\frac{3}{4}$ of a mile northward is a *dangerous rock*, with only 3 feet water on it: these latter rocks lie near the centre of the entrance to Green Bay.

LA FLEUR DE LYS.—This harbour lies to the northward of Mings and Verte Bays, and the south-eastward of Partridge Point, from which it is distant about a league, and derives its very appropriate name from three remarkable hillocks just over it. It is small, but safe, and secured from all winds, having excellent anchorage in its N.E. arm, in 4 fathoms water. To avoid a *rocky shoal* that lies 100 yards off the island, borrow towards the eastern shore, until you get Bluff Head open to the island. There is plenty of wood, but in a dry season water becomes scarce. It is, however, very conveniently situated for the fisheries, and is commonly frequented by French vessels.

WHITE BAY.—This is a large and extensive arm of the sea, being at its entrance, from Cape Partridge to Cat Head, full 5 leagues wide, and running in a south-westerly direction, about 16 leagues, to its head, where it is contracted to a river's mouth, $1\frac{1}{2}$ mile wide. In this bay, or gulf, are several islands, coves, and inlets, affording both anchorage and shelter; these are Lobster Harbour, Southward Arm, Middle Arm, Pigeon Islands, Westward Arm, Purbeck Cove, Granby's Island, Gold Cove or River's Head, Goat and Sop Islands, Sop's Arm, Jackson's Arm, French Cove, Great and Little Coney Arms, and Great and Little Cat Arms.

LOBSTER HARBOUR lies about 4 leagues south-westward of Partridge Point. This is a small round harbour, with a shallow narrow entrance, having, at low water, in some places, not above 8 or 9 feet water; but when you have once entered, there are 12 and 13 fathoms all over the harbour. Small vessels therefore sail in generally at the flood-tides. It is high water, full and change, about 6h. 45m.; springs rise 6 feet, neaps 4.

THE SOUTHWARD ARM lies about 5 miles from Lobster Harbour, and farther up the bay. Here a ship may anchor with great safety, in 17 fathoms water, about 3 miles within the heads; but there is also good anchorage in any part below this, and before you are advanced so far up, in 20 and 25 fathoms. A little above the inner point, on the northern side, is a *muscle bank*, which stretches quite across the arm, and nearly dries at low water; and when you have passed this, you will have 11 and 12 fathoms water, and the channel continues deep until you approach the river's head. This is the first great inlet on this side of the gulf, and may therefore be readily recognized.

MIDDLE ARM.—This inlet lies about $1\frac{1}{2}$ mile W.S.W. from the Southward Arm; at its entrance is a *rocky island*, which is joined to the shore by a *shoal*, over which are 1 and 2 fathoms water. This inlet runs in to the southward, about 3 or 4 miles. To enter it, you will do well in keeping the port shore on board: it is fitted only for small vessels. At 2 leagues W. by S. from Middle Arm is Hawling Point; and between them lie the Pigeon Islands, about which the ground is good for fishing.

WESTWARD ARM.—This lies S.E. of Hawling Point, and runs up nearly 4 miles; here large vessels may anchor in 14 to 16 fathoms water. There is a cove on each side of its entrance: that to the north-eastward is named Bear Cove, where smaller vessels may moor securely, and ride safe from all winds, in about 12 fathoms water; the other is called Wild Cove, a very indifferent anchorage, open to the north-westerly winds, and the bottom rocky and foul.

PURBECK COVE.—About 5 leagues down from the River's Head, and near the S.E. side of the bay, lies Granby's, or Mid Bay Island, without either cove or place of shelter. On the south-eastern part of this island is a *shoal* running off the length of 2 cables, with not more than 9 feet water over it; and nearly abreast of this island, on the S.E. side of White Bay, is Purbeck Cove, where shipping may find safe anchorage, and lie with good conveniences for the fisheries. This is the last cove on this side of White Bay. Here the Bay is only 5 miles wide.

Having passed to the southward of Granby's Island, the bay narrows, and runs up about 5 leagues towards Gold Cove, where the river branches out into several streams, and is commonly called the River's Head.

On returning up the western side of White Bay, you will perceive Sop's Island; about 3 miles in length, and 11 miles in circuit; near its southern end is Goat's Island; these form a long passage, or arm, called Sop's Arm; at the northern part of which a vessel may safely anchor, just inside the north side of Sop's Island; this will be the best side of the channel, or passage, into the arm; but there is anchorage in deep water between Sop's Island and the main, before you reach so far up as Goat's Island: there is also a small cove at the north end of the island, called Sop's Cove; and two other coves opposite the main, called Hart's Coves, in all which the fisheries are carried on, although ships generally anchor in the upper part of the arm, and within side of Goat's Island.

JACKSON'S ARM.—About $3\frac{1}{2}$ miles to the northward of Sop's Island is Jackson's Arm; to enter which you will pass a ragged point, low and round; the water here is deep, except in a small cove on the starboard side, where a vessel should moor head and stern. This place affords the largest timber in White Bay. Frenchman's or French Cove is about 2 miles to the northward of Jackson's Arm, and offers good and safe anchorage.

LITTLE AND GREAT CONEY ARMS.—Nearly 4 miles to the north-eastward of Frenchman's Cove, is Coney Arm Head, the most remarkable land on the western side of White Bay, and bears W. $\frac{1}{2}$ N., distant $8\frac{1}{2}$ leagues from Cape Partridge. The land here projects out $1\frac{1}{2}$ mile, forming a deep bight, called Great Coney Arm. In this place there is no good shelter for shipping; but in Little Coney Arm, which lies to the westward of the head, is convenient anchorage for small vessels, although its entrance is too shallow for large ships; here fishing craft frequently rendezvous.

GREAT AND LITTLE CAT ARMS.—To the north-eastward of Coney Arm Head, distant $10\frac{1}{2}$ miles, lies the Great Cat Arm; and 2 miles farther is Little Cat Arm; this former inlet runs up to the westward full $2\frac{1}{2}$ miles; off its northern point are some rocks above water; to avoid which, keep nearer to the southern shore. You will find the water deep, and no good shelter, unless you approach the head or farther end of the arm, where you will lie secure and land-locked.

When entering Little Cat Arm, keep on the north side, by which you will avoid a rock lying near the south shore.

LITTLE HARBOUR DEEP.—You will now be to the northward of White Bay, and following the shore, will perceive the entrance into Little Harbour Deep; this place is much exposed to south-easterly winds, and by no means a good harbour; off its northern point are some rocks, which are always above water; they lie $\frac{1}{2}$ a mile from the shore, and afford good fishing about their environs. The water is not very deep in any part of this inlet; and when you get up half-way from the entrance to the head, or farther end, it becomes quite shoal.

GRANDE VACHE is an inlet, about $1\frac{1}{2}$ mile deep, lying a mile from Little Harbour Deep; this is also open to the southerly winds, and may be known, when near the shore, by the northern point appearing like an island, and bearing N.W. $\frac{3}{4}$ N. from Cape Partridge, distant 15 miles; it is but an indifferent place for shipping, and seldom frequented.

ORANGE BAY, OR GREAT HARBOUR DEEP, lies 7 miles N.E. by E. from Grande Vache. This may be known from any other inlet, by the land at its entrance being much lower than any land on the north side of White Bay, and by its bearing N. $\frac{3}{4}$ W., distant $5\frac{1}{2}$ leagues from Cape Partridge; it forms a large harbour, and when you get about 3 miles within its entrance, divides into two branches: in the northern arm the water is too deep for vessels to anchor, until they have run up near the head; but in the western arm there is no anchorage, having 50 fathoms near its head. A little within the entrance of Orange Bay there is a cove on each side, frequented by the fishing vessels; but these are very dangerous for a ship to lie in, for although they moor head and stern, yet, should a gale come on from the eastward, there is little safety to be depended upon.

FOURCHÉE.—This place is little frequented, and there is no anchorage until you approach its farther end, where you will find a cove on the northern side; this cove is 2 or 3 miles above the entrance, and very small vessels may anchor there, in 18 fathoms, mooring head and stern. The land on both sides is extremely high and steep to the shore. There is also another arm running in above 2 miles farther than the

cove, but it is so narrow, and has such a depth of water, that it is almost useless to shipping.

HOOPING HARBOUR.—About 5 miles to the north-eastward of Fourchée, and 6 miles south-westward of Canada Head, lies the entrance to Hooping Harbour, or Sans Fond. This place has two arms, or bays, the one running up northward, the other westerly. Near the head of the northern arm you may anchor, in 6 fathoms, although open to the southward; the anchorage is recommended by Captain Bullock, as safe; although the western arm is more sheltered, the water is much deeper, having 16 to 24 fathoms near its head. The entrance of this harbour lies N.N.E. $\frac{1}{4}$ E., distant 27 miles from Partridge Point.

CANADA HEAD lies about 6 miles N.E. by E. $\frac{3}{4}$ E. of Hooping Harbour; it is elevated land, and very easy to be distinguished either from the northward or southward; but when you are directed to the eastward of it, it becomes hidden by the high land up the country, commonly called the clouds.

CANADA BAY.—This is an inlet of considerable size and extent; at its southern entrance is Canada Head, from whence it runs N.N.-easterly full 4 leagues; here vessels caught in easterly gales may seek shelter, and anchor in safety. In entering, when you get above the two rocky islets which lie near Bide's Head, and called the Cross Islands, you will see a low white point, and another black one a little beyond it; off this latter, distant 2 cables' lengths, lies a *sunken rock*; keep, therefore, towards the middle of the bay, and you will find no danger, except a *rock* above water, which lies about a mile below the point of the narrows; this you will endeavour to leave on your port hand, keeping mid-channel, and you will have 10 fathoms through the narrowest part. Soon after you have passed the narrows, the bay widens, and is above a mile across, and you may then anchor, in from 18 to 20 fathoms, good holding ground, and secure from all winds. But this bay is not much frequented, and only occasionally resorted to in case of necessity.

ENGLÉE HARBOUR is situated on the north side of Canada Bay. To sail into this place you must pass a low point, appearing white, and forming the northern point of entrance into Canada Bay; then keep near the shore of the island, to avoid the *reef* which runs to the southward from Bide Arm, until you get abreast of the next point, which makes the harbour: haul round to the S.E., taking care not to come too near the point, for it shoals a full cable's length off. Having so far advanced, you can anchor in from 15 to 7 fathoms, good holding ground; but this is well up the cove, which is too small to lie in, unless you moor head and stern. In Bide's Arm, which runs up N.N.E. from Englée, almost 2 leagues, there is no good anchorage, the water being too deep; but within the south end of Englée Island is a good harbour for shallows, although from thence to where the ships lie, there is no channel, even for boats, unless at high water, or beyond half-tide.

GOUFRE HARBOUR is in the S.W. corner of the bay, about 2 miles westward of Canada Head, and 3 miles from the north point of the entrance; in this harbour, which runs in S.W., near a mile, is good safe anchorage, in 15 fathoms, well sheltered from wind and sea. Canada Harbour is the first on the port hand within Canada Head; here is a fishery establishment. As it is unsafe with N.E. winds, the ships anchor in Goufre, and only use this harbour with boats.

CONCH HARBOUR bears nearly E.N.E. $\frac{1}{4}$ E., distant 11 miles from the entrance of Canada Bay; it lies very open to the winds from the south, but has good anchorage, well up to the head, in 11 fathoms water, good holding ground. S. by W. from Conch, distant 2 leagues, is Hilliard's Harbour, called by the French, Botitot; this is a bad place for shipping, but very convenient for the fishing craft.

CAPE ROUGE HARBOUR lies E.N.E. from the harbour of Conch, and bears N.W. by W. from the south end of the island of Groais, distant 3 leagues: its northern point is called Cape Rouge. The isles Groais and Bell Isle contribute to shelter this harbour from the heavy swells of the Atlantic; the southern part of its entrance is shallow and rocky, and in the S.W. arm is the harbour shoal. The best anchorage is in the northern arm, in any depth of water. Ships may beat in or out, but the centre of the harbour is too deep for anchorage. Directly opposite to its entrance is a small island, named Rouge Island; its northern end requires a berth in passing.

BELL ISLE AND GROAIS ISLAND.—These are high islands, lying off the N.E. coast of Newfoundland, from which they are separated 9 or 10 miles. Bell Isle

is the southernmost, and the larger island, being 9 miles in length, and 6 broad; there is a little harbour at its south part, where fishing craft occasionally resort, but not calculated for shipping: other coves may be found about the shores of the island, where shallows sometimes take shelter. Off its south-western side lies Green Island, a small rocky islet; and to the southward a *bank of soundings* extends, with 12, 20, 25, and 30 fathoms; there are some *rocks*, both above and under water, at the south point of Bell Isle: some of these lie 2 miles from the land. The south rock, which is above water, lies 2 miles S.W. from the south point of the island, and a *sunken rock* lies $\frac{1}{2}$ of a mile S.W. of it; this is the southernmost rock.

GROAIS ISLAND lies to the north-eastward of Bell Isle; and is about 7 miles in length, and $3\frac{1}{2}$ miles broad, its northern point lying in latitude $50^{\circ} 59'$ north. Off this end, and also off the N.W. part of the island, are several *rocks* above water; otherwise this island is bold all round, and between it and the main are from 20 to 70 fathoms water; and in the channel between it and Bell Isle, which is 5 miles wide, there are from 40 to 58 fathoms, dark mud and rotten shells. To clear the rocks lying off the N.W. point of the island, you should not bring the N.E. point to the southward of S.E.

CROQUE HARBOUR.—The entrance to this harbour is in latitude $51^{\circ} 2' 30'$ north; it is $\frac{3}{4}$ of a mile wide, and somewhat difficult to discover; it bears N.W. $\frac{1}{2}$ N. from Groais, distant 3 leagues. When the north point of Bell Isle is clear of the southern part of Groais, you will be a little to the southward of Croque; and this mark will not fail pointing out to those unacquainted with this navigation, the fairway to its entrance, especially as the headland forming the southern shore is bare of trees, and has a round appearance, with some *rocks*, which are always visible, and lie about 40 yards to the S.E. of it. The shores of the harbour are bold-to, and even a frigate may easily work into it; but care should be taken to tack in time, as the winds are variable near the land, and if from the N.W., generally squally: the anchorage is excellent, being good holding ground, of dark slate-coloured mud. Having opened the harbour's mouth, steer in N.W. by N., proceed mid-channel, and when you have advanced up about a mile, you will see the river divide into two branches; anchor hereabout. Water and wood can be obtained from either side of the northern branch; or by running your boat to the farther end of the other arm, you may furnish yourself with both these articles. The land here is covered with the dwarf pine, which is indigenous to the country; the soil appears to have been composed of rotten and decayed leaves: it is wet and spongy, and the trees do not attain any great dimensions, the largest being not more than $1\frac{1}{2}$ foot in diameter, and the wood, when full grown, not good. There is a little cove at the southern entrance, called Irish Bay, in which are 13, 10, 8, and 5 fathoms; and *two rocks* above water at the head of the bay, near which is a little rivulet of fresh water.

GREAT AND LITTLE ST. JULIEN.—About 4 miles to the north-eastward of the harbour of Croque lie Irish and St. Julien's Islands; near which are the harbours of Great and Little St. Julien, and also that of Grandsway; these are all adjacent to the island of St. Julien, and bear to the north-westward of the northern part of the island of Groais. The S.W. end of the island of St. Julien is but little separated from the main, and cannot be distinguished to be an island until you arrive very near it; there is at this end no passage except for boats: therefore, to sail into either of these harbours, you may keep close to the N.E. end of the island; and in passing that, the harbours will open to your view.

Great St. Julien is the easternmost harbour, to which there is no danger until you get within the entrance; then you will find the starboard shore to be shoal nearly $\frac{1}{2}$ over: but when you have passed the first stages, you may anchor in from 8 to 4 fathoms water.

To sail into Little St. Julien, you will first steer for Great St. Julien Harbour, in order to clear a *sunken rock*, which lies directly before the harbour's mouth; and having arrived opposite the entrance of Grandsway, steer into the harbour, and anchor in 5 or 4 fathoms water. It will be requisite for all ships which go into either of these harbours, to moor both head and stern: but Grandsway is not a harbour for shipping, although it is extremely convenient for fishing craft.

THE FISHOT ISLANDS.—About 3 miles N.E. $\frac{1}{2}$ E. from St. Julien Island, lies the southernmost of the Fishot Islands, which is the largest of the group, and has a har-

bour of the same name on its western side. These islands extend in a N.E. direction, nearly 4 miles, to the N.E. island: this island is surrounded by *shoals* to some distance; but there are passages between it and the next two islands to the southward, which may be taken in fine weather. Fishot Harbour may be approached either from the northward or the southward, by those well acquainted, but it is only fit for vessels drawing 10 or 11 feet water. Between Fishot Harbour and the N.E. island there are numerous *shoals* scattered about; but the eastern shores of these islands are all clear to within $\frac{1}{2}$ of a mile of the shore.

HARE BAY.—The entrance of this bay is formed by the Fishot Islands on the south, and Cape Goose on the north; they are 5 miles apart. From hence this bay extends to the N.W., about 6 leagues, to the Northern Arm, and is about 6 miles in width; within it are several good harbours, but they are not much frequented. The south side of the bay is bordered by *rocks* and *islets*; the northernmost and most remarkable are the Spring and Brent Islands. The Spring Islands lie 6 miles within the entrance of the bay, on the south side; and 4 miles farther lie the Brent Islands. The Southern Arm runs in about S.W. by W., 5 or 6 miles from the eastern side of the Brent Islands, where good and well sheltered anchorage may be found in 10 or 12 fathoms; you may also find good anchorage, in 5 or 6 fathoms, to the westward of the southernmost of the Brent Islands. The north side of the bay is all clear and safe. On this side, $11\frac{1}{2}$ miles from Cape Goose, is How Harbour.

HOW HARBOUR.—The entrance to this harbour lies $11\frac{1}{2}$ miles N.W. from Cape Goose, and N.E. by N., $3\frac{1}{2}$ miles from the eastern part of the Brent Islands, and is by far the best harbour in Hare Bay, having safe anchorage in every part. The surrounding hills are barren; but small stunted wood may be found in the valleys. To the northward a range of marshes and ponds extend as far as Pistolet Bay. The harbour is about $1\frac{1}{2}$ mile long, and nearly $\frac{1}{2}$ a mile wide. A *small rock* lies off its western point, but it is very near the land; and the upper part of the harbour shoals gradually. In the middle of the harbour are 10 fathoms.

GOOSE HARBOUR.—This harbour is situated on the western side of Cape Goose. It is small, but very secure, and has most excellent anchorage in 4 or 5 fathoms. Vessels can sail in with a westerly wind; and rings are fixed, to assist vessels warping in with a contrary wind. Vessels generally moor head and stern in this harbour.

CAPE GOOSE (in latitude $51^{\circ} 17' 20''$ north) is one of the most remarkable points on this coast, and may be seen at a great distance; in certain positions it appears like an island. Near Cape Goose are the three remarkable mountains; and farther in the interior are the Capillaire Mountains, which are a great height.

CREMALLIRE HARBOUR lies about 2 miles northward of Cape Goose; it is a spacious and good harbour, with excellent anchorage in 7 or 8 fathoms water; it is supplied with abundance of wood and water, and is a good port for men-of-war to put into. In coming from the southward there is a *shoal* between Notre Dame Island and the port side of the entrance, which may be easily avoided by keeping near mid-channel.

ST. ANTHONY HARBOUR.—This lies a little to the eastward of Cremallire Bay, and is a safe place, having good anchorage in 6 or 7 fathoms water, on a bottom of blue clay; its entrance lies N.W. by W., $1\frac{1}{2}$ mile from Cape St. Anthony. It cannot easily be mistaken, from the remarkable high land on its southern shore, and being the first opening on the port side as you enter the large bay within St. Anthony Point. This bay runs in north, 3 miles, and has 25 to 35 fathoms in it, and is quite open to south and S.E. winds. St. Anthony Harbour is well supplied with wood and water, and is commonly frequented by French fishing-vessels. Cape St. Anthony lies in latitude $51^{\circ} 22'$ north, and longitude $55^{\circ} 31'$ west. French Point, which lies $1\frac{1}{2}$ mile to the eastward, has sometimes been mistaken for the cape.

BRAHA HARBOUR lies 3 miles north-eastward of French Point. It is small, but safe, having good anchorage within it; the bottom is sandy, and the shores are bold and steep-to. It generally has 4 or 5 French vessels in it during the fishing season. The *Braha Shoal* lies S. 74° E. (true), distant $1\frac{1}{2}$ mile from the Needle Rocks; it is reported to have 12 feet on it, but Lieut. Bullock says he never found less than 16 feet. With a little sea it occasions breakers; but the common current will always create a

constant ripple. This is the most dangerous rock on this part of the coast. There is a good passage between it and the shore, with 22 fathoms just within the rock, and 47 fathoms near mid-channel.

ST. LUNAIRE BAY lies in latitude $51^{\circ} 30'$ north, and longitude $55^{\circ} 28'$ west. At the southern point of its entrance lie two islands, between both of which there is a narrow boat-passage; but the only channel for ships is to the northward of them; here the entrance is almost $\frac{1}{2}$ of a mile wide, and both shores bold-to. Having entered between the points of the bay, you will perceive some small rocky islets a-head of you; there is a passage on either side of these, but none between, for they are connected by a *rocky reef of shallow water*; you will, therefore, steer to the northward of them all; and on the northern shore you will see Amelia Harbour, where, within Red Island, you may anchor in 15 fathoms, or farther in, and nearer the head of the bay, in less water. The starboard side of this bay is rocky, and is sheltered from the westward by some high islands; but towards the top of the bay is a sandy beach, where some small brooks empty themselves. To the northward of High Island is a sandy cove, having some little islets within it; but the depth is shallow, and there is a *knoll* of 3 fathoms lying before its entrance. To the westward is an opening, called N.W. Bay, the land on both sides being high, and the passage into it clear of danger; but its farther end becomes suddenly very shallow. There is also another narrow entrance to the N.W. Bay, behind a high island, which forms its southern boundary; but this is rocky, and fit only for boats. Between this high island and the two islands at the entrance of Lunaire Bay, is a wide space, with very good anchorage, in 15, 18, or 20 fathoms water; here vessels may lie secure from south-easterly gales; but in going to it you must avoid a *rock* of only 10 feet water; this rock lies to the westward of Plate Island, about $\frac{1}{2}$ of a mile, and exactly the same distance from the eastern point of the high island which forms the southern boundary to N.W. Bay. There is also an opening to the southward, called S.W. Bay; it has not been explored, but its entrance appears to be clear of danger, and has a depth of 9, 8, and 7 fathoms; the shores on each side are rocky.

Lieutenant Bullock says, "This excellent harbour will contain 100 vessels in perfect safety; is remarkably easy of access, and may always be recognized by the appearance of the White Cape. The best and most convenient anchorage will be found at Amelia Cove, in from 5 to 7 fathoms. The approach and entrance are bold and steep-to, only observing to give the points of the southern islands a good berth. Both wood and water are to be obtained without difficulty; and it affords, in every respect, a good and secure anchorage."

GRIGUET BAY is situated about a league to the north-eastward of St. Lunaire Bay, and is formed by Stormy Cape to the northward, and White Cape to the southward, having several good coves or harbours for shipping engaged in the fisheries. In this bay lies Camel's Island, rising up in the middle like the hump of a camel, and scarcely to be distinguished from the main land in sailing along. Behind this island is situated the S.W. harbour, a narrow channel, running in nearly 2 miles, with from 4 to 10 fathoms water in it; there is a *shoal* at its entrance.

THE NORTH HARBOUR runs in within Stormy Cape, and has, at its entrance, a *rock* above water, which is bold-to all round, and vessels may sail on either side of it, and anchor in 6 fathoms water. In the passage which leads to the N.W. and S.W. harbours there is an island, which contracts the channel, rendering the passages narrow; the best and safest entrance is to the northward of this island, giving the outer point of the N.W. harbour a little berth, and so soon as you get within the island, you will open both harbours; that which runs in north-westward is the larger of the two, and is 2 miles deep; you should sail up on its western side, having 14, 16, and 18 fathoms, until you get inside the point, a little within which is a *bank* of 7 or 8 fathoms; but when you have passed over this, you will again drop into 16 and 17 fathoms; and as you approach the head of the bay, you will lessen your water to 7, 6, and 5 fathoms, every where good anchorage, and well sheltered from all winds. The two islands of Griguet lie outside of Camel's Island, and, together, form between them several small, but snug harbours for fishing vessels.

Lieutenant Bullock observes, "The north bay is insecure in spring and fall, on account of its being exposed to southerly gales; the S.W. bay is, therefore, recommended, where there is good anchorage in 5 or 6 fathoms water. Camel's Islands' Harbour will always

be found too intricate for a stranger, and should never be attempted without the assistance of a pilot."

WHITE ISLANDS.—You will now perceive the White Islands, lying to the north-eastward of Stormy Cape, from which they are distant a league, and about 2 miles from the shore opposite; they are small, of moderate height, and have several *rocks* inside, both above and under water; but these are not considered to be dangerous, as they are easily discoverable, even in fine weather; and the passage between them and the main is very safe, having a depth of 40 fathoms in it; these islands lie in latitude $54^{\circ} 35'$ north, and longitude $55^{\circ} 21'$ west.

QUIRPON ISLAND.—This lies off the north-eastern part of Newfoundland, and forms the S.E. point of entrance to the Strait of Belle Isle; it is large, high, and barren; and Cape Degrat is visible, in clear weather, full 12 leagues to seaward.

LITTLE QUIRPON.—There is a narrow channel which runs in to the southward of Quirpon, and divides it from the main; here lies Little Quirpon Harbour, to enter which there is no danger but what you will easily perceive; vessels commonly moor head and stern, and lie there perfectly secure.

DEGRAT AND PIGEON COVES.—These coves lie on the eastern side of Quirpon Island, and to the northward of Cape Degrat; at their entrance are several small *rocky islets* and *rocks* above water, affording behind them very fair security for shipping, in 4 fathoms water, and good conveniences for fishing.

CAPE BAULD, which is the northern extremity of Quirpon Island, lies in latitude $51^{\circ} 39'$ north, and in longitude $55^{\circ} 27'$ west; it is rocky and steep-to, and may be approached very near with great safety. Having rounded this cape, you will perceive a rocky point to the southward leading to the harbour of Quirpon.

GREAT QUIRPON HARBOUR lies on the N.W. side of the island, and its entrance is between it and Graves Island; in your approach towards it from the northward you may borrow as close as you please to Bauld Head, there being no invisible danger until you arrive at the entrance of the harbour, where there are some *shoals*, which must be left on your port side; to do this, keep Black Head, on Quirpon Island, open of all the other land, until Raven Point comes over Noddy Point, then haul in for the harbour, going not nearer than the distance of $\frac{1}{2}$ a cable's length from the point of Graves's Island; the anchorage within the island is every where good, with room and depth enough for any ships, and the ground holds well: but the best place to ride in will be towards the upper end of Graves's Island, abreast of Green Island, in 7 fathoms water. The passage to the Inner Harbour, on either side of Green Island, is very good for ships of moderate water, through which you will have 3 fathoms, and above Green Island you have excellent riding in 7 fathoms. There is also a passage to this harbour through Little Quirpon Harbour, but it is too narrow and intricate for any one to attempt, unless they are perfectly acquainted with the navigation. In and about Quirpon are conveniences for a great number of vessels employed in the fisheries, and good fishing throughout; the land every where is high, and wears a barren appearance.

NODDY HARBOUR.—This place lies a little to the westward of Quirpon Harbour, and runs in between Noddy Point and Cape Raven; there is no danger in entering, and you will pass to the starboard of the little island that lies about a mile within the entrance, and anchor above it in 5 fathoms water; or you may, with a small vessel, run farther up into the basin, and anchor in $2\frac{1}{2}$ or 3 fathoms; here is a stage within the island, and on the eastern side of the harbour, with convenient room for many vessels.

GULL ROCK AND MARIA'S LEDGE.—The Gull Rock lies W.N.W. $\frac{1}{2}$ W. from Bauld Cape, in the island of Quirpon, distant 2 miles; and N.N.E., nearly 2 miles from Cape Raven; it is always above water. Maria's Ledge lies nearly S.W. from the Gull Rock, distant $1\frac{1}{4}$ mile, and north, about a mile from Cape Raven, being distant about a mile from Maria's Head. In standing in from the northward for either QUIRPON or NODDY HARBOURS, you need be under no apprehension of danger from the Gull or Maria Rocks, for both are above water: the passage between them is $\frac{1}{2}$ a league wide, and very safe; but it will be prudent to pass nearer the Gull Rock, because of the *N.W. Ledge*, which never appears but in bad weather; this N.W. Ledge bears west, a little south, distant $1\frac{1}{4}$ mile from the Gull Rock, and you should not attempt the passage between it and the main, on account of other *rocks* that are said to lie about, and places of shallow water.

To the westward are the Sacred Islands. Great Sacred Island lies about N.W. by W. $\frac{1}{4}$ W. from Bauld Cape, distant $5\frac{1}{2}$ miles, and S.E. by E. $\frac{1}{4}$ E. from Cape Norman, nearly 12 miles. Little Sacred Island is a mile to the south-eastward of the Great Island; the passage between them is safe, and you may sail round both, for they are high and bold; within them, on the main, and to the W.S.-westward, is Sacred Bay, tolerably large, with numerous *rocky islets* within it; the shores of this place abound with wood, and, therefore, it is much resorted to for the use of the fisheries at Quirpon and Griquet, &c. Cape Onion forms the north point of Sacred Bay, being high and steep; near it is a remarkable *rock*, called the *Mewstone*, and much resembling that in Plymouth Sound. There is a little cove to the southward of this rock, where a vessel may occasionally resort to with safety.

HA-HA BAY.—From Cape Onion to Burnt Cape the course is W. $\frac{3}{4}$ N., about $4\frac{1}{2}$ miles; it has a white appearance, and rises from the seaward to a considerable height. On the eastern side of Burnt Cape is Ha-Ha Bay, which runs in southerly about 2 miles; it lies open to northerly winds; but, when you are within the cape, you will find anchorage in 6 or 7 fathoms; or you can go farther up, and ride well sheltered in 3 or $2\frac{1}{2}$ fathoms. This is a convenient place for the fisheries, and has plenty of wood.

PISTOLET BAY.—This bay lies between Burnt Cape and the Norman Ledges, which bear from each other N.W. by N. and S.E. by S., distant about 4 miles; the bay is extensive, and reaches several miles each way, having good anchoring ground in most parts, particularly on the western side, a little above the islands, in about 5 fathoms water. The shore is tolerably well furnished with wood, and contributes to supply those places which are destitute of that article.

COOK'S HARBOUR lies in the N.W. part of Pistolet Bay, and within the islands about 2 miles above Norman Ledge Point. These ledges are about a mile to the eastward of the north point. To clear these dangers as you enter, be sure to keep Burnt Cape well open of the outer rocks that lie off the islands at the western entrance to Pistolet Harbour; and, if going in, so soon as you consider yourself to be to the southward of these ledges, steer in for the harbour, leaving the islands and rocks on your port side; keep the southern shore on board, for fear of a *ledge of rocks* that juts out from a little rocky island on the other side; and so soon as you get within the island, haul over for the northern shore, and anchor, in 4 or 5 fathoms water. This harbour is capable of being made very convenient, with several fishing rooms; and proper stages for the boats to resort to, and cure their fish, might be erected in all the coves between it and Cape Norman.

CAPE NORMAN is the northernmost point of Newfoundland, in latitude $51^{\circ} 38'$ north, and longitude $55^{\circ} 56'$ west, being of a moderate, even height, and very barren appearance, which continues far inland; it is about a league to the north-westward of the ledges. From Cape Norman the shores of Newfoundland turn south-westerly, and will be described hereafter.

BELLE ISLE.—This island, which lies at the entrance of the strait to which it communicates its name, should be called the Northern Belle Isle, in order to distinguish it from those we have already described, lying to the southward; it is about $9\frac{1}{2}$ miles long, and $4\frac{1}{2}$ miles broad, being distant from Bauld Head, in Quirpon Island, about 14 miles, and from the coast of Labradore 12 miles; it is moderately high, and wears a uniform sterile appearance. On its north-western shore there is a small harbour, called Lark Cove, or Harbour, lying within an island almost close to the land, and fit only for small craft; and at the eastern side of the island is another cove, called Batteaux Creek, frequented occasionally by shallops. About 2 miles to the north-eastward of this island lies a *ledge of rocks*, part of which appear above water, and over these the sea breaks very high; this is called the *N.E. Ledge*; you will have 15 and 20 fathoms close to it, and 55 between it and the north part of the island. The soundings about this Belle Isle are very irregular; near the island you will seldom find less than 20 fathoms, except on a *small bank*, said to lie to the northward, distant 4 miles from its northern part, whereon are only 5 fathoms. The northern part of this island is said to lie in the latitude of $52^{\circ} 1'$ north, and longitude $55^{\circ} 19'$ west. The S.W. end of the island bears S.E. $\frac{3}{4}$ S., 19 miles from York Point, and N.E. $\frac{3}{4}$ N., 14 miles from Cape Bauld, in Quirpon Island.

Soundings in the Strait of Belle Isle.—In crossing the Strait of Belle Isle from Quirpon to Chateaux Bay, your soundings will be irregular: from 20 to 30 fathoms on the Newfoundland side, and in some places from 30 to 38 fathoms; in the stream, or middle of the strait, you will find 25 and 35 fathoms, coarse sand and broken shells; and towards Chateaux Bay, 45 to 80 fathoms, and within a mile of the coast of Labrador, 35, 30, and 25 fathoms. To the northward, between Belle Isle and St. Peter's Bay, there are 59, 87, 96, 63, and 20 fathoms.

The soundings afford very little assistance to a vessel at night, or during the fogs, which frequently prevail in all southerly, easterly, and even S.W. winds; it is only with west winds you can depend on clear weather with any certainty. The fogs and currents in the straits render this part of the navigation extremely dangerous. The prevailing current is from the northward, between Belle Isle and the coast of Labrador, bringing down, in some seasons, numerous ice-bergs into the straits, some of which pass into the gulf; this current, with a N.E. wind, has been known to run 2 knots, at other times almost imperceptible, and even running in a contrary direction.

III.—THE SOUTHERN COAST OF NEWFOUNDLAND.

FROM CAPE RACE TO CAPE CHAPEAU ROUGE.

Variation 25 degrees west.

PRELIMINARY REMARKS.—Vessels bound towards the Gulf of Newfoundland should take the greatest care to notice and make a proper allowance for the currents, which set from the eastward, all along the southern coast of Newfoundland, with frequently fatal velocity, causing an impetuous indraught into the various bays, and occasioning the much to be deplored loss of many lives, and the wreck of numerous vessels. These local currents chiefly prevail on that part between Cape Race and Cape Ray. The British frigate *Tweed*, the sloop *Comus*, the transport *Harpooner*, were all, of late years, lost on this coast; the two latter nearly on the same spot, and within three weeks of each other. H.M. ship *Drake*, in June 1822, was wrecked about the eastern head of St. Shot's Bay; and in the July following the brig *Spence* was totally lost on the same dangers: so that it should seem more vessels have been cast away on the small point of land which divides the two bays of Trepassey and St. Mary, than on any other part of the island; that these accidents were occasioned by the currents, there can be little doubt.

It is observed by an officer in the Royal Navy, that it frequently happens, a vessel bound from England to Quebec will strike soundings on the Great Bank of Newfoundland, and thence shape her course for the Gulf of St. Lawrence, without ever seeing the land, which, probably, is enveloped in fog. When unable or neglecting to make a proper allowance for the above current, which runs sometimes at the rate of 4 miles an hour, he is swept away to the westward; and while he considers himself to be steering fairly for the entrance of the gulf, he is driven on shore, and his vessel becomes a wreck.

An able navigator, who has been 20 years employed in the fisheries, and who is a native of Newfoundland, observes,—“It is well understood by all the boat-masters, that there is, in general, a strong current setting in from the eastward, along the western coast of Newfoundland, which, after passing Cape Pine, runs more towards St. Mary's and Placentia Bays. This current will be felt at least 20 leagues to the S.W. of Cape Pine, and becomes more rapid as you approach the land, its velocity increasing as the winds favour its direction; but at all times of sufficient magnitude to endanger the safety of any vessel approaching from the south or west, in foggy weather, and being ignorant of its existence.”

In order to avoid the danger arising from this current, the fishermen, in foggy weather, when returning from the western coast to their homes on the eastern shore,

invariably use the lead, depending more upon the depth of water than their compass, and always keeping a sufficient distance from the land, to ensure the safety of the vessel. On passing to the eastward of Cape Race, they never approach nearer to the land than 35 fathoms water; the ground being more of an inclined plane on the west than on the east coast, you will find that depth of water at a considerable distance. The ground becomes more broken, and the depth of water increases so fast, that in your course from Cape St. Mary's to avoid Cape Race, you will, when to the eastward of it, find yourself in 50 fathoms, and when advanced a very short distance farther, you will drop into 60 and 70 fathoms; consequently, you will then be clear of any land, and may safely pursue what course you think proper; but, in all this navigation, the mariner's safety may be insured by a due attention to the lead.

The before-named gentleman, in a letter, dated Bonavista, Newfoundland, February 8th, 1826, and addressed to the Chairman of Lloyd's, after the *Hibernia* steamer had been brought up by Cape Race on her homeward voyage, in November 1845; after making several remarks on the probable causes of these dangerous currents, says,—“Had the *Hibernia* been a vessel under canvas, instead of being propelled rapidly through the water by steam, she would have been brought up at St. Shot's, or about Cape Pine, instead of reaching Cape Race. In such a case I will not even venture to glance at the fearful consequences to her crew and passengers. The admirable presence of mind and cool determined judgment displayed by her commander, among the rocks at Cape Race, would not, I fear, have been sufficient to bring his vessel off from St. Shot's. Until something has been done to ascertain the true state of the current upon that part of the coast, I would impress upon all commanders approaching Cape Race from the southward and westward, the absolute necessity of making more frequent use of the lead in foggy weather, and not to come within 30 or 35 fathoms on passing or rounding Cape Race. A cast or two of the lead about Cape St. Mary's, and one or two between that and Cape Race, will enable the navigator to conduct his ship, by observing the foregoing precautions, clear of the dangers of that part of the coast, and counteract the force of the current.

“If any doubt were entertained, or any proof were wanting, as to the direction of the current, after its passing Cape Race, the circumstance of the body of Captain Baker, of H.M. brig *Little Drake*, having been discovered cast on shore near the Rams or Ramed Island, on the east side of Placentia Bay, and there interred, about 100 miles, or nearly so, from the scene of his unhappy shipwreck, would, I presume, be sufficient to indicate its true course, and to remove all doubt, if any existed, on the subject.”

CAPE RACE lies in latitude $46^{\circ} 39' 44''$ north, and longitude $53^{\circ} 5'$ west from Greenwich; it is situated on the southernmost part of Newfoundland, and lies S.W. $\frac{1}{2}$ W., distant $2\frac{1}{2}$ leagues from Cape Ballard; before it lie two or three *rocks* above water; these are close to the land, and have 10 fathoms water very near them. Between 6 and 7 miles E.S.E. from Cape Race is the *New Bank*, being 4 miles long and $1\frac{1}{2}$ broad, and lying N.E. by N. and S.W. by S.; on it are 17, 20, and 25 fathoms, with very deep water on its outside, and 20 fathoms just within it. Vessels making this part of the coast may know their approach toward the land, by suddenly lessening their water to the above depths.

Near Cape Race is a small inlet, named Cripple Cove; the land then turns westerly towards Mistaken Point, a distance of $4\frac{1}{4}$ miles. The shores are bold, and out Mistaken Point, is a *rock* above water. N.W. by W., about 2 miles, is the French Mistaken Point: this also has a *rock* off its extremity; from hence the shore winds N. by W. into Biscay and Mutton Bays; these are seldom frequented, and it is considered dangerous to get embayed there, for the sea commonly drives in, and there is hardly any currents to help you out again. Mutton Bay is formed to the eastward by Cape Mutton, and to the westward by Cape Powles; this last is the extreme point of a narrow neck of land that divides Mutton Bay from Trepassey Harbour; it is a long, low, sandy, and stony beach, over which the ships lying in Trepassey Harbour can be distinctly seen. Mutton Bay is about 2 miles deep, and has from 12 to 3 fathoms water in it; but the bottom is foul and rocky.

TREPASSEY HARBOUR.—The entrance to this harbour is to the westward of Cape Powles, and the direct course in will be N.E. $\frac{1}{4}$ E. Cape Powles lies from French Mistaken Point N.W., about 9 miles; from Cape Mutton W.N.W. $\frac{3}{4}$ W., $2\frac{1}{2}$ miles; and from Cape Pine N.E. by E., 5 miles. The entrance to Trepassey Harbour is $\frac{3}{4}$ of a mile

wide, and continues of that breadth full $2\frac{1}{2}$ miles up; it then narrows to less than $\frac{1}{2}$ a mile, and opens again to its former width, and there vessels commonly ride. To enter this harbour, ships commonly steer over from Mistaken Point towards Cape Pine, until you fairly open the harbour; you may then safely run along the shore, for it is bold. In sailing into the harbour, you will meet with a *rock* on the south-eastern shore, lying about a mile from Powles Head, and $\frac{1}{2}$ of a cable's length off the shore: there is also, on the northern side, a *shoal* which runs along up the harbour, so far as a low green point; to clear this shoal, bring Baker's Point on with a low rocky point at the entrance of the harbour; and when you get so far up as the low green point, you may steer more westerly, and anchor either in the N.W. or N.E. arm, in 5 or 6 fathoms water; both wood and water can be obtained with ease.

From Mistaken Point to Cape Pine the course and distance are W.N.W. $\frac{1}{2}$ W., $4\frac{1}{2}$ leagues; and from Cape Pine to Cape Freels, west, $1\frac{1}{2}$ mile. The land about Cape Pine is barren, and moderately high. From Cape Freels the shores extend W.N.W., a mile, to Black Head, and thence N.W. $\frac{3}{4}$ W. to the eastern reef, and head of St. Shot's Bay.

ST. SHOT'S BAY.—This is the fatal spot where so many vessels have been recently wrecked; the bay is about a mile deep, and from the eastern to the western head, the bearing is N. by W., distant nearly 3 miles; it is entirely open and exposed to the sea.

ST. MARY'S BAY.—This is an extensive bay, or gulf, commencing on the eastern side at St. Shot's, and on the western side at Point Lance; the course from the eastern head of St. Shot's to Point Lance being N.W. by N., about 20 miles; from thence the land runs up E.N.E., 9 leagues; the land on each side being moderately high, and having several good harbours in it. In proceeding from St. Shot's along the eastern shore, you will pass two little coves, and reach Gull Island; this lies close in to the land, and bears from the western head of St. Shot's N. $\frac{1}{4}$ E., distant 4 miles.

From Gull Island to Cape English the bearing and distance are N. by E. $\frac{1}{2}$ E., $1\frac{1}{2}$ league. Cape English is high table-land, terminating in a low rocky point, and forming a bay, about a mile deep, to the southward of it; at the bottom of this bay is a stony beach, within which is Holyrood Pond, running E.N.E., nearly 6 leagues, and from $\frac{1}{2}$ a mile to 2 miles in breadth; this occasions the cape to appear like an island, when you are to the southward of it. At $1\frac{1}{2}$ mile N.E. $\frac{1}{2}$ N. from Cape English is False Cape; $6\frac{1}{2}$ miles E.N.E. from Cape English is Point la Haye: this is low, and has a *ledge of rocks* running from it, about $\frac{1}{2}$ of a mile into the sea, and above a mile along the shore, on which the waves break furiously in bad weather; this is the only danger you will meet with in St. Mary's Harbour.

ST. MARY'S HARBOUR.—From Point la Haye to Double Road Point, which is the southern extreme of St. Mary's Harbour, the course and distance are E.N.E., $1\frac{1}{2}$ mile; the land between is low, and wears a barren appearance. Within Double Road Point is Ellis's Point, distant $\frac{1}{2}$ a mile; these two form the starboard points of entrance to the harbour, which is here nearly a mile wide. You will now perceive the river to be divided into two branches, the one running E.N.E. into what is called Mal Bay, the other south-easterly into St. Mary's Harbour. When you are within Ellis's Point, in St. Mary's Harbour, you can haul to the southward, and anchor abreast of the fishing-stages and houses upon a flat, in 4 or 5 fathoms water, where you will ride land-locked; this flat runs off shore about $\frac{1}{2}$ a mile, and between it and the opposite shore is from 15 to 30 fathoms water. The best anchorage is about 2 miles above the town, opposite to Brown's Pond, where it is not $\frac{1}{2}$ a mile wide; here also you will lie land-locked in 12 fathoms, and have excellent ground at the farther end of the bay.

MAL BAY on the E.N.E. branch, is about a mile wide, and runs up 2 miles, but the anchorage is not good; a heavy sea frequently sets into it, and unless you run up to its very head, in 5 or 6 fathoms, you can have no place even for occasional security; it is therefore seldom resorted to. The entrance to these harbours bears from Point Lance nearly east, distant 19 miles. From Trapeau Point the coast runs N.N.E. $\frac{1}{2}$ N., above 2 miles, to Shoal Bay, and opposite to the northern point of this Shoal Bay, lies Great Colinet Island; this is about a league in length and $1\frac{1}{2}$ mile broad: the southern end of which bears from Cape English N. by E., distant 3 leagues. There is a safe channel on either side of this island, only taking care to give Shoal Bay Point a good berth of $\frac{1}{2}$ of a mile, in order to avoid some *rocks* which lie off it. On the northern side of

the Great Colinet is a stony beach, off which runs a *bank*, with from 7 to 17 fathoms water, rocky ground. At $1\frac{1}{2}$ mile north-eastward from Great Colinet is Little Colinet Island, above a mile in length and $\frac{1}{2}$ a mile in breadth; there is deep water all round it.

GREAT SALMON RIVER.—E. by N., 4 miles from the northern part of Little Colinet Island, is the entrance to Great Salmon River, which is nearly $\frac{3}{4}$ of a mile wide, and runs E.N.E., 7 miles. About 3 miles up this river, and on its southern shore, is an opening, called Little Harbour; opposite this, in a small cove, is the best anchorage in the river, although it is generally good throughout: here you may ride in safety, in 5 or 6 fathoms water. The river narrows as you advance up it; and towards its farther end becomes very shallow.

COLINET BAY.—N.W. by N. from the entrance of Great Salmon River, distant $2\frac{1}{2}$ miles, and N.E. $\frac{1}{2}$ E., $5\frac{1}{2}$ miles from Little Colinet Island, is the mouth of Colinet Bay. Between Salmon River and Colinet Bay is a cove, $1\frac{1}{2}$ mile deep, with from 13 to 4 fathoms in it; but it is exposed to the S.W., and therefore not much resorted to. Colinet Bay runs in N.E. by N., about 2 miles, where the point of an island on the starboard side narrows the passage; having passed which, the channel opens wider again, and the top of the bay is a sandy shallow beach. Throughout the whole of Colinet Bay the anchorage is good: you will have from 12 to 6 fathoms water up to the narrows; in passing the narrows there are 7 and 8 fathoms, and above it 6, 5, and 4 fathoms, all good ground.

NORTH HARBOUR.—To the W.S.W. of Colinet Bay, 4 miles, and N.N.E., about 2 miles from the northern end of Little Colinet Island, is the entrance to North Harbour, which is $\frac{3}{4}$ of a mile wide, and runs up to the northward 3 miles. The anchorage is very good about 2 miles up the river, where it is $\frac{1}{2}$ a mile wide, in 5 or 6 fathoms; or vessels may run farther up, where two sandy points stretch out, being $\frac{1}{2}$ a cable's length asunder: keep $\frac{1}{2}$ a cable's length to the starboard point on board, and anchor close within the starboard shore. In entering North Harbour, always keep mid-channel, for the eastern land is somewhat shallow.

The land now trends W.S.W. $\frac{1}{2}$ S. towards Point Lance. There are one or two coves in the way, but no place fit for the reception of shipping.

POINT LANCE lies in latitude $46^{\circ} 48'$, and is a low rugged point, although the land in the interior rises up, and becomes highly elevated. We have already stated that the course and distance from the eastern head of St. Shot's to Point Lance is N.W. $\frac{1}{2}$ W., about 20 miles. From Point Lance to Cape St. Mary is N.W. $\frac{1}{2}$ W., about $6\frac{1}{2}$ miles.

CAPE ST. MARY is a high, bluff point of land, making like Cape St. Vincent on the coast of Portugal. The land to the northward along shore, to a considerable distance, has an even appearance, and is nearly of equal height with the cape itself. W. by S. from Cape Lance, distant full 2 miles, lie the *Bull* and *Cow Rocks*; these are two *flat rocks*, lying very near each other, and having many *small rocks* about them. About a similar distance, but nearer the main, is another *rock*, appearing at half-tide; there are 10 fathoms between it and the shore, and 15 fathoms between it and Bull and Cow Rocks. In a similar direction to the Bull and Cow Rocks from Cape Lance, but at 3 leagues' distance, and nearly S.S.W., distant 7 miles from Cape St. Mary's, are two *other little rocks*, appearing just above the surface of the water, and having the sea constantly breaking over them; they lie S.S.E. and N.N.W. from each other, distant 3 cables' length, and have 15 fathoms between them; the same depth of water is all around them, excepting towards the S.S.E., where only 6 fathoms will be found 2 cables' length off. Between these rocks and Cape St. Mary are 30, 25, and 19 fathoms water; and near the cape are 13, 14, and 15 fathoms. Vessels therefore may proceed between them, and also between the Bull and Cow Rocks and the main, if necessary, for there is no hidden danger; but perhaps it will always be more prudent to go to the southward of both.

PLACENTIA BAY.—The entrance to Placentia Bay is formed by Cape St. Mary on the east, and Cape Chapeau Rouge, or Mountain of the Red Hat, on the west; the former lying in latitude $46^{\circ} 49'$ north, and the latter in $46^{\circ} 53'$ north, bearing from each other W.N.W. and E.S.E., distant $16\frac{1}{2}$ leagues. Cape Chapeau Rouge is the most remarkable land on all the coast, appearing higher than the surrounding shore, and somewhat like the crown of a hat, from which singularity it obtains its name. It is visible 11 or 12 leagues to seaward in clear weather.

From Cape St. Mary to Cape Breme your course will be N. by E., about 9 miles, and from Point Breme to the Virgin Rocks N.E. by N., 12 miles; these rocks lie $1\frac{1}{2}$ mile from the main, and always appear above water. A little to the southward of the Virgin Rocks are some whitish cliffs in the land, by which it may be known if falling in with the land hereabouts in thick weather. About a mile S.S.W. from the Virgin Rocks lies the *Girdle Rock*.

From the Virgin Rocks to Point Verde, the southernmost point of Placentia Harbour, the course and distance are N.E. by E. $\frac{1}{4}$ E., 6 miles. From St. Mary's Cape to Verde Point there is no harbour or place of shelter for ships of any size.

PLACENTIA HARBOUR.—Point Verde, or Green Point, is low and level, and forms the southern point of the road; it has a pebbly beach on each side, and several fishing stages within it. At the end of this beach is a high rocky cliff, extending to the S.E. corner of the bay, where it again terminates in a pebbly beach; this beach then runs E.N.E., a mile, to the Fort Point: on the inside, which faces the S.E. arm of the harbour, stands the town of Placentia. A little southward of the town is a high hill, with a remarkable cliff in the middle of the beach. The outer side of the north point is level, with a clay cliff on its outer part, bearing nearly N.E. by N., distant from Point Verde $1\frac{1}{2}$ mile; from this point the land forms a small bay, with a stony beach round it, to the corner of the cliff under Signal Hill; this cliff continues to Freshwater Bay, which is formed in a valley between Signal Hill and Castle Hill, having a pebbly beach around it; here a small rivulet runs down the valley, at which vessels may obtain water. To sail into this road, if coming from the southward, you should keep a league off the land, in order to avoid the *Gibraltar Rock*, which lies about 2 miles to the westward of Green Point, and has only 8 feet water over it; the mark to go to the northward of which is, the castle, standing on a hill at the northern side of the harbour, and very conspicuous to seaward, open of Point Verde. When you have this castle on with the point, you will pass a little to the northward of the rock; but when you have the castle well open of the point, you will give the rock a wide berth. Run in with this mark, keeping your lead going, for there are regular soundings on both sides, and then proceed to the anchorage in Freshwater Bay, and under Castle Hill, at $\frac{3}{4}$ of the distance over from that side, where you will lie in 6 or 7 fathoms water, good ground. At the bottom of the road is a long beach, which terminates in a point to the northward, on which stand some houses and an old fortress; there is also a fort on the opposite point. The entrance to the harbour is between these; it is very narrow (not above 60 fathoms across), and has $3\frac{1}{2}$ fathoms water in it. When you get within these points the harbour opens, becomes $\frac{1}{2}$ of a mile wide, and extends E.N.E., above $1\frac{1}{2}$ mile, where ships may lie in perfect security, with 6 and 7 fathoms water; in going in, keep nearer to the starboard side. The stream runs into the harbour more than 4 knots an hour. The tide rises 6 or 7 feet; and it is high water, full and change, at 15 min. after 9 A.M.

N.E. $\frac{1}{2}$ E. from Point Verde, distant 2 miles, and N.N.W. from Moll Point, about $\frac{3}{4}$ of a mile, is the *Moll Rock*, over which are only 12 feet water, with 8 and 10 fathoms near it. N.E. by N., $5\frac{1}{2}$ miles from Point Verde, is Point Latina. S.W. from Point Latina, distant a mile, is the *Wolf Rock*, which lies about $\frac{1}{2}$ a mile from the main, and between Placentia Harbour and Point Latina, and therefore must have a good berth in passing. The shore all the way is low near the sea, but high and ragged inland. A large mile to the eastward of Point Latina is Point Roche, which has a *shoal* off it, extending $\frac{1}{4}$ of a mile out.

LITTLE PLACENTIA HARBOUR runs in to the southward from Point Roche; and S.E. by E. $\frac{1}{2}$ E. from Point Roche, distant 2 miles, is the opposite, or Fox's Point, which may be considered to be the eastern entrance to Placentia Sound. On the western side of this sound is the harbour of Little Placentia, which extends W. by S., above $1\frac{1}{2}$ mile, and is nearly $\frac{1}{2}$ a mile broad. There is good anchorage in a cove on the northern shore, which you may know by the western side of it being woody; off the east point of the cove lies a *shoal*, stretching nearly $\frac{1}{2}$ across the channel; in this cove are 7 and 8 fathoms water. To the eastward an arm also runs in almost a league, with deep water, but little frequented, called Placentia Sound. Fox's Harbour is a small sandy cove, fit for boats only.

SHIP HARBOUR.—From Point Latina to Ship Harbour the course and distance are east, nearly $5\frac{1}{2}$ miles. This inlet runs up northerly, $2\frac{3}{4}$ miles, and is $\frac{1}{2}$ mile wide.

wide; the best anchorage is in a cove on the west side, in 10 fathoms water, about a mile from the entrance.

FOX ISLAND is small and round, and lies N.E. $\frac{1}{2}$ N., distant 3 miles from Point Latina, and N.W. by W., full 3 miles from Ship Harbour Point. This latter is a low stony point, lying $1\frac{1}{2}$ mile from the entrance of the harbour. Between Fox Island and Ship Harbour Point is a *ledge of rocks*, which, in bad weather, will show breakers quite across; between the rocks are 2, 5, 7, and 10 fathoms water. N.N.W., $1\frac{1}{2}$ mile from Fox Island, is the *Fishing Rock*, steep, and always above water; and N.N.E., $1\frac{1}{2}$ mile from the Fishing Rock, is *Rowland's sunken Rock*, over which the sea most commonly breaks.

THE RAM ISLANDS.—This is a cluster of high islands, lying nearly N.E. $\frac{3}{4}$ E. from Fox Island, distant 3 miles; on the eastern side of these islands is Long Harbour. There is no danger in entering this place; but the best anchorage will be on the northern side, to the eastward of Harbour Island, between it and the main, in 6 or 7 fathoms water, where you will ride secure from all winds.

From Long Harbour the shore runs N.N.E., N. by E., and north, full 15 miles, having no harbour or place fit for the reception of vessels, until you reach Little Harbour, Little South Harbour, and Great South Harbour; within this space are said to be several low islands and *rocks*; one of which, called the *White Rock*, from being covered with the dung of birds, lies N.E. by N. from Point Latina, distant 13 miles, and direct midway between Fox Island and Little Harbour. It is abreast of a small place, called Tinny Cove, and full 2 miles off the land: vessels pass on either side.

LITTLE HARBOUR has very bad anchorage, and much exposed to south-westerly winds, therefore not much frequented.

LITTLE SOUTH HARBOUR lies a mile to the north-westward of Little Harbour, and has several rocky islands at its entrance, which, in sailing in, must be left on your starboard side, excepting one, on either side of which there is a good passage, with 15 fathoms water. On the southern shore within these islands, is a *sunken rock*, over which the sea commonly breaks; it lies about a cable's length from the land. Nearly opposite are also some *rocks*, a cable's length from the shore, which appear at half-ebb; this harbour is $1\frac{1}{2}$ mile long, $\frac{1}{2}$ a mile wide, and has 7, 8, 10, and 12 fathoms water in it; and the ground, except where these rocks are situated, is tolerably good.

GREAT SOUTH HARBOUR lies a mile to the northward of Little South Harbour; its entrance is, between the middle point and the Isle au Bordeaux, $1\frac{1}{2}$ mile wide, with from 20 to 30 fathoms water; there is no danger in going in, and the anchorage, $1\frac{1}{2}$ mile up, or near the head of the harbour, is very good in 6 and 7 fathoms water.

CHANCE HARBOUR.—The Isle au Bordeaux is a high round island, from which the coast runs north-easterly, 4 miles, to the entrance of an inlet, called Come-by-Chance; this runs up full 3 miles, and has from 20 to 3 fathoms water, gradually decreasing in depth unto the farther end; vessels may anchor here on a sandy bottom, but they will be quite exposed to south-westerly winds.

NORTH HARBOUR.—About N.N.W., 3 miles from the entrance of Come-by-Chance, is that of North Harbour; it is above a mile wide, and there is no danger in sailing into it, but, like the former, it is too open to be trusted to; there is, however, fair anchorage about 2 miles up, in 7 fathoms water.

PIPER'S HOLE.—N.W. by N., distant $2\frac{1}{2}$ miles from the entrance to North Harbour, is that which leads to Piper's Hole; the channel in is between Sound Island and the main; in the passage you will have 19, 15, and 12 fathoms, and when to the northward of the island 8, 7, and 6 fathoms; from hence Piper's Hole runs up to the northward full 5 miles; but the water is shallow and unfit for shipping. From Piper's Hole, in a south-westerly direction, lie Sound, Woody, and Barren Islands, having a channel between them and the north-western shore, $\frac{1}{2}$ a mile wide, in which are from 7 to 20 fathoms, and good anchorage all the way. Between Woody and Sound Island is a passage with from 7 to 16 fathoms water in it; that between Woody and Barren Island is much wider and deeper, having 40 and 50 fathoms. Opposite the northern part of Barren Island is a small cove, called La Plant, fit only for boats. Barren Island is $3\frac{1}{2}$ miles in length, and 1 in breadth; it is high land, and at its south-eastern part is a small cove, in which is tolerable anchorage in from 8 to 16 fathoms. N.W. by W.

from the southern part of Barren Island is Gulsh, an inlet of very little importance; farther S.W. are Great and Little Sandy Harbours.

GREAT SANDY HARBOUR lies W. $\frac{1}{2}$ S., distant 4 miles from the south end of Barren Island; to this place there is a passage between Ship Island and the main, with 7, 9, and 17 fathoms water; but the entrance to the harbour is very narrow, and much encumbered with *rocks*; these are all above water, and have channels between them; but when you get within the harbour there are 6 and 7 fathoms, and good shelter.

LITTLE SANDY HARBOUR is $\frac{1}{2}$ of a mile to the southward of the Great Harbour: in it you will have 6 and 7 fathoms water, good ground; in sailing in, you should pass to the northward of a low *rock*, which lies at the entrance. You may readily know this harbour by the Bell Island, which lies S.E. $\frac{1}{2}$ E., $1\frac{1}{2}$ mile from the mouth of it, and N.E. by N., 13 miles from the western point of Merasheen Island; this island has a remarkable appearance, resembling a bell with the bottom upwards.

CLATISE HARBOUR, &c.—S.W. by S. from Bell Island lie the Burgoe Islands; and farther south the White Islands. S.W. by W. from the Burgoe Islands, nearly 5 miles, is the entrance to Clatise Harbour, between the Great Island of Valen and the main; the shore all along from the Sandy Harbours is steep-to, and the passage to Clatise $\frac{3}{4}$ of a mile wide, with 40 and 50 fathoms water; but the cove itself is very narrow. The best anchorage is in the western branch, which is a mile long, in from 10 to 17 fathoms, good ground. There is also a good channel from the southward, between Great and Little Valen Islands and the main, with 20, 30, and 50 fathoms in it.

GRAMMER'S ROCKS.—These are a *cluster of low rocks*, just appearing above water, and lying E. by N. $\frac{1}{2}$ N., $1\frac{1}{2}$ mile from the northern end of Valen Island. There is a passage between Great and Little Valen Islands, but it is encumbered with several *rocks*.

MERASHEEN ISLAND.—This is a long narrow island, running nearly in the direction of the coast full 6 leagues; off its northern shores are a *large cluster of rocks and islands*, denominated the *Ragged Islands*. At its south-western part is a small but good harbour, with from 6 to 10 fathoms water in it. To sail into this place, you should keep the starboard shore on board, in order to avoid a *sunken rock* that lies a cable's length off a ragged rocky point, on the port side, when going in. There is also a *small cluster of rocks* lying off the south-eastern part of Merasheen, $\frac{3}{4}$ of a mile from shore; these lie between it and Red Island.

RED ISLAND is high, being visible 11 or 12 leagues, and wears a barren appearance, about $4\frac{1}{2}$ miles long, and $2\frac{1}{2}$ broad; its southern point bears N.N.W., distant 11 miles from Placentia Road, and E. by N., 16 leagues from Mortier Head. On the eastern side of the island, and near its northern end, is a small cove, or bay, fit only for small craft.

LONG ISLAND.—Directly N.E. from Red Island, distant 7 miles, lies the main body of Long Island; and midway between them is Woody Island, off the S.W. of which are *two small rocks* above water. The passage between Red and Woody Islands is otherwise clear from dangers, and nearly 3 miles wide; that between Woody and Long Island is 2 miles across; both have deep water. Long Island is irregularly shaped, and indented with inlets: its length is full 8 miles, its breadth no where much above one. Off its southern end is Iron Island, and a *small rock* above water; the southern point being formed of high and steep rocks. From Point Latina to this end of Long Island, the course and distance are N. $\frac{1}{2}$ E., $4\frac{1}{2}$ leagues; and from thence to Indian Harbour, which is situated on the eastern side of Merasheen Island, N.W. by W., 4 miles. To enter this place, you may go on either side of a small island at the entrance; the passage is safe, but the only anchorage is to the westward of the island, between it and Merasheen, and here the ground is uncertain.

HARBOUR BUFFET.—On the eastern side of Long Island, about a league from Iron Island, is Harbour Buffet, a tolerably good harbour, the entrance to which is narrow, but has 13 fathoms water in it; this place may be known by the islands that lie in the mouth and to the southward of it, and by Harbour Buffet Island, which lies E. $\frac{1}{2}$ S., a mile from the entrance. To sail into this harbour, you must steer to the northward of the islands at its mouth, and, being within them, you will perceive the harbour

divided into two branches; one running westward, the other northward. The best anchorage is in the northern arm, in 15 fathoms water.

MUSCLE HARBOUR.—On the western side of Long Island, and about 4 miles from its southern end, is Muscle Harbour; the entrance to which is between a low green point on the starboard side, and a small island on your port hand; the harbour is nearly 2 miles long, and one broad; and has from 10 to 20 fathoms water within it. Vessels bound to this place may run in between Woolly and Iron Islands from the southward, or between Long and Merasheen Islands from the northward; but in the latter track there are some *rocks* to be guarded against, which lie nearly mid-channel between the northern ends of both islands; there are also some *rocks* above water to the north-eastward of Long Island, called the Bread and Butter Islands, but these are always visible, and steep-to.

PRESQUE.—W.N.W. $\frac{1}{2}$ N., distant 4 miles from the south-western point of Merasheen Island, lies the little harbour of Presque; the water here is sufficiently deep, but there are so many *rocks* about its entrance, that it is rendered thereby difficult of access. S.W. $\frac{1}{2}$ W., 2 miles from Presque, is the *Black Rock*, and $\frac{1}{4}$ of a mile within this is a *sunken rock*. West from the Black Rock, distant 2 miles, is the island of Marticot, about a mile in length, and $\frac{1}{2}$ a mile broad. Within the Black Rock and Marticot Island, lie the harbours La Perche and Little and Great Paradise.

LA PERCHE runs in to the northward of the Black Rock; its entrance is difficult, and there is no good anchorage. Little Paradise lies to the westward of La Perche, and to the northward of the east point of Marticot Island; the only safe anchorage is in a cove, at the head of the harbour, on the port side; there you may moor to the shore, and lie land-locked. Great Paradise is fit only for boats; it lies to the westward of Little Paradise. Between the north-western point of Marticot and the main, is Fox Island; between these islands is a safe passage into Paradise Sound, with 9 fathoms; but vessels must never attempt going between Fox Island and the main.

PARADISE SOUND.—To the westward of Fox Island, about a mile, is the entrance to Paradise Sound, extending N.E. by E., $4\frac{1}{2}$ leagues, and being about a mile broad; having very deep water throughout, and no safe anchorage, except at its head. Just within the sound, on the eastern side, is a cove, with 10 fathoms water; but there are several *rocks* above water in it, and the bottom is rocky, so that you cannot well anchor there. In passing to the north-westward of Fox Island there is a *sunken rock*, which must be avoided. To the south-westward of Paradise Sound lies Long Island, running W.S.W. $\frac{1}{2}$ S., about $3\frac{1}{2}$ miles: it is principally high land, making in several peaks.

PETIT FORT HARBOUR.—At a mile to the westward of Paradise Sound lies Petit Fort Harbour, a very good inlet, having in it from 14 to 7 fathoms water, good ground. The entrance is more than $\frac{1}{4}$ of a mile wide, and lies N.E., distant 5 miles from the south point of Long Island, and N. by E., $2\frac{1}{2}$ miles from the north point of the same. There is no danger in going in; and the best anchorage is on the starboard or eastern side, for S.E. winds heave in a great swell on the western shore when it blows hard. Nonsuch Harbour has no good anchorage.

CAPE ROGER HARBOUR lies close to the westward of Cape Roger, which is a high, round, barren head, lying N. $\frac{1}{4}$ E., $3\frac{1}{2}$ miles from the south point of Long Island. There are several low *rocks* and islands lying off the eastern point of the entrance. In the harbour, at $\frac{1}{4}$ of a mile within, on the western side, lies a small island; to the northward of which, between it and the main, is very good anchorage in 7 or 8 fathoms water, or farther up in 6 or 7 fathoms.

GREAT GALLOWES HARBOUR.—N.N.W., 2 miles from the south point of Long Island, lies a small Green Island, which has a *shoal* all round it, to nearly a cable's length. From Green Island, N.N.W., $2\frac{1}{2}$ miles, lies Great Gallows Harbour Island, which is high. Vessels may pass on either side of this island into Great Gallows Harbour, which lies a mile to the E.N.E. of the island. In this harbour is exceedingly good anchorage, in 7 fathoms water, on the starboard side, just within a low stony point, taking care to give the point a small berth, in order to avoid a *rock* which is alternately covered and uncovered with the tide.

LITTLE GALLOWES HARBOUR lies close round to the eastward of Great Gallows Harbour, and is only fit for small vessels, which must be moored to the shore; a *rock* above water lies at its entrance, and the two harbours are only divided by

a narrow neck of land. To the north-westward of Great Gallows Harbour are Little Harbour, Bay de L'Eau, and Boat Harbour; the first of these is only fit for boats. Bay de L'Eau runs in a full league, and has deep water all the way up, except at its head, where there appears a sandy beach; here vessels may ride in 3 fathoms.

BOAT HARBOUR lies round the western point of Bay de L'Eau, off which is a *rock* above water; this harbour runs up N.E., 3 miles, with deep water, until you get near its farther end. The land from hence runs south-westward to Bane Harbour; this lies on the main land, and is fronted by several islands, the largest of which is called Cross Island, being 2 miles in length and 1 in breadth; the other islands are named Gooseberry, Petticoat, Gull, and Jerseyman's Islands, and are situated between Cross Island and the main.

BANE HARBOUR is a good place for small vessels; its entrance is narrow, but when you are within it, there is sufficient room to moor with 3 fathoms water. There are good channels between all these islands, through which vessels may pass to the harbours at the northward. At $1\frac{1}{2}$ mile S.W. from Bane Harbour is Rashoon, too shallow for any vessels; and about the same distance from Rashoon is Broad Cove: here the anchorage is exceedingly good, with 8 and 9 fathoms water; it lies to the north-eastward of a point of land which juts out, and is named Broad Cove Head.

RED HARBOUR lies 3 miles from Broad Cove Head, and is a good harbour, but too open to the southward; in it are 17, 13, and 9 fathoms. S.W. from hence, distant $3\frac{1}{2}$ miles, and situated on the main, is John the Bay; in your passage to which, and nearly mid-channel, between Flat Islands and the shore, is a cluster of small islands, with deep water all round them; and further on, near the land, is a *rock* above water: you may sail on either side of this. The channel between it and the land is narrow, and has 17 fathoms; that on the eastern, or outer side, has 18, 25, and 26 fathoms, and leads directly out to Placentia Bay.

AUDIERNE ISLAND lies $\frac{1}{2}$ a mile to the northward of Cape Jude or Middle Island, on the west side of which there is a tolerably good harbour. At about a cable's length from Audierne Island, to the southward of the harbour, is a *sunken rock*; the mark for avoiding which, in coming from the southward, is not to haul in for the harbour till you open a remarkable green point on the southern side of the harbour. The best anchorage is on the north shore, just within a small island. A *spit of rocks* stretches just off the Green Point on the south shore, which is covered at high water.

Vessels bound for Audierne Harbour may pass between Cape Jude or Middle Island and Audierne Island; and between Crow and Patrick's Island, which are two small islands lying off the S.W. point of Audierne Island. Off the eastern point of Audierne is Ford's Island; to the west is a *sunken rock*, about a cable's length from the island, and another on the eastern side, which almost always breaks. W. by N., about $1\frac{1}{2}$ mile from Ford's Island, is Green Island, having a little rocky islet off its entrance, and another off its western ends; there is deep water all round it, 11 fathoms close to the rocky islets, 70 fathoms between it and Ford's Island, 73 and 60 fathoms between it and Long Island, and still deeper water towards the Gallows Harbours.

THE SADDLE BACK is an islet lying E.N.E. $\frac{1}{2}$ E., $8\frac{1}{2}$ leagues from Corbin Head, E. by N. from Mortier West Point, and E. by S., 3 leagues from John the Bay Point. Between it and the main are a great number of *rocks* and little islands, which render this part of the coast very dangerous. A *chain of rocks* extends N.E. by E., $1\frac{1}{2}$ mile from the Saddle Back.

CAPE JUDE, OR MIDDLE ISLAND, is about $2\frac{1}{2}$ miles in length, 2 in breadth, and lies $1\frac{1}{2}$ mile north of the Saddle Back; on the south end of it is a round hill, called the cape. Between this island and the main is a cluster of *islands* and *low rocks*, with a great number of *sunken rocks* about them, called the *Flat Islands*, the innermost of which lies about a mile from the main.

West, $3\frac{1}{2}$ miles from the south-eastern Flat Island, and 2 miles to the N.N.W. of John the Bay Point, lies John the Bay, in which there is tolerably good anchorage, with about 8 fathoms water, sandy bottom.

ROCK HARBOUR.—From John the Bay Point to Mortier East Head, the bearing and distance are S.W. $\frac{1}{2}$ W., 8 miles. At 2 miles S.W. by W. from John the Bay Point lies Rock Harbour, unfit for shipping. Between lie *two sunken rocks*, nearly $\frac{1}{2}$ a mile from the shore.

MORTIER BAY.—At 2 miles W.S.W. from Rock Harbour is the opening into Mortier Bay; at the western entrance of which is a small harbour, called Boboy, of only 9 feet water. The course into Mortier Bay is N.N.E., for about 2 miles; and in it there are from 50 to 70 fathoms water, the land on each side being high; it then extends westward, about 2 miles, and is nearly 2 miles wide. On the eastern side, at about 3 miles from the entrance, is an exceedingly good harbour, called Spanish Room, in which vessels may anchor in from 4 to 6 fathoms water, good ground, and secure from all winds. There is not the least danger in going into this harbour, only giving the *low rocks* above water, on the port hand, at the entrance, a berth of a cable's length.

LITTLE MORTIER BAY.—At $2\frac{1}{2}$ miles from the entrance of Mortier Bay lies Croncy Point and Islands; about 2 miles farther southward, and nearly a mile westward of Mortier East Point, is Little Mortier Bay, at the entrance of which is a round island, called Mortier Island, lying $\frac{1}{2}$ of the distance from the west side; it is bold-to-all round, and may be passed on either side. Close to the first point beyond the island, on the port side going in, is another little island, close under the land; and 2 cables' length from it, in a direct line towards the outer island, is a *sunken rock*, on which the sea breaks in bad weather, which is the only danger in the bay. At the bottom of it, $1\frac{1}{2}$ mile from Mortier Island, on the east side, is a cove, called Fox Cove, where there is fair anchorage, and room for one ship to moor in 9 fathoms, good holding ground, two points open to the sea, from S.S.E. to S.E. On the west side of the bay is the harbour, which is small and narrow, but a very good one for small ships, where they lie moored to the shore. Off the starboard point going in is a *rock*, which is always covered at high water.

At $1\frac{1}{2}$ mile S.W. by W. from Mortier East Point lies Mortier West Head; a mile beyond which is Iron Island; and S.E. $\frac{1}{2}$ E., 2 leagues from Iron Island, and S.W. $\frac{1}{4}$ W., 5 leagues from Cape Jude, lies the *Mortier Bank*, the shoal part of which is about a league over, and on which there are said to be only 4 fathoms. The sea breaks heavily on it in blowing weather.

IRON ISLAND is small and high. Off its S.W. point is a *rock* under water; at $\frac{2}{3}$ of a mile to the southward of it is *Gregory's Rock*; S. $\frac{1}{2}$ W., $\frac{1}{4}$ of a mile from which is *Galloping Andrews*; and S.E. by E. from Iron Island is the *White Horse*, of 8 fathoms. A W.S.W. course from Marticot's Island will clear all these dangers.

GREAT AND LITTLE BURIN HARBOURS.—S.W. $\frac{1}{2}$ W. from Iron Island, distant a league, is the S.E. point of Great Burin Island; and W.N.W., $1\frac{1}{2}$ mile from it, is the north part of Parly's Island. On the main, within these islands, lie the harbours of Great and Little Burin. Vessels bound for Burin may pass on either side of Iron Island; the only danger in passing to the northward is the *ledge*, called the *Brandys*, which almost always break: they lie nearly $\frac{1}{4}$ of a mile to the southward of a *low rock* above water, close under the land of Mortier West Head. By keeping Mortier West Head open to the westward of Iron Island, you will avoid *Gregory's Rock*, on which is only 2 fathoms water, and which almost always breaks. Vessels may pass with safety between this rock and Iron Island, by giving the latter a berth of above a cable's length.

GALLOPING ANDREWS.—On the main, within Parly's Island, are two remarkable white marks in the rocks; the northernmost of these brought on with the north part of Parly's Island, and Iron Island N.E. $\frac{1}{2}$ N., will lead on the *Galloping Andrews*, a *shoal*, with 5 fathoms water on it.

The *White Horse* is a *shoal*, with 8 fathoms on it, which bears S.E. by E., a mile from Iron Island.

The *Dodding Rock* lies about $\frac{1}{4}$ of a mile from the easternmost part of Great Burin Island.

Great Burin Island is about $2\frac{1}{2}$ miles in length, lying N.N.E. and S.S.W., being high land. Near its south end is Cat Island, high and round, lying E.N.E., nearly 4 miles from Corbin Head.

From Corbin Head to Shalloway Point the bearing and distance are N.E. $\frac{1}{2}$ N., $4\frac{1}{2}$ miles. Between them, and nearly in the same direction, lie Corbin and Little Burin Islands, both high and round, not more than a cable's length from the shore.

SHALLOWAY ISLAND lies N.N.W., a mile from Cat Island, and N.E. by E., $\frac{1}{4}$ of a mile from Little Burin Island. The passage into Burin Harbours, from the southward, is to the westward of Shalloway Island.

In sailing in, take care to give Poor Island a berth on your port hand; and, when within Shalloway Island, you may anchor in safety between it and Great Burin Island, in from 12 to 18 fathoms. The best anchorage in Great Burin Harbour is in Ship Cove; the course up to it, after you are within Neck Point (which is to the westward of the Shalloway Island) is N.N.E., about $1\frac{1}{2}$ mile. It is nearly $\frac{1}{4}$ of a mile wide. In sailing up, keep the west shore on board, in order to avoid a *sunken rock* on the east shore, at about half-way up, and nearly a cable's length from the shore. Directly off this is a remarkable hole in the rock, on the same side; and a gully in the land, from top to bottom, on the western shore. Another *rock*, with $2\frac{1}{2}$ fathoms on it, lies above a cable's length to the S.W. of Harbour Point, which is round and green, and of a moderate height, joined to Great Burin Island by a low, narrow, sandy neck.

BURIN BAY is about a mile N.N.E. of Little Burin Island; it is clear, and about a mile wide every way: here ships may occasionally anchor, and lie almost land-locked. In this bay are two islands, one called Poor Island, low and barren; the other lies to the northward, before the entrance of Burin Inlet, and is high and woody.

BURIN INLET may be entered on either side of the island; it extends up 5 miles. A little within the entrance, on the east side, $\frac{1}{2}$ a cable's length from the shore, is a *rock*, covered at $\frac{3}{4}$ flood; and $1\frac{3}{4}$ mile from the entrance, near the middle, is another *rock*, to the westward of which is good room, and fair anchorage, in from 7 to 12 fathoms. There are 15 fathoms in the entrance; and, in the middle, 2 miles up, 15 to 23 fathoms; and thence, up to the head, are from 10 to 5 fathoms.

The east passage is between Parly's Island and Iron Island; but it is not safe without a commanding gale, and that between the N.N.E. and S.E.

CORBIN HARBOUR is about a mile to the northward of Corbin Head, and is a good harbour for small vessels. At $\frac{1}{4}$ of a mile eastward of this harbour, and 2 cables' length from the shore, is a *sunken rock*, of 5 or 6 feet water, on which the sea breaks in bad weather. Vessels bound for this harbour must also avoid a *shoat*, of 2 fathoms water, which lies E.S.E. from the south point of the entrance, distant $\frac{1}{2}$ a mile; the best anchorage is in the north arm, about $\frac{1}{2}$ a mile within the entrance, opposite a cove on the starboard side.

From Corbyn Head, which is high, bluff land, to Small Point the lowest hereabout, the course and distance are W.S.W., $2\frac{1}{2}$ miles; and from Small Point to Sauker Head W. $\frac{1}{2}$ S., 2 miles. There are many headlands between, which form coves, but afford no shelter. The coast is clear of rocks; and there are 30 fathoms water close to the shore; but a little to the south-westward of Sauker Head there is a *small rock*, under water; it lies close in within the land.

From Sauker Head, which is a high hill, in the shape of a sugar-loaf, to Cape Chapeau Rouge, the bearing and distance are west, 4 miles; between lie the harbours of Great and Little St. Lawrence.

LITTLE ST. LAWRENCE.—The harbour of Little St. Lawrence is the first to the westward of Sauker Head. To sail in, you must keep the west shore on board, to avoid a *sunken rock*, which lies a little without the point of the peninsula, which stretches off from the east side of the harbour. The anchorage is above the peninsula, (which shelters it from the sea-winds,) in 3 or 4 fathoms water, a fine sandy bottom. Ships may anchor without the peninsula, in 12 fathoms, good ground, but this place is open to S.S.E. winds.

GREAT ST. LAWRENCE.—The harbour of Great St. Lawrence, which is the westernmost, is close to the eastward of Cape Chapeau Rouge. To sail in, you should be careful with westerly, particularly with S.W. winds, not to approach too near the Hat Mountain, in order to avoid the flaws and eddy winds under the high lands. There is no danger but what is very near the shore. The course in is, first, N.N.W., till you open the upper part of the harbour, then N. $\frac{1}{2}$ W. The best anchorage for large ships is before a cove, on the east side of the harbour, in 13 fathoms water. A little above Blue Beach Point, which is the first on the west side, you may lie, only having two points open: and may anchor any where between this point and the point of Low Beach, on the same side, near the head of the harbour, observing that, close to the west shore,

the ground is not so good as on the other side. Fishing vessels commonly lie at the head of the harbour, above the beach, sheltered from all winds.

Garden Bank, whereon are from 7 to 16 fathoms water, lies about $\frac{1}{2}$ a mile off Little St. Lawrence, with Blue Beach Point on with the east point of Great St. Lawrence.

FROM CAPE CHAPEAU ROUGE TO CAPE RAY.

Variation 25 to 23 degrees West.

FERRYLAND HEAD lies W.S.W., a mile from Cape Chapeau Rouge; it is a high rocky island, just separated from the main, and, with Chapeau Rouge, are infallible objects to point out the harbours of St. Lawrence.

LAUN BAY.—W.N.W., 5 miles from Ferryland Head, lies the Point of Laun, from whence the land turns towards the northward, and forms the bays of Laun; here are two small inlets, called Great and Little Laun. Little Laun, the easternmost, lies open to the S.W. winds, and, therefore, is no place to anchor in; Great Laun runs in N.E. by N., 2 miles, is nearly $\frac{1}{2}$ a mile wide, and has from 14 to 3 fathoms water. In sailing in, be careful to avoid a *sunken rock*, which lies about $\frac{1}{2}$ of a mile off the east point. The best anchorage is on the east side, about $\frac{1}{2}$ a mile from the head, in 6 and 5 fathoms, tolerably good bottom, and open only to the south and S. by W. winds, which cause a great swell, as the head of this place is a bar harbour, where boats can ascend at half-tide, and find conveniences for fishing, with both wood and water.

LAUN ISLANDS lie off the west point of Laun Bay, not far from the shore; the westernmost and outermost of which lies W.N.W., westerly, 10 miles from Ferryland Head. Nearly $\frac{1}{4}$ of a mile to the southward of this island is a *rock*, whereon the sea breaks in bad weather. There are other *sunken rocks* about these islands, but not dangerous, being very near the shore.

TAYLOR'S BAY lies open to the sea, about 3 miles to the westward of Laun Islands. Off the east point are some *rocks*, nearly $\frac{1}{4}$ of a mile from the shore.

POINT AUX GAUL is a low, narrow point of land, which stretches out a little to the westward of Taylor's Bay. A *rock* lies off it above water, $\frac{1}{2}$ a mile from the shore, called *Gaul Shag Rock*, which bears from Ferryland Head W.N.W. $\frac{3}{4}$ W., 5 leagues; there are 14 fathoms close to the off-side of it, but some *rocks* on its inside. From Point aux Gaul Shag Rock to the Lameline Islands, the bearing and distance are N.W. by W., a league; between is the Bay of Lameline, which is unfit for shipping, being shallow, and having several islands and rocks about it. The river at the bottom of the bay abounds with salmon.

Near the south point of the westernmost Lameline Island is a *rock*, high above water, called *Lameline Shag Rock*; from which to Point May the distance is 8 miles. Between lie the *Lameline Ledges*, which are very dangerous, some of them being 3 miles from the land. To avoid them in the day-time, you should not bring the Lameline Islands to the southward of E.S.E., until Point May bears N.E. by N. from you; you may then steer northward between Point May and Green Island with safety. By night, approach no nearer than in 30 fathoms water.

REMARK.—Mariners who navigate this part of the coast, will do well by observing the appearance of the land, for all that part of Chapeau Rouge and Laun is very high and hilly close to the sea; from Laun Islands to Lameline it is only moderately high; and from Lameline to Point May, the land near the shore is low, with beaches of sand, while inland it becomes mountainous.

ST. PIERRE, OR ST. PETER'S ISLAND.—The island of St. Pierre lies 11 leagues W. by N. from Cape Chapeau Rouge; it is about 4 leagues in circumference, and pretty high, with a craggy, broken, uneven surface. On coming from the westward, Gallantry Head (which is the S.E. point of the island) makes in a round hummock, like a small island, separated from St. Pierre. A little to the N.E. of Gallantry Head lie three small islands, the innermost of which is the largest, and called Chiens or Dog Island; within it are the road and harbour of St. Pierre. The harbour is small, and has from 20 to 12 feet water; but there is a *bar* across the entrance, with only 6 feet at low water, and 12 or 14 at high water. On Gallantry Head is a fixed light, visible, in clear weather, 18 miles.

The road lies on the west side of Dog Island, and will admit ships of any burthen, in 8, 10, or 12 fathoms water. The best anchorage is on the north side; but in general it is rocky, and exposed to the N.E. winds. Be cautious, in going in or out, of some *sunken rocks*, which lie about a mile E.S.E. from Boar Island, which is the easternmost of the three islands before mentioned: this is the only danger about St. Pierre but what lies very near the shore. This harbour has been improved by the erection of a lighthouse on Canon Point, which is on the north side of the entrance to the inner harbour, in latitude $46^{\circ} 46' 52''$ north, and longitude $56^{\circ} 14'$ west, and about $\frac{1}{2}$ of a mile to the eastward of the town. This is a fixed light, visible 3 miles off, which is shown only from the 1st May to the 15th December. About 2 cables' length eastward of the lighthouse is anchorage in 5 or 6 fathoms, with the light bearing about W. by N. The passage in between St. Pierre and Dog Island is very narrow, being rocky on both sides; but in the channel are 6, 5, and 4 fathoms.

The flood-tide at St. Pierre enters by the S.E. Pass, and also the Passage aux Fletans, going out at the N.E. Pass, and the ebb in an opposite direction; but at a little distance outside, the current is generally to the N.N.W.

THE ISLAND OF COLOMBIER is rather high, and lies very near to the N.E. point of St. Pierre; between them is a passage, $\frac{1}{3}$ of a mile wide, with 12 fathoms water. On the north side of the island is a *rock*, called *Little Colombier*; and about $\frac{1}{4}$ of a mile E.N.E. from it is a *sunken rock*, with 2 fathoms on it, called by the French, *Basse du Colombier*.

GREEN ISLAND is about $\frac{3}{4}$ of a mile in circuit, and low; it lies E.N.E., about 5 miles from St. Pierre, and nearly in the middle of the channel between it and Point May, in Newfoundland. On its south side are *several rocks*, above and under water, extending $2\frac{1}{2}$ miles to the W.S.W.

LANGLEY, or LITTLE MIQUELON.—Langley Island lies to the N.W. of St. Pierre, with a passage of about 3 miles wide between, free from danger. It is about 8 leagues in circuit, of a moderate and equal height, excepting at the north end, which is a low point, with sand-hills; off which, on both sides, it is flat a little way; but every other part of the island is bold-to. There is a settlement in the N.E. Bay. There is anchorage on the N.E. side of the island, near Seal Cove, in 5 or 6 fathoms, a little to the southward of the sand-hills, on a fine sandy bottom.

GREAT MIQUELON is joined to Langley, or Petit Miquelon, by a long, narrow range of sand-hills, having a beach on each side. Miquelon is 4 leagues in length from north to south, and is about 5 miles in breadth at the widest part: the middle of the island is high land, called the High Lands of Dunne; but down by the shore it is low, excepting Cape Miquelon, which is a lofty promontory at the northern extremity of the island.

Miquelon Rocks stretch off from the eastern point of the island, under the high land, $1\frac{1}{2}$ mile to the eastward: some are above, and some under water; the outermost are above water, and there are 12 fathoms close to them, with 18 and 20 a mile off. N.E. $\frac{1}{2}$ E., about $4\frac{1}{2}$ miles from these rocks, lies *Miquelon Bank*, on which are 6 fathoms water.

Miquelon Road, which is large and spacious, lies towards the north end, and on the east side of the island, between Cape Miquelon and Chapeau, which is a very remarkable round mountain near the shore, off which are some *sunken rocks*, at the distance of about $\frac{1}{4}$ of a mile; but every where else it is clear of danger. The best anchorage is in 6 or 7 fathoms, near the bottom of the road, on fine sandy bottom; but there you lie exposed to easterly winds.

The *Seal Rocks*, two in number, are above water, and lie about $1\frac{1}{2}$ league off from the N.W. side of Miquelon; the passage between them and the island is very safe, and there are 14 or 15 fathoms water within a cable's length all round them.

The islands of St. Pierre, Langley, and Miquelon, were ceded to France by England, on condition that no forts should be built on either; that no more than 50 men of regular troops should be kept there, and that they should have no military stores, or cannon, capable of making a defence. During the late hostilities these isles were annexed to the Government of Newfoundland, having been taken possession of by the British forces, 14th May, 1793; but they have been restored to France, on the original conditions, by the treaty of 1814.

Point May has a *rocky islet* at its point; and from thence the land turns N.N.E. towards Dantzick Cove and Point, and thence E.N.E. towards Fortune Head.

FORTUNE BAY, &c.—From Point May to Pass Island, the bearing and distance are N. by E., 12 leagues. Between them is the entrance to Fortune Bay, which is about 22 or 23 leagues deep; and in which are numerous bays, harbours, and islands.

BRUNET ISLAND.—The island of Brunet lies nearly in the middle of the entrance into Fortune Bay; it is above 5 miles in length, 2 in breadth, and of moderate height; on its N.E. side is a bay, wherein there is tolerable anchorage for ships, in 14 or 16 fathoms water, sheltered from southerly and westerly winds. In the bottom of the bay, at about $\frac{1}{4}$ of a mile from the shore, are some *rocks*, which must be avoided. Opposite to this bay, on the S.W. side of the island, is a small cove, with 6 fathoms water. The islands lying off the west end of Brunet, to the southward, are called the Little Brunets, which, with Brunet, may be approached within $\frac{1}{4}$ of a mile all round.

The Plate Islands are three rocky islets, of a moderate height, the nearest of which lies W.S.W., a league from the west end of Great Brunet. The southernmost is about 2 miles farther off, and bears from Cape Miquelon E. $\frac{1}{2}$ S., $3\frac{1}{2}$ leagues; and in a direct line between Point May and Pass Island, 17 miles from the former, and 19 miles from the latter. E.S.E., $\frac{1}{4}$ of a mile from the Great Plate, (which is the northernmost) is a *sunken rock*, whereon the sea breaks, and this is the only danger about them. There are several strong and irregular settings of the tide or currents about the Plate and Brunet Islands, which seem to have no dependency on the moon and the course of the tides on the coast.

SAGONA ISLAND, which lies N.E., 2 leagues from the east end of Brunet, is about a mile across each way, of a moderate height, and bold-to all round; on its western side there is a small creek, admitting fishing shallows; in the middle of the entrance to this is a *sunken rock*, which occasions it to be difficult of access, except in very fine weather. A *sand bank* surrounds this island, running westerly, full 7 miles, upon which are 14, 17, and 20 fathoms water.

POINT MAY is the southern extremity of Fortune Bay, and the S.W. extremity of this part of Newfoundland; it may be known by a great *black rock*, nearly joining to the pitch of the point, and something higher than the land, which makes it look like a black hummock on the point. At about $\frac{1}{4}$ of a mile directly off from this *black rock* are three *sunken rocks*, on which the sea always breaks.

DANTZICK COVES.—N. by E., $1\frac{1}{2}$ mile from Point May, is Little Dantzick Cove; and 2 miles farther, is Great Dantzick Cove. From Dantzick Point (which is the north point of the coves,) to Fortune Head, the bearing and distance are E.N.E., $2\frac{1}{4}$ leagues, and thence to the town of Fortune, $1\frac{1}{2}$ mile S.E. by E. This is a fishing village; and the road where the ships lie has from 6 to 10 fathoms water, quite exposed to nearly half the compass; it lies S.S.W. from the east end of Brunet. To the N.N.-westward of Dantzick Point is the long, narrow *bank* of *Jerseyman's*, with 24 and 25 fathoms over it, extending from abreast of the point in the direction of the Plate Islands.

SHIP COVE.—The Cape of Grand Bank is high, and lies a league E.N.E. from Fortune. To the eastward of this cape is Ship Cove, where there is good anchorage for shipping in 8 or 10 fathoms water, sheltered from south, west, and north-westerly winds. Grand Bank lies S.E., $\frac{1}{2}$ a league from the cape, and is a fishing village, where there is no security for shipping, and the entrance is barred.

From the Cape of the Grand Bank to the Point Enragée, the course is E.N.E. $\frac{1}{4}$ E., distance 8 leagues: the coast between forms a circular bay, in which the shore generally is low, with several sandy beaches, behind which are bar-harbours, fit only for boats, of which the principal is Great Garnish, lying $4\frac{1}{2}$ leagues from the Cape of Grand Bank; it may be known by several *rocks* above water, lying before it, at 2 miles distance from the shore; the outermost of these is steep-to, but between them and the shore are several *dangerous sunken rocks*. To the eastward, and within these rocks, is Frenchman's Cove, where small vessels sometimes run in and anchor in 4 or 5 fathoms water, tolerably well sheltered from the sea winds; this is a convenient place for the cod fishery. The passage in is to the eastward of the rocks that appear the highest above water; between them and some other lower *rocks* lying off to the eastward

of the east point of the cove, there is a *sunken rock* nearly in the middle of the passage, which you must be aware of. The shore is bold all the way from Point May to Cape of Grand Bank, there being 10 or 12 fathoms within 2 cables' length, and 30 or 40 at a mile off: between the latter and Great Garnish the water is not so deep, and ships may anchor any where, in 8 or 10 fathoms water, sheltered only from the land-winds.

From Point Enragée to the head of the bay, the course is, first, E.N.E. $\frac{1}{2}$ E., 3 leagues, to Grand Jerver; then E. $\frac{3}{4}$ N., $7\frac{1}{2}$ leagues, to the head of the bay. The land in general, along the south side, is high, bold-to, and of uneven appearance, with hills and valleys of various extent, the latter mostly covered with wood, and having many fresh water rivulets.

BAY L'ARGENT.—At 7 leagues to the eastward of Point Enragée is the Bay l'Argent, where there is anchorage in 30 or 40 fathoms water, sheltered from all winds.

HARBOUR MILLÉ.—The entrance of Harbour Millé lies to the eastward of the east point of L'Argent. Before this harbour and the Bay l'Argent, is a remarkable *rock*, which, at a distance, appears like a shallow under sail. Harbour Millé branches into two arms, one lying to the S.E., the other to the east; at the upper part of both are good anchorages. Between this harbour and Point Enragée are several bar-harbours, or small bays, with sandy beaches: but the water all along the coast is very deep; you may safely anchor any where, but it must be very near the shore.

Cape Millé lies N.E. $\frac{1}{2}$ E., a league from the Shallop Rock, above mentioned, and near 3 leagues from the head of Fortune Bay: it is a high, reddish, barren rocky point. The width of Fortune Bay at Cape Millé barely exceeds $\frac{1}{2}$ a league; but immediately below it, it becomes twice as wide, by which the cape may readily be known; and above this cape the land on both sides is high, with steep craggy cliffs. The head of the bay is terminated by a low beach, behind which is a large pond, or bar-harbour, fit only for boats. In this, and in all other bar-harbours between this and the Grand Bank, are convenient places for building stages, and good beaches for drying fish, fitted to accommodate numerous boats.

GRAND LE PIERRE is a good harbour, situated on the north side of the bay, $\frac{1}{2}$ a league from the head. The entrance cannot be seen until you are abreast of it; there is no danger in going in, and you may anchor in any depth from 8 to 4 fathoms, sheltered from all winds.

ENGLISH HARBOUR lies a little to the westward of Grand Pierre; and to the westward of English Harbour is the Little Bay de l'Eau, both of which are small, and only fit for boats.

NEW HARBOUR is situated opposite to Cape Millé, and to the westward of the Bay de l'Eau; it is a small inlet, and has good anchorage on the west side, in from 8 to 5 fathoms, sheltered from S.W. winds.

THE HARBOUR FEMME lies $\frac{1}{2}$ a league to the westward of New Harbour; it is narrow, and has in it 20 and 23 fathoms; before its entrance is an islet, near to which are some *rocks* above water; a league to the westward of Harbour Femme is Brewer's Hole, fit only for boats. Before this cove is also a small island near the shore, and some *rocks* above water.

HARBOUR LA CONTE, OR STORY HARBOUR, is situated a mile to the westward of Brewer's Hole. Before this are some islands: the outer one is called the Petticoat Island, the inner, Smock Island. There are also two smaller ones between these, and a *sunken rock* or two. The best passage in is on the west side of the outer island, and between the two larger ones; so soon as you begin to open the harbour, keep the inner island close on board, to avoid some *sunken rocks* that lie near a small island, which you will discover between the N.E. point of the outer island and the opposite point on the main: there is also another *rock*, which appears at low water, and lies higher up on the side of the main; and when you get beyond these dangers, you may keep in the middle of the channel, and will soon open a fine spacious harbour, wherein you may anchor in any depth from 6 to 16 fathoms water, on a bottom of sand and mud, shut in from all winds. To the eastward of the outer island there is a small cove fit for small vessels and boats, and otherwise convenient for the fisheries.

LONG HARBOUR lies 4 miles to the westward of Story Harbour, and N.E. by E. $\frac{1}{2}$ E., distant 5 leagues from Point Enragée. It may be known by Gull Island, which lies at its mouth, and a *small rock*, which lies $\frac{1}{2}$ a mile without the island, and has the appearance of a small boat. There is a passage into this harbour on each side of this island: the western one is the broader of the two; nearly in the middle of this channel, a little outside of the island, is a *ledge of rocks*, whereon is 2 fathoms water; and a little within the island, on the eastern side, are others, 2 cables' lengths from the shore, which lie off two sandy coves, and are visible at low water. Long Harbour runs 5 leagues up into the country; but the only anchoring place is in Morgan's Cove, on the N.W. side of the harbour, about 2 miles within Gull Island, in 15 fathoms water, unless you run above the narrows; there is a salmon fishery at the head of the bay.

A little to the westward of Long Harbour is Hare Harbour, fit for small vessels only. At 2 miles to the northward of Hare Harbour is Mal Bay, having very deep water, extending north-easterly, about 5 miles, and having no anchorage, except at its farthest end; to the westward of Mal Bay, near the shore, lie the Rencontre Islands, the westernmost of which is the largest, and has a communication with the main at low water. In and about this island is shelter for small vessels and boats.

BELLE HARBOUR lies 4 miles N.W. by N. from the westernmost Rencontre Island; the passage into it is on the western side of the island: and so soon as you have passed the islands you will open a small cove, on the east side, where small vessels can anchor; but large vessels must run up to the head of the harbour, and anchor in 20 fathoms, where there is most room; it is but an indifferent harbour. About $1\frac{1}{2}$ mile westward of Belle Harbour is Lally Cove, behind an island, fit for small vessels only; the west part of this cove is high and bluff, and is called Lally Head; to the northward of this head is Lally Back Cove, where ships may anchor, in 14 or 16 fathoms water.

At 2 miles to the northward of Lally Cove Head are East and North Bays; in both of these is deep water, but no anchorage near the shore. At the head of North Bay is the largest river in Fortune Bay, and appears to be a good place for the salmon fishery, from which circumstance it is named Salmon River.

CINQ ISLES BAY.—The Bay of Cinq Isles lies to the southward of the North Bay, and opposite to Lally Cove Head; there is tolerably good anchorage for large ships on the S.W. side of the islands, in the bottom of the bay. The north arm is a very snug place for small vessels, and salmon may be caught at its head.

CORBEN BAY.—A little to the southward of the Bay of Cinq Isles is Corben Bay, where there is good anchorage for any ships, in 22 or 24 fathoms water. About 2 miles south-eastward from Lally Cove Head are two islands, about a mile distant from each other; the north-easternmost is called Belle Island, and the other Dog Island; they are bold to all round. Between Dog Island and Lord and Lady Island, which lies off the south point of Corben Bay, something nearer to the latter, is a *sunken rock*, with deep water all round it; and about $\frac{1}{2}$ of a mile to the northward of Lord and Lady Island, is a *rock*, which appears at low water.

BANDE DE L'ARIER BAY lies on the west point of Belle Bay, and N. $\frac{1}{2}$ W., 8 leagues from Point Enragée; it may be known by a very high mountain over the bay, which rises almost perpendicularly from the sea, called Iron Head. Chapel Island, which forms the east side of the bay, is high land also; the harbour lies on the west side of the bay, just within the point formed by a narrow low beach, and is a snug place. Between the harbour and Iron Head there is a tolerably good anchorage, in 18 or 20 fathoms.

Bande de L'Arier Bank has 7 fathoms water on it, and lies with the beach of Bande de l'Arier Harbour just open of the west point of the bay, and Boxy Point on with the north end of St. Jacques Island.

ST. JACQUES.—At 2 miles to the westward of Bande de l'Arier is the harbour of St. Jacques, which may be readily known by the island before it, being high at each end, and low in the middle. The passage into the harbour is on the west side of the island, free from danger, as is the harbour, where you may anchor in from 17 to 4 fathoms.

BLUE PINION.—About $1\frac{1}{2}$ mile to the westward of St. Jacques is the harbour of Blue Pinion; and a little to the westward of that is English Cove.

BOXY HARBOUR.—Boxy Point lies W. $\frac{3}{4}$ S., 6 miles from St. Jacques Island, and E.N.E. $\frac{1}{2}$ E., $12\frac{1}{2}$ miles from the east end of Brunet Island; it is of a moderate height, and the most advanced to the southward of any land on the coast. Boxy Harbour lies N.E., 3 miles from Boxy Point, in which there is anchorage, in 4 or 5 fathoms water, fine sandy ground: to sail in, bring Boxy Point open of a little black head just within the point, called Friar's Head; in this direction you will keep the middle of the channel, and between the *shoals* which lie off each point of the harbour where the stages are.

W.N.W., a mile from Boxy Point, is the island of St. John; and N.N.W., $\frac{1}{2}$ a league from St. John's Island, is St. John's Head, high, steep, and craggy. Between St. John's Head and Boxy Point is St. John's Bay, quite exposed; in the bottom of this is John's Harbour, fit for boats only. On the north side of St. John's Head are two rocky islets, called the *Gull* and *Shag*; at the west end of which are several *sunken rocks*.

GREAT BAY DE L'EAU is about $1\frac{1}{2}$ league to the northward of St. John's Head. In this bay there is good anchorage in various depths, sheltered from all winds. The passage in is on the east side of the island, which lies in its entrance; for only very small vessels can enter to the westward.

BARRYSWAY BAY.—To the westward of Bay de l'EAU, about 3 miles north from St. John's Head, is Little Bay Barrysway, on the west side of which there is good anchorage for large ships, in 7, 8, or 10 fathoms; and both wood and water to be obtained with ease.

HARBOUR BRITON lies to the westward of Little Barrysway, and N.N.E., $1\frac{1}{2}$ league from the island of Segona. The heads which form the entrance are high, and lie from each other S.E. and N.W., distant about 2 miles. Near the east head is a *rock* above water. The only danger in going in is a *ledge of rocks*, which stretch 2 cables' length from the south point of the S.W. arm, which is more than a mile within the west head. The only place for ships-of-war to anchor in is above the ledge, before the entrance of the S.W. arm, in 16 or 18 fathoms, mooring nearly east and west; the bottom is very good, and plenty of wood and water are to be obtained here. Opposite to the S.W. arm is the N.E. arm, or Jerseyman's Harbour, which is capable of holding a great number of ships, secure from all winds, in 6, 7, and 8 fathoms water: it has a bar at the entrance, on which there are 3 fathoms. The mark to sail over the bar is, the point of Thompson's Beach, which is the south point of the entrance into the S.W. arm, open of Jerseyman's Head, which is high and bluff, on the north side of the entrance into Jerseyman's Harbour; so soon as you open the harbour, haul up to the northward, and anchor.

From the west end of Harbour Briton to Connaigre Head, the bearing and distance are W. $\frac{1}{2}$ N., 6 miles; between are Gull Island and Deadman's Bay, off which there is a *bank* stretching from the shore, between 2 and 3 miles, whereon the depths vary from 34 to 4 fathoms. The sea, during storms, will sometimes break for a considerable way out from Gull Island.

CONNAIGRE BAY.—From Connaigre Head, which is high and craggy, to Basse-terre Point, the bearing and distance are N.W. $\frac{3}{4}$ W., 7 miles; between is Connaigre Bay, which extends about 4 leagues inland. In the mouth of the bay lie the *Connaigre Rocks*, above water, which may be approached very near, there being no danger but what shows itself; the channel between them and Connaigre Head is the safest, as a *ledge of rocks* extends a mile from the north shore, which renders the other channel rather dangerous.

Connaigre Harbour is nearly 5 miles above the head, within a point on the south side of the bay; it is very small, and the depth of water is 7 fathoms: the passage in is on the S.E. side of the island which lies before it. Abreast of this harbour, nearly in the middle of the bay, are two islands; and on the north side of the westernmost are some *rocks* above water.

Dawson's Cove is on the N.W. side of the bay, and bears N.N.E., about 4 miles from Connaigre Head, and W.N.W., 2 miles from the west end of the westernmost (and the greatest) island; the anchorage is in 6 or 5 fathoms, quite exposed to south-

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erly winds. Basseterre Point, which forms the west point of Connaigre Bay, is of moderate height, clear of wood, and from thence to Pass Island, bold-to. Pass Island lies nearly W. by N., distant 3 miles from Basseterre Point.

PASS ISLAND, which is the north-western extremity of Fortune Bay, is a full mile in length, and narrow; it bears from the north point of Miquelon N.E. by N., 7 leagues, and from Point May N. $\frac{1}{2}$ E., $11\frac{1}{2}$ leagues. It lies near the shore, and is rather lofty. On its south-western side are several rocks above water, which extend a full mile from the island; and to the N.W. is a *sunken rock*, about $\frac{1}{4}$ of a mile from the island. There is a passage between this island and the main, about the length of 2 cables wide; it is frequently traversed by small vessels, which sometimes anchor there, on a fine sandy bottom, in 6 fathoms water. The cod fishery about this part is generally considered good and productive.

REMARKS ON FORTUNE BAY.—The general appearance of the land on the northern side of Fortune Bay is hilly, rising directly from the sea, with craggy, barren hills, extending 4 or 5 leagues inland, having many rivulets and ponds; while that on the southern side of Fortune Bay has a very different appearance, having less of these rugged hills, and being better clothed with wood, of a short brushy kind, giving to the country an air of greenness and fertility.

SOUNDINGS.—In the night-time, or in dark, foggy weather, the mariner should not place much dependence on the soundings in Fortune Bay, for therein they might be greatly and fatally deceived, inasmuch as, in many places, the water near the shores, and in its creeks and harbours, are often deeper than in the middle of the bay itself.

HERMITAGE BAY.—This extensive bay is bounded on the S.W. by Pass Island, and to the northward by the islands that form the Bay of Bonne and Great Jervis Harbour, the width being more than 2 leagues; and by the southern shores of Long Island, where it begins to narrow. In sailing along the southern coast from Pass Island, you will discover the Fox Islands, which are distant from Pass Island 10 miles. These islands are situated opposite to the entrance to Hermitage Cove, about $\frac{1}{4}$ of a mile from the land, and are said to have good fishing about them. Off the northern Fox Island are several rocks above water, and a *sunken rock* also lies off the south side of this island. To enter Hermitage Cove, you should keep between the islands and the shore, borrowing somewhat towards the main land, where you will find 30, 32, and 37 fathoms water; here you will see the cove open, and may turn in south, having deep water, and without the least danger; the anchorage is good, with every convenience for fishing, and plenty of both wood and water. From hence Hermitage Bay runs in nearly east, for 12 miles, with very deep water, until you get near the head, where it gradually lessens to 25 and 22 fathoms, and farther in to 9 fathoms. There is a small inlet or two on the southern side, but no danger whatever.

LONG ISLAND, which separates the Bay of Despair from Hermitage Bay, is of a triangular form, about 8 miles long, and nearly 8 leagues in circuit. The eastern passage is very good, but narrow, and is between the east end of Long Island and the main, called the Passage of Long Island. The west entrance into the Bay of Despair, from Hermitage Bay, is by the west end of Long Island. About $\frac{1}{2}$ a mile from its S.W. point are two rocks, both above water, with deep water all round them.

GALTAUS HARBOUR.—There are four harbours on the south side of Long Island, the easternmost of which is called Galtaus; this is but small, and lies near the S.E. point of the island. The best channel into the harbour is on the west side of several rocky islands which lie at the entrance, wherein are 4 fathoms, but in the harbour there are from 15 to 24 fathoms.

PICARRE HARBOUR.—The next is Picarre, which lies N. by E., $\frac{1}{2}$ a league from the easternmost Fox Island. In going in here, keep near the west point, in order to avoid some *sunken rocks* off the other. The anchorage is in the first cove on the east side, in 9 or 10 fathoms, sheltered from all winds.

ROUND HARBOUR.—The next harbour, called Round Harbour, is about 2 miles to the westward of Picarre, and fit only for small vessels, the channel in being so narrow.

LONG ISLAND HARBOUR is the fourth, and lies about $2\frac{1}{2}$ miles from the west end of Long Island. This harbour has two arms, one running in to the north, the other to the eastward; they are both very narrow, and have from 40 to 7 fathoms water: the eastern arm has the greater depth, and affords the best anchorage. The passage in is on either side of an island which lies off the entrance, and has several rocks above water about it.

BAY OF DESPAIR.—The entrance of the Bay of Despair lies between the west end of Long Island and Great Jarvis Island, which lies in the mouth of the harbour of that name. The distance between is $1\frac{1}{4}$ mile, and midway no bottom is found with a line of 280 fathoms.

The Bay of Despair forms two capacious arms, one extending full 8 leagues to the north-eastward, the other about 13 miles northward. In the N.E. arm are several arms and islands, and tolerably good anchorage in several places; in the north arm is very deep water, and no anchorage excepting in the small bays and coves which lie on each side of it; but in an arm of this bay which runs in easterly, there is a fine salmon fishery, and wood in abundance. In the N.E. arm also there are good salmon fisheries at Little River and Gonne River. All the country about this part is mountainous and barren; but about the head of the bay it becomes level, and has abundance of wood, such as fir, pine, birch, witch hazel, spruce, &c.

GREAT JARVIS HARBOUR is situated at the west entrance into the Bay of Despair; it is a safe harbour, with good anchorage in every part of it, in from 16 to 20 fathoms, secure from all winds, and plenty of wood and water. The passage in is on either side of Great Jarvis Island; but the southernmost channel is the safest, there being no danger in it but the shore itself. In the northern channel are several *sunken rocks*. To sail in, you should bring the north point between the two rocks above water on the starboard side, and then steer directly in; this will carry you clear of some *sunken rocks* lying on the west point of the island, which appear at low water. The entrance to this harbour may be known by the east end of Great Jarvis Island, which is a high, steep, craggy point, called Great Jarvis Head, and is the northern point of the south entrance to the harbour.

BONNE BAY lies about a league to the westward of Great Jarvis Head, and nearly N. by E., distant 7 miles from Pass Island; it has several islands at its entrance, the westernmost of which is the largest and highest. The best passage in is to the eastward of the largest island, between it and the two easternmost islands. The bay runs in north, 4 miles, and there is no danger but what shows itself. You may go on either side of Drake Island, which is small, and nearly in the middle of the bay; between which and two small islands on the west side of the bay, within Great Island, there is anchorage in 20 or 30 fathoms; but the best place for large ships is near the head of the bay, in 12 or 14 fathoms, clear ground, and convenient for wood and water. On the N.W. side of Great Island, within the two small islands, is very good anchorage, in from 16 to 24 fathoms, secure from all winds; the entrance to this from the bay is to the northward of the two small islands. In sailing in or out of the bay, approach not too near the south point of Great Island, as there are some *sunken rocks* lying at $\frac{1}{4}$ of a mile from the shore. A little to the westward of Bonne Bay is Mosquito Cove, a small inlet, of from 30 to 47 fathoms water.

W.N.W., 4 miles from Bonne Bay is the entrance to the Bays of Facheux and Dragon; this entrance being very conspicuous at sea, the coast may here be readily known.

FACHEUX, which is the easternmost branch, is very easily seen to seaward; it runs in N.N.E., 2 leagues, and is $\frac{1}{2}$ a mile wide at the entrance, with deep water in most parts of it. On the west side of the bay are three coves, where ships may anchor, in from 10 to 20 fathoms. Dragon Bay lies in N.W., a league, and is nearly $\frac{1}{2}$ a mile wide, with 60 or 70 fathoms water, and no anchorage excepting near the head; and then you must lie very near the shore. A mile to the westward of Facheux is Little Hole, with shelter for small craft; and a league to the westward of Facheux is Richard's Harbour, a place fit only for small vessels and fishing shallops, with 23 fathoms water in it.

HARE BAY.—N.W. by N., a league from Richard's Harbour, is Hare Bay, which runs in N.N.E., about 5 miles, and is about $\frac{1}{2}$ of a mile wide, with deep water close

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home to both shores in all parts of it, except about a league up on the west side, where there is good anchorage, in from 8 to 15 fathoms, with plenty of wood and water; and a small cove about a mile up on the east side, where there are 30 fathoms, with gradual soundings to the shore.

DEVIL'S BAY.—N.W., about $4\frac{1}{2}$ miles from Hare Bay, and 4 miles N.E. from Hare's Ears Point, is Devil's Bay, a narrow inlet, extending a league to the northward, with deep water, and no anchorage until you come close to the head.

The Bay of Rencontre lies to the northward of Hare's Ears Point, and runs in N.W., 2 leagues; it has deep water in most parts of it, and is nearly $\frac{1}{2}$ a mile wide at its narrowest part. The anchorage is in 30 fathoms, above a low woody point on the south shore, quite land-locked. Hare's Ears Point is large, with a ragged rock upon it, which, from some points of view, looks like the ears of a hare. It lies N.W. $\frac{1}{2}$ W., distant 17 miles from Pass Island, and divides the Bays of Rencontre and Chaleur. Off this point is a *fishing bank*, extending a full mile from the shore, having from 20 to 36 fathoms over it.

CHALEUR BAY.—At 2 miles to the westward of Hare's Ears Point is the Bay of Chaleur, which runs about 2 leagues N.N.W. It is very narrow, and has deep water in most parts. At the north entrance into the bay, and close to the land, is a small island, of moderate height; and $\frac{1}{2}$ a league within the island, on the N.E. side of the bay, is a rock above water; a little within this rock, on the same side, is a small cove, with a sandy beach, off which you can anchor in 28 fathoms, a cable's length from the shore.

FRANCOIS BAY.—West, nearly $\frac{1}{2}$ a league from the Bay of Chaleur, is Bay François, a small inlet, running in N.W. $\frac{1}{4}$ W., a mile, being at the entrance about $\frac{1}{2}$ of a mile broad, and 17 fathoms deep; but just within are 50 and 60 fathoms, at the head are from 30 to 20 fathoms, good anchorage, and very convenient for carrying on the fishing business.

OAR BAY.—Westward, 4 miles from the Bay François, on the east side of Cape La Hune, lies Oar Bay; off the east point of its entrance is a low rocky islet, and in the entrance of the bay is another, with a passage on each side of it. The bay runs in N.N.E., about 4 miles, and is $\frac{1}{2}$ of a mile wide, with deep water close to both shores all the way up; at the head is a harbour for small vessels, with only 5 fathoms water. At the west side of the entrance into the bay, is Cul de Sac, a little cove, with 3 and 4 fathoms water, and good shelter for small vessels.

CAPE LA HUNE is the southernmost point of land on this part of the coast, and lies in latitude $47^{\circ} 31'$ north, and longitude $56^{\circ} 56'$ west, bearing W.N.W. $\frac{1}{2}$ N., $8\frac{1}{2}$ leagues from Pass Island, and N.N.W. $\frac{1}{2}$ N., 10 leagues from Cape Miquelon; its figure much resembles a sugar-loaf: this cape may also be known by the high land of La Hune, which lies a league to the westward of it, appearing flat at the top, and may be seen from a distance of 16 leagues.

THE PENGUIN ISLANDS lie W.S.W. $\frac{3}{4}$ S., $10\frac{1}{2}$ miles from Cape La Hune, and N.W. $\frac{1}{2}$ N., 10 leagues from Cape Miquelon: they are an assemblage of *barren rocks* lying near to each other, and altogether about 2 leagues in circuit; and may be approached in the day-time to the distance of $\frac{1}{2}$ a league all round. On the W.S.W. side of the large island, which is the highest, is a small cove, fit for shallops, and convenient for the fisheries; the ground about it is considered to be good for fishing.

WHALE, or LA HUNE ROCK.—E.S.E., 7 miles from the Penguin Islands, and S. by W., 3 leagues from Cape La Hune, lies the *Whale Rock*, on which the sea generally breaks; it is about 100 fathoms in circuit, with 10, 12, and 14 fathoms close-to, all round it. From this rock a *narrow bank* extends a league to the westward, and $\frac{1}{2}$ a league to the eastward, with from 24 to 58 fathoms water on it, rocky and gravelly bottom. In the channel between the shore and this rock, and also between the shore and the Penguin Islands, are 120 and 130 fathoms of water, muddy bottom; and there is the same depth of water at a league without them.

LA HUNE BAY lies close to the westward of Cape La Hune; it is about 2 leagues deep, and $\frac{1}{2}$ of a mile wide, with deep water in most parts of it; but there is a *sunken rock* which lies off the west point of the entrance, nearly $\frac{1}{2}$ over the channel. In sailing in or out of this bay, you should keep the eastern shore on board, in order to avoid a *sunken rock*, which lies off the west point of the entrance into the bay, nearly $\frac{1}{2}$ over.

At 2 miles up the bay is Lance Cove, having anchorage in 14 and 16 fathoms water, good clean ground. A cable's length off the southern point of this cove is a small *shoal*, with 9 feet water; and between it and the point there are 5 fathoms. To sail into this place, keep the east point of the bay open of a red cliff point, off which is a *rock* above water, until the round hill you will see over the valley of the cove, is brought on with the north side of the valley; you will then be above the shoal, and may haul into the cove with safety. There is a *narrow bank* which stretches quite across the bay, from the south point of the cove to the opposite shore, whereon are from 27 to 45 fathoms.

LA HUNE HARBOUR lies $\frac{1}{2}$ a league to the westward of Cape La Hune, and is fit only for small vessels, and open to westerly winds: before it lies an island near the shore. The channel into the harbour is on the N.W. side of the island; there is no danger going in, and you must anchor close up to the head, in 10 fathoms water. This harbour is well adapted for the fishery, there being good fishing ground about it, and a large beach quite across from the head of the harbour to La Hune Bay—a space of 800 feet, exposed to the open air, and well calculated for drying fish.

At 4 leagues N.W. $\frac{3}{4}$ W. from Cape La Hune is the entrance of Little River, which is about 100 fathoms wide at the entrance, and 10 fathoms deep; a little way up there is anchorage in 10, 8, and 7 fathoms water, good ground. Between Cape La Hune and Little River the land is tolerably high, and forms a bay, where there are several small *islands* and *rocks* above water, the outermost of which lie N.N.E. $\frac{1}{2}$ E., 3 leagues from the Penguin Islands, and are called the *Magnetic Rocks*.

S. by W. $\frac{1}{2}$ W., 7 miles from the entrance of Little River, and N. by W. $\frac{1}{2}$ W. from the Penguin Islands, lie the *Little River Rocks*, which are just above water, with very deep water all around them.

THE ISLES OF RAMEA, which are of various extent, both in height and circuit, lie N.W. $\frac{1}{2}$ N., $5\frac{1}{2}$ leagues from the Penguin Islands, and a league from the main. They extend east and west 5 miles, and north and south 2 miles, and have several *rocks* and *breakers* about them; but more on the south side than the north. The easternmost island is the largest, and is very high and hilly; the westernmost, called *Columbe*, is a remarkably high, round island, of small circuit, with some *rocky islands* and *sunken rocks* near it.

RAMEA HARBOUR.—There is a harbour for small vessels, formed by the islands which lie near Great Ramea and the Columbe, called Ramea Harbour, where they may lie sheltered from all winds. To enter this from the westward, you should give the southern point a berth, on account of some *rocks* which lie off the starboard island, all of them being above water; steer E.N.E. towards the harbour, keeping as near mid-channel as you can: the passage is above a cable's length broad; and run for the anchorage in Ship Cove. This is the second inlet on the north-western shore; you will here ride in safety, on clean ground, in 5 fathoms water. To enter from the eastward, you must keep the northern side of Great Ramea on board, until you are up to the west end thereof; then steer S.W. into the harbour, keeping in the middle of the channel, in about 3 fathoms water, and anchor as before directed. This harbour is very convenient for fishing-vessels; in it, and also about the islands, are several places fit for erecting stages, and drying fish, which seem to be well calculated for that purpose.

The *Ramea Rocks* are two in number, close to each other; they lie about south, distant 4 miles from the east end of Great Ramea. W.S.W., a league from these rocks is a small *bank*, with only 6 fathoms water on it; and nearly in the middle, between Ramea and Penguin Islands, is the *New Bank*, with from 14 to 50 fathoms water. To run upon the shoalest part of this bank, bring the two Ramea Rocks on with the south-western part of Ramea Islands, and between them and Columbe; and the entrance to Little River N.E. $\frac{3}{4}$ E.

OLD MAN'S BAY.—At 4 miles to the westward of Little River is Old Man's Bay, which runs in N.N.E., about 7 miles, and is nearly a mile wide: the water throughout the bay is very deep. At $1\frac{1}{2}$ mile up the bay, on the eastern side, is a small island, called Adam's Island, behind which vessels can ride, if necessary, in 30 and 40 fathoms; but the best anchorage is at the head, in 14 or 16 fathoms.

MOSQUITO HARBOUR lies about $\frac{1}{2}$ a league to the westward of Old Man's Bay; it is a snug and safe harbour, and will hold a great number of vessels in perfect secu-

urity; but the entrance is so narrow, being only 48 fathoms in breadth, that it is difficult to get in or out. The land on both sides is high; and off the southern point of entrance is a large *white rock*, about a cable's length from which is a *black rock*, above water, on the southern side of which is a *sunken rock*, whereon the sea breaks; from this black rock to the entrance of the harbour, the course is about N.N.W., distant $\frac{1}{2}$ of a mile. In sailing either in or out, you should give the black rock a sunnll berth, keeping the western shore on board, and, if obliged to anchor, be as quick as possible in getting a rope on shore, lest you drift on the rocks. In this harbour you will have from 18 to 30 fathoms water, with good riding every where, and plenty of both wood and water. In the narrows you will find 12 fathoms, the shores being bold-to. South and easterly winds blow right in, northerly right out; and with westerly winds it is commonly either quite calm, or descends in irregular puffs.

Fox Island Harbour is formed by an island of the same name; it lies about $\frac{1}{2}$ a league to the westward of Mosquito Harbour: between are several *rocky islands* and *sunken rocks*. This is a commodious harbour for small vessels, which may anchor, in 8, 9, and 10 fathoms water. You may go in on either side of the island, and there is no danger but what shows itself.

WHITE BEAR BAY lies about 2 miles to the westward of Fox Island Harbour, and N.N.E., a league from Great Ramea Island; it has several islands at its entrance. It runs in N.E. $\frac{1}{2}$ N., about 4 leagues, is nearly $\frac{1}{2}$ a mile wide in the narrowest part, and has deep water close to both shores in most parts, to the distance of 8 miles up; then the ground rises at once to 9 fathoms, whence it shoals gradually to the head, with good anchorage. The best passage into the bay is to the eastward of all the islands. On the S.W. side of Bear Island, which is the easternmost and largest in the mouth of the bay, is a small harbour, running in about east, $\frac{1}{2}$ a mile, with from 10 to 22 fathoms of water; but there are several *sunken rocks* before its mouth, rendering it difficult of access. At the western entrance is a high, round, white island; and S.W., $\frac{1}{2}$ a mile from this island, is a *black rock*, above water. The best passage into the bay, from the westward, will be to the westward of this black rock, and between White and Bear Islands; some of the rocks are above a mile off the land.

RED ISLAND HARBOURS.—At 5 or 6 miles to the westward of White Bear Bay, and nearly north from Ramea Columbe, are two small harbours, called Red Island Harbours, formed by Red Island, which lies close under the land. The westernmost is the largest and best, and has from 6 to 8 fathoms water, good anchorage. In going in, keep the island close on board, the outer part of which is composed of steep red cliffs.

The BURGEON ISLES are a cluster of islands extending about 5 miles along shore, and forming several snug and commodious harbours. They lie about 3 leagues N.W. by W. from Ramea Columbe. To sail into Burgeo from the eastward, the best passage is on the N.E. side of Boar Island, which is the northernmost, and lies N.N.W. from Ramea Columbe. S.E. by S. from this island, $\frac{1}{2}$ a league, is a *rock*, uncovered at low water, on which the sea generally breaks; you may go on any side of this rock, the water being deep all round it: so soon as you are to the N.W. of it, keep the north side of Boar Island on board, and steer W. $\frac{1}{2}$ N. for Grandy's Cove, the north point of which is the first low point on your starboard bow; haul round that point, and anchor in the cove, in 14 fathoms, and moor with a fast on shore. The best place for large ships to anchor in is, betwixt Grandy's Cove and a small island, lying near the west point of Boar Island, in 20 or 24 fathoms, good ground, and sheltered from all winds. To sail into Grandy's Cove from the westward is dangerous, unless well acquainted; there are several safe passages in from the southward and eastward, between the islands, and good anchorage; and, in bad weather, all the *sunken rocks* discover themselves, and you may run in without any fear; but the islands do not afford either wood or water.

WOLF BAY extends inwards N.E. by E., a league; the entrance is E.N.E., 2 miles from Boar Island, and 2 miles to the westward of Red Island Harbour. The east point of the entrance is composed of low *rugged rocks*, off which is a *sunken rock*, at the distance of $\frac{1}{4}$ of a mile from shore, over which the sea breaks in bad weather. Near the head of the bay is tolerably good anchorage, and plenty of wood and water.

King's Harbour lies round the west point of Wolf Bay, and runs in N.E. by E., $\frac{3}{4}$ of a mile; before its mouth is a cluster of little islands. To sail in, keep the east point of

these islands on board, and steer N. by W. and north for the entrance of the harbour, anchoring under the east shore, in 9 fathoms.

HA-HA.—On the south side of the islands before King's Harbour, and nearly north, a mile from Boar Island, is the entrance into the Ha-Ha, which runs in W.N.W., a mile, and is about $\frac{1}{2}$ of a mile broad, with from 20 to 10 fathoms water, and good ground all over. Over the south point of the entrance into this harbour is a high green hill; and $1\frac{1}{2}$ cable's length from the point is a *sunken rock*, that always shows itself. Over the head of the Ha-Ha is Richard's Head, a mark for running upon Ramea Shoal.

GREAT BARACHAIS.—About 4 miles to the westward of the Burgeo Isles is the Great Barachais Point, which is low, white, and rocky; and E.N.E. $\frac{1}{2}$ E., $\frac{1}{2}$ a league from this point, is the west entrance into the Great Barachais, wherein is room and depth for small vessels. Between the Burgeo Isles and the Great Barrysway Point are several *sunken rocks*, some of which are $\frac{1}{2}$ a league from the shore.

CONNOIRE BAY.—N.W. $\frac{1}{2}$ N., 4 leagues from the Burgeo Isles, is the east point of the Bay of Connoire; this point is so far remarkable that it rises with an easy ascent to a moderate height, and much higher than the land within it; the west point of the bay is low and flat, and to the westward of this are several small islands. The bay runs in N.E. by N., about a league, from the east point to the middle head, which lies between the two arms, and is $\frac{1}{2}$ a league wide, with 14, 12, 10, and 8 fathoms, close to both shores, good anchorage, and clear ground, but open to S.W. winds. The N.E. arm affords shelter for small vessels from all winds. To sail in, keep nearest the starboard shore, and anchor before a small cove on that side, near the head of the arm, in $3\frac{1}{2}$ fathoms. Towards the head of the arm on the north-western side, is a *bank of mud and sand*, upon which a vessel may run, if necessary, and receive no damage.

THE BAY OF CUTTEAU lies about 2 leagues to the westward of Connoire; its depth will admit small vessels only. Round the west point of Cutteau is Cinq Serf, wherein are a number of islands, which form several small snug harbours. Right off Cinq Serf, about $\frac{1}{2}$ a league from the shore, is a low rocky island, called Capt Island, westward of which is the safest passage into the largest harbour: keep near this rock, steering E.N.E. $\frac{1}{2}$ E. towards the south-eastern shore, until you get abreast of a small woody island; this is the easternmost except one, and lies about $\frac{1}{2}$ of a mile E.N.E. from a white rock in the middle of the channel; haul short round this island, and anchor behind it, in 7 fathoms water; here you will lie safely, sheltered from all winds, or you may go farther up, and anchor at its head, in 4 fathoms.

GRAND BRUIT.—At 4 miles to the westward of the rocky island of Cinq Serf, is the harbour of Grand Bruit, which is small but commodious, and may be known by a very high remarkable mountain over it, $\frac{1}{2}$ a league inland, which is the highest land on all the coast: down this mountain runs a considerable brook, emptying itself, by a cascade, into the harbour. Before the mouth of the harbour are several little islands, the largest of which is of middling height, with three green hillocks on it. A little outside of this island is a *round rock*, rather high above water, called the *Columbe of Great Bruit*, and $\frac{1}{4}$ of a mile to the southward of this rock is a *low rock*: in a direct line between the low rock and the rocky isles of Cinq Serf, $\frac{1}{2}$ a league from the former, is a *sunken rock*, whereon the sea does not break in fine weather. The safest passage into Grand Bruit is to the north-eastward of this rock, and of the islands lying before the harbour, between them and the three islands (which are low, and lay under the shore); and, after you are to the northward of the sunken rock, above mentioned, there is no danger but what shows itself. The harbour extends N.N.E., $\frac{1}{2}$ a mile, and is but $\frac{1}{2}$ of a mile wide in the broadest part; but it is bold-to on both sides, and has a depth of from 4 to 7 fathoms.

BAY OF ROTTE.—To the westward of Great Bruit, between it and La Poile Bay, lies the Bay of Rotte, wherein are a great many islands and *sunken rocks*. The southernmost is a remarkable high *round rock*, called the *Columbe of Rotte*, which lies N.W. by W., $8\frac{1}{2}$ leagues from the southernmost of the Burgeos. Between this island and Grand Bruit is a *reef of rocks*, some above and some under water; but they do not lie to the southward of the direct line between the islands. Within the islands of Rotte there is shelter for shipping; the safest passage in is to the westward of the islands between them and Little Ireland, which lies off the east point of La Poile Bay.

LA POILE BAY is large and spacious, and has several commodious harbours. It may be known by the high land of Grand Bruit, which is only 5 miles to the eastward

of it; and likewise by the land on the east side of the bay, which rises in remarkably high craggy hills. About $1\frac{1}{2}$ mile S.W. from its east point lies Little Ireland, a small low island, environed with *sunken rocks*, some of which are $\frac{1}{2}$ of a mile off. North, about $\frac{1}{2}$ a mile from Little Ireland, is a *sunken rock* that shows itself at low water; this is the only danger in going into the bay, excepting such as lie very near the shore.

GREAT AND LITTLE HARBOURS.—At 2 miles within the west point of the bay, and N. $\frac{1}{2}$ W., 2 miles from Little Ireland, is Tweeds, or Great Harbour; its south point is low, and it extends inwards W.N.W., a mile; it is about $1\frac{1}{2}$ cable's length wide in the narrowest part; and the anchorage is near the head of the harbour, in 18 or 20 fathoms, clear ground, and sheltered from all winds. At $\frac{1}{2}$ a mile to the northward of Great Harbour, is Little Harbour, the north point of which, called Tooth's Head, is the first high bluff head on the west side of the bay; the harbour extends inwards W.N.W., about a mile. In sailing in, give the south point a small berth. You may anchor about half-way up the harbour, in 10 fathoms water, before the stage which is on its northern side.

GALLY BOY'S HARBOUR lies on the east side of the bay, opposite Tooth's Head; it is small, snug, and convenient for ships bound to the westward. The north point is high and steep, with a white spot in the cliff, and near its southern point are some hillocks close to the shore. To sail in or out, keep the north side on board. You must anchor so soon as you are within the inner south point, in 9 or 10 fathoms, good ground, and sheltered from all winds. At a mile to the northward of Gally Boy's Harbour, between two sandy coves on the east side of the bay, and nearly 2 cables' length from the shore, is a *sunken rock*, that just uncovers at low water.

Broad Cove is about 2 miles to the northward of Tooth's Head, on the same side of the bay. In this there is good anchorage in 12 or 14 fathoms.

N.E. ARM.—About 2 leagues up the bay, on the eastern side, is the N.E. Arm, which is a spacious, safe, and commodious harbour. In sailing in, give the low sandy point on the S.E. side, a small berth, and anchor above it, where convenient, in 10 fathoms water, good holding-ground, sheltered from all winds, and very convenient for wood and water.

Indian Harbour and De Plate lie just within the outer west point of La Poile Bay; these are two small coves, conveniently situated for the fishery, but fit only for small vessels, which may get in at high water.

Little Ireland bears from the southernmost of the Burgoes N.W. by W. $\frac{1}{4}$ W., $9\frac{1}{2}$ leagues; and lies nearly 11 leagues to the eastward of Cape Ray.

GARIA BAY.—From Little Ireland to Harbour la Coue and La Moine Bay, the course is W.N.W. $\frac{1}{4}$ W., 9 or 10 miles; between lies the Bay of Garia, and several coves, fit only for small vessels; before these are several islands and *sunken rocks* scattered along the shore, but none of them lie with ut the above course. In bad weather, all the *sunken rocks* discover themselves. To sail into Garia Bay, you will, in coasting along the shore, discover a white head; this is the south point of an island, lying under the land, off the eastern point of the bay, and a little to the westward of two green hillocks on the main; bring this white point N.N.E., and steer directly towards it; keep between it and the several islands that lie to the W.S.-westward. From the white point, the course into the bay is N. by W.: borrow toward the eastern point, which is low. The Bay of Garia affords plenty of timber, large enough for building ships.

LA MOINE AND LA COUE HARBOURS.—The S.W. point of the entrance into Harbour la Coue, called Rose Blanche Point (near to which are some *rocks* above water,) is tolerably high, and the land near the shore over Harbour la Coue and La Moine Bay, is much higher than any other land in the vicinity: by this they may be known. La Moine Bay extends inwards N.E. $\frac{1}{4}$ E., about 4 miles, and is $\frac{1}{2}$ of a mile broad in the narrowest part. Off the east point are some small islands and *rocks* above water. In sailing in, keep the west point on board, until you have entered the bay; then edge over towards the east shore, and run up to the head of the bay, where you may anchor in 10 or 11 fathoms, good ground: here is plenty of wood and water. To sail into Harbour la Coue, which lies at the west entrance into La Moine Bay, steer in N.N.W., between a *rock* above water, in the mouth of the harbour, and anchor in 6 or 8 fathoms water, mooring with a hawser on shore; or you may steer into the arm, which runs in

N.E. by E. from the harbour, and anchor in 20 fathoms, sheltered from all winds. This has been the resort of the small fishing-vessels for many years.

ROSE BLANCHE.—To the westward of Rose Blanche Point is the harbour of the same name; it is small and snug, and the anchorage is in 9 fathoms water. The channel into the harbour is between the island lying off its western point, and Rose Blanche Point; give the island a good berth, on account of some *sunken rocks* which lie on its eastern side, and keep the west side of the small island which lies close to the point, on board, anchoring within the N.E. point of this island in 9 fathoms. To enter into the N.W. part of the harbour would be dangerous, if a stranger, because of its numerous islands and *rocks*.

Mill Face is a small cove, 2 miles to the westward of Rose Blanche Point, wherein is anchorage for small vessels in 4 fathoms. Off the west point of the cove are two small islands, and several *sunken rocks*; the passage in is to the eastward of these.

At 7 miles to the westward of Rose Blanche Point are the Burnt Islands, which lie close under the shore, and are not easily to be distinguished from it; behind these is shelter for small vessels. Off these islands are *sunken rocks*, some of which are $\frac{1}{2}$ a mile from the shore.

CONNAY AND OTTER BAYS.—At 6 miles to the westward of Rose Blanche Point, are Conney and Otter Bays, both of which are rendered difficult of access by several *sunken rocks* outside the passage, which do not show themselves in fine weather; but when once you are safe within Otter Bay, there is good riding in 7, 8, and 9 fathoms water.

DEAD ISLANDS HARBOUR.—W.N.W. $\frac{3}{4}$ W., nearly 4 leagues from Rose Blanche Point, are the Dead Islands, or Isle aux Morte, which lie close under the shore. In the passage to Dead Islands Harbour, between the islands and the main, is good anchorage for shipping in 6 or 8 fathoms, sheltered from all winds; but it is very dangerous of access to strangers, as there are several *sunken rocks* in both the east and west entrances. The eastern entrance can be known by a remarkable white spot on one of the islands; bring this spot to bear N. by W., and steer in for it, keeping the starboard rocks on board, and leave the white spotted island on your port side. The western entrance may be recognised by a high point on the main, a little to the westward of the islands, on the western part of which point is a green hillock: keep this point close on board, until you get within a little round *rock*, near to the westernmost island, at the eastern point of entrance; then haul over to the eastward for the great island, distinguished by a high hill, and steer E. $\frac{3}{4}$ N., keeping the before-mentioned little rock in sight.

PORT AUX BASQUE.—From the Dead Isles to Port aux Basque, the course and distance are W.N.W., about 4 miles; between lie several small islands close under the shore, and there are *sunken rocks*, some of which are $\frac{1}{2}$ a mile from the shore. Port aux Basque is a small commodious harbour, which lies about 2 $\frac{1}{2}$ leagues to the eastward of Cape Ray. To fall in with it, bring the Sugar-Loaf Hill over Cape Ray, to bear N.N.W. $\frac{1}{2}$ W., or the west end of the Table Mountain N.N.W. Steer in for the land with either of these marks, and you will fall directly in with the harbour: the S.W. point, called Point Blanche, is of a moderate height, and of white appearances; but the N.E. point is low and flat, and has, close to it, a *black rock* above water. In order to avoid the outer shoal, on which are 3 fathoms, and which lies E.S.E., $\frac{3}{4}$ of a mile from Point Blanche, keep the said point on board, and bring the flag-staff which is on the hill over the west side of the head of the harbour, on the S.W. point of Road Island: that direction will lead you in the middle of the channel, between the east and west rocks, the former of which always show themselves, and these you leave on your starboard hand: continue this course up to Road Island, and keep the west point on board, in order to avoid the *Frying-Pan Rock*, which stretches out from a cove on the west shore, opposite the land; and, so soon as you are above the island, haul to the E.N.E., and anchor between it and Harbour Island wherever you please, in 9 or 10 fathoms, good ground, and sheltered from all winds; this is called the Road, or Outer Harbour, and is the only anchoring place for men-of-war, or ships drawing a great depth of water, but small vessels always lie up in the Inner Harbour. To sail into it, run in between the west shore and the S.W. end of Harbour Island, and anchor behind the said island, in 3 or 4 fathoms. In some parts of this harbour ships can lay their broad-

side so near to the shore as to reach it with a plank. This place has been frequented by fishermen for many years; it is well situated for their purposes, and is capable of most excellent accommodations. A mile to the eastward of Basque is Little Bay.

GRAND BAY lies about 2 miles to the westward of Port aux Basque; there are several small islands and *rocks* in and before it, the outermost of which are not above $\frac{1}{4}$ of a mile from the shore; on these the sea generally breaks. It is only fit for small vessels.

From Port aux Basque to Point Enragée, the bearing and distance are W.N.W., about a league, and thence to Cape Ray, N.N.W., nearly $1\frac{1}{2}$ league. Point Enragée is low; off it, and to the eastward of it, are some *sunken rocks*, a mile from the shore, on which the sea breaks.

CAPE RAY is the S.W. extremity of Newfoundland, situated in latitude $47^{\circ} 37'$ north, and longitude $59^{\circ} 23'$ west from Greenwich. The land of the cape is very remarkable; near the shore it is low, but 3 miles inland is a very high table mountain, which rises almost perpendicular from the low land, and appears to be quite flat at the top, excepting a small hillock on the S.W. point of it. This land may be seen, in clear weather, from the distance of 16 or 18 leagues. Close to the foot of the table mountain, between it and the point of the cape, is a high round hill, resembling a sugar-loaf, (called the Sugar-Loaf of Cape Ray,) the summit of which is a little lower than that of the table mountain; and to the northward of this hill, under the table mountain, are two other conical hills, resembling sugar-loaves, which are not so high as the former; one or other of these sugar-loaf hills are, from all points of view, seen detached from the table mountain.

There is a sandy bay between Cape Ray and Point Enragée, wherein ships may anchor with the wind from N.N.W. to east, but they should be cautious not to be surprised there with S.W. winds, which blow directly in, and cause a great sea. The ground is not the best for holding, being fine sand. Towards the east side of this bay is a *small ledge of rocks*, a mile from shore, on which the sea does not break in fine weather. The best place for large ships to anchor in is, to bring the point of the cape N.W., and the high white sand-hill in the bottom of the bay N.E., in 10 fathoms water. Small vessels may lie farther in. Be careful not to run so far to the eastward as to bring the end of the table mountain on with the sand-hill in the bottom of the bay, by which means the ledge of rocks, before mentioned, will be *avoided*.

N.W. $\frac{1}{2}$ W., nearly a mile from the point of the cape, is a *small ledge of rocks*, called the *Cape Rocks*, whereon the sea always breaks; and a mile to the northward of the cape, close under the land, is a *low rocky island*. There is a channel between the ledge and the cape, with 14 and 15 fathoms water; and also between it and the island, with 4 and 5 fathoms; but the tides, which run here with great rapidity, render it unsafe to shipping.

The soundings, under 100 fathoms, do not extend above a league from the land to the southward and eastward of the cape, nor to the westward and northward of it, except on a *bank*, which lies off Port aux Basque, between 2 and 3 leagues from the land, whereon are from 70 to 100 fathoms, good fishing ground. S.E. $\frac{1}{2}$ S., about 13 leagues from Port aux Basque, in the latitude of $47^{\circ} 14'$ north, is said to be a *bank*, whereon are 70 fathoms.

The ISLAND of ST. PAUL lies in latitude $47^{\circ} 11'$, and longitude $60^{\circ} 11'$ west, and bears W.S.W. $\frac{1}{2}$ W., distant $13\frac{1}{2}$ leagues from Cape Ray, in Newfoundland, and E.N.E. $\frac{1}{4}$ E., 4 leagues from the north cape of Breton Island; it is about 3 miles long and a mile broad; it has three high hills upon it, the highest being elevated 450 feet. The island is bold-to, and there is anchorage, close in, for small vessels all round it. There are now two lighthouses established on this island; one on the northern end, and the other on the southern point, one of which will always be open, unless to a vessel very near the central rocks. The northern light is a fixed light, and visible 6 leagues between the bearings of N. by E. and E. by N., (magnetic,) when it will be obscured by the hills to the southward of it. The southern light revolves at about the same elevation as the northern one (140 feet), and is visible 6 leagues between the bearings of west and S.S.E. At the southern lighthouse a bell is kept tolling in foggy weather, worked by machinery.

Trinity Cove is about a mile from the south point of the island, on the west side. On the north point of this cove a provision post is established, consisting of a dwelling-house and a store, where two men reside. This depôt is for the relief of shipwrecked persons, and supported by the Government of New Brunswick. It is to be hoped the new lighthouses will prevent those disastrous shipwrecks this island has been so much noted for.

Atlantic Cove is on the east side of the island, and opposite to Trinity Cove. A landing may be effected at either of these coves, better than in any other place; they afford shelter only for boats. The N.W. cove has a bold beach, about 150 feet long; but the landing is sometimes difficult, on account of the swell.

CAPE NORTH is a lofty promontory at the N.E. extremity of Breton Island; its latitude is $47^{\circ} 3'$, the longitude $60^{\circ} 24'$. The entrance into the Gulf of St. Lawrence is formed by this cape and Cape Ray, and the latter bears from the former E.N.E. $\frac{1}{4}$ E., distant $18\frac{1}{2}$ leagues: the depth of water between, excepting near the island of St. Paul, is generally above 200 fathoms.

THE TIDES.—Between Cape Chapeau Rouge and Cape Ray, in all the bays, &c., the tide generally flows till 9 o'clock, on full and change, and its perpendicular rise is about 7 or 8 feet on springs; but it must be observed, that the tides are every where greatly influenced by the winds and weather. On the coast, between Cape Chapeau Rouge and St. Pierre, the current sets generally to the S.W. On the south side of Fortune Bay it sets to the eastward, and on the north side to the westward. Between Cape La Hune and Cape Ray the flood sets to the westward in the offing, very irregularly; but generally 2 or 3 hours after it is high water by the shore. The tide, or current, is inconsiderable, excepting near Cape Ray, where it is strong, and at times sets quite contrary to what might be expected from the common course of the tides, and much stronger at one time than at another: these irregularities seem to depend chiefly on the winds.

"Off St. Paul's Island," Captain Bayfield observes, "the irregularity of the tidal streams add much to the danger arising from fogs, which prevail in southerly, easterly, and also with S.W. winds. During the whole of a fine calm day, at the end of June, we observed the current to set to the S.E., at the rate a knot, past the north point of the island."

IV.—THE WESTERN COAST OF NEWFOUNDLAND.

FROM CAPE RAY TO THE STRAIT OF BELLE ISLE.

Variation 24° to 33° west.

FROM Cape Ray to Cape Anguille the course and distance are N. $\frac{1}{2}$ E., 17 or 18 miles. Cape Anguille is the northernmost point of land you can see, after passing to the westward of Cape Ray; it is high table land, and covered with wood in the country above it. Between the high land of the two capes the coast is low, and the shore forms a bay, wherein are the great and little rivers of Cod Roy; the northernmost is the great river, which has a bar-harbour, fit to admit vessels of 8 or 10 feet draught only at high water. The shore may be approached between the two capes to $\frac{1}{2}$ a league, there being no danger so far off. It is a good salmon fishery, and for building small vessels and boats, there being timber in abundance.

ISLAND COD ROY.—The island of Cod Roy lies $1\frac{3}{4}$ or 2 miles to the southward of Cape Anguille, close under the high land; it is a low, flat, green island, of nearly 2 miles in compass, in the shape of a horse-shoe, forming between it and the main, a small snug harbour for vessels of 10 or 12 feet draught; the safest entrance to it is from the southward.

COD ROY ROAD.—South-eastward from the island is Cod Roy Road, wherein is very good anchorage for shipping, in 8, 7, or 6 fathoms, on a clay bottom. With the

south point of the island, bearing about W.N.W., and the point of the beach on the inside of the island, at the south entrance into the harbour, on with a point on the main to the northward of the island, you will lie in 7 fathoms, and nearly $\frac{1}{2}$ a mile from the shore; a league to the southward of Cod Roy Island is a high bluff point, called Stormy Point, or Point Enragée, off which a *shoal* stretches out full $\frac{1}{2}$ mile; this point covers the road from the S.S.E. winds, and there is good anchorage all along the shore, between it and the island.

ST. GEORGE'S BAY.—From Cape Anguille to Cape St. George the course and distance are N.N.E. $\frac{3}{4}$ E., nearly 12 leagues; these two capes form the Great Bay of St. George, which extends inwards E.N.E., 18 leagues from the former, and E.S.E., 11 leagues from the latter. At the head of this bay, on the south side, round a low point of land, is a harbour, with anchorage, in 8, 10, or 11 fathoms water. The river St. George empties itself into the head of this bay, but it is not navigable for any thing but boats, and this appears to be fast filling up with sand. The tide rises here from 5 to 8 feet. There are a few wooden houses near the point, which are resorted to at particular seasons. On the north side of the bay, before the isthmus of Port-a-Port, is good anchorage, in 7 or 8 fathoms, with northerly winds: from off this place a *fish-ing-bank* stretches out $\frac{3}{4}$ across the bay, with from 7 to 19 fathoms water on it; dark sandy bottom.

CAPE ST. GEORGE lies in latitude $48^{\circ} 28'$ north, and longitude $59^{\circ} 21'$ west. It may readily be known, not only by its being the north point of the Bay of St. George, but also by the steep cliffs on the north part of it, which rise perpendicularly from the sea to a considerable height; and by Red Island, which lies 5 miles to the north-eastward of the cape, and $\frac{1}{2}$ a mile from the shore. This island is about $1\frac{1}{2}$ mile in length, and of a middling height; the steep cliffs around it are of a reddish colour. There is anchorage with off-shore winds under the N.E. end of the island, before a sandy cove on the main, which lies just to the northward of the steep cliffs, in 12 or 14 fathoms; you will there ride, covered from the S.W. winds by the island, and from the southerly and easterly winds by the main land; but there is no shelter whatever with winds from the north or N.W., although this place was heretofore much resorted to by vessels in the fishing trade.

From abreast of Red Island, distant 4 or 5 miles, to Long Point, at the entrance into the Bay of Port-a-Port, the bearing and distance are E. by N., 7 or 8 leagues; from Red Island to Guernsey Island, in the mouth of the Bay of Islands, E.N.E., nearly 16 leagues; from Red Island to Cape St. Gregory N.E. by E. $\frac{3}{4}$ E., full 20 leagues; and from Red Island to Point Rich, which is the north part of Ingornachois Bay, N.E. by E., 49 leagues.

PORT-A-PORT.—The land between Red Island and the entrance into Port-a-Port is rather low, with sandy beaches, except one remarkable high hillock, called Round Head, close to the shore, about 2 leagues to the E.N. Eastward of Red Island; but up the country, over Port-a-Port, are high lands: and if you are 3 or 4 leagues off at sea, you cannot discern the long point of land which forms the bay. This bay is capacious, being above 5 miles broad at the entrance, and 4 leagues deep, running in to the south and south-westward, with good anchorages in most parts of it.

Long Point is the west point of the bay; it is low and rocky, and a *ledge of rocks* extends from it E.N.E., nearly a mile. S.E. by E. $\frac{3}{4}$ E., 4 miles from Long Point, and $\frac{1}{2}$ a league from the east shore, lies Fox Island, which is small, but of middling height. From the north end of this island a *shoal* stretches out nearly 2 miles to the N.N. Eastward, called *Fox's Tail*; and nearly in the middle of the bay, between Fox Island and the west shore, lies the *Middle Ground*, on one place of which, near the S.W. end, is not above 3 or 4 feet water. From the head of the bay, projecting out into the middle of it, is a low point, called Middle Point, off which, extending 2 miles N.E. by N., is a *shoal spit*, part of which dries at low water; this Middle Point divides the bay into two parts, called East and West Bays. From the head of the East Bay over to the Bay of St. George, the distance is a large $\frac{1}{4}$ of a mile; this isthmus is very low, and has a pond in the middle of it, into which the sea frequently dashes over, especially at high tides, and with gales of wind from the southward. On the east side of it is a tolerably high mountain, rising directly from the isthmus, and flat at top; to the northward of this, and at about 5 miles distant from the isthmus, is a conspicuous valley or hollow, hereafter to be used as a mark.

N.E. by E. $\frac{1}{2}$ E., above 2 leagues from Long Point, and $\frac{1}{2}$ a league from the shore, lies Shag Island, which appears at a distance like a high rock, and is easily to be distinguished from the main; and W.N.W., about a league from it, lies the middle of the *Long Ledge*, which is a narrow *ledge of rocks*, stretching E.N.E. and W.S.W., about 4 miles; the eastern part of them is above water: and the channel into the bay of Port-a-Port, between the west end of this ledge and the reef which stretches off from the west point of the bay, is a league wide.

In sailing in to Port-a-Port, if coming from the south-westward, advance no nearer to the Long Point of the bay than $1\frac{1}{2}$ mile, until you have brought the valley in the side of the mountain before mentioned (on the east side of the isthmus), over the east end of Fox Island, or to the eastward of it, which will then bear south, a little easterly; you will then be clear of the Long Point Reef, and may haul into the bay with safety; but, if coming from the N.E. without the Long Ledge, or turning into the bay, in order to keep clear of the S.W. end of Long Ledge, bring the isthmus, or the foot of the mountain (which is on the east side of the isthmus), open to the westward of Fox Island, nearly twice the breadth of the island, and it will lead you into the bay, clear of Long Ledge; and when Shag Island is brought on with the foot of the high land on the south side of Coal River, bearing then E. $\frac{3}{4}$ S., you will be within the Long Ledge. There is also a safe passage into the bay, between the Long Ledge and the main, on either side of Shag Island, and taking care to avoid a small *shoal*, of $2\frac{1}{2}$ fathoms, which lies W. by N., a mile from the island.

To sail up into the West Bay and Head Harbour, keep the western shore on board, which is bold-to. In turning between it and the Middle Ground, stand no nearer to the Middle than 8 fathoms; but you may stand to the spit of the Middle Point into 6 or 5 fathoms. The anchorage in West Bay is in about 8 fathoms, and in Head Harbour in about 5 fathoms. The West Road lies before a high stone beach, about 2 miles south-westward of Long Point, where you may lie very secure from westerly and N.W. winds, in about 10 or 12 fathoms water; this beach is steep-to, and forms an excellent place for landing and drying your fish. There is a good place at the northern end of Fox's Island for the same purpose. The whole bay and the adjacent coasts abound with cod, and extensive fishing banks lie all along the coasts.

The East Road lies between Fox Island and the east shore. To sail up to it, you should keep the high bluff head, which is about a league to the E.N.E. of the island, bearing to the southward of S.E. by E. $\frac{1}{2}$ E., until the isthmus is brought to the eastward of Fox Island; you will then be within the *shoal* called the *Fox's Tail*, and may haul to the southward, and anchor any where between the island and the main, in from 10 to 18 fathoms.

To sail up the East Bay, pass between the island and the east shore; and after you are above the island, come no nearer to the main than $\frac{1}{2}$ a mile, until you are abreast of a bluff point above the island, called Road Point, just above which is the best anchorage with N.E. winds, in about 12 fathoms water. To sail up the East Bay between the Middle Ground and Fox's Tail, bring the said bluff point on with the S.W. point of Fox Island; this mark will lead you up in the fairway between the two shoals. Give the island a berth, and anchor, as before directed, in from 8 to 12 fathoms water.

BAY of ISLANDS.—From the Long Point at the entrance of Port-a-Port to the Bay of Islands, the bearing and distance are N.E. by E. $\frac{1}{2}$ E., 8 leagues. Be careful to avoid the *Long Ledge*. The land between is of considerable height, rising in craggy barren hills, directly from the shore. The Bay of Islands may be known by the many islands in the mouth of it, particularly the three named Guernsey Island, Tweed Island, and Pearl Island, which are nearly of equal height with the land on the main. If you are bound for Lark or York Harbours, which lie on the S.W. side of the bay, and are coming from the southward, run in between Guernsey Island and the South Head, both of which are bold-to; but with southerly and S.W. winds approach not too near the South Head, lest calms and sudden gusts of wind should proceed from the high land, under which you cannot anchor with safety. There are several channels formed by the different islands, through which you may sail in or out of the bay, there being no danger but what shows itself, excepting a *small ledge of rocks*, which lie $\frac{1}{2}$ a mile north-eastward from the northern Shag Rock, and in a line with the two Shag Rocks in one. If you bring the south Shag Rock open on either side of the north Shag

stock, you will go clear to the eastward or westward of the ledge. The safest passage into this bay from the northward, is between the two Shag Rocks, and then between Tweed and Pearl Islands.

LARK HARBOUR.—From Guernsey Island to Tortoise Head, which is the north point of York Harbour, and the S.E. point of Lark Harbour, the course and distance are nearly S. by W. $\frac{1}{2}$ W., 5 miles. Lark Harbour extends inwards W.S.W., nearly 2 miles, and is $\frac{1}{2}$ of a mile broad in the entrance, which is the narrowest part; in sailing into it with a large ship, keep the port shore on board, and anchor with a low point on the starboard side bearing W.N.W., N.N.W., or N.N.E., and you will ride in 6 or 7 fathoms water, secure from all winds.

YORK HARBOUR.—From Tortoise Head into York Harbour the course and distance are W.S.W., nearly a league. There is good turning room between the Head and Governor's Island, which lies before the harbour; but you must be careful to avoid a *shoal* which runs off from a low beach point on the west end of Governor's Island, called Sword Point. There is also a *shoal* which spits off from the next point of Governor's Island, which must also be avoided; Tortoise Head just touching Sword Point, will lead clear of it. In sailing in, give Sword Point a berth; passing which, the best anchoring ground is in 10 fathoms, along a sandy beach on the main, with Tortoise Head open of Sword Point. West and north-westerly winds blow here with great violence.

Harbour Island lies at the entrance of the River Humber, and S. by E. $\frac{3}{4}$ E., 7 miles from Guernsey Island; at its S.W. point is Wood's Harbour, which is unfit for shipping. The River Humber, at about 5 leagues within the entrance, becomes narrow, and the stream is so rapid in some places, for about 4 leagues up, to a lake, that it is with great difficulty that even a boat can stem the current. The banks of this river are well clothed with timber; and formerly an extensive salmon fishery was carried on here.

The North and South Arms are both long inlets, with very deep water up to their heads. On the east side of Eagle Island, between the North and South Arms, is anchorage in 8, 10, or 12 fathoms water. Under the north side of Harbour Island also is good anchorage with S.W. winds; and opposite to the S.E. end of Harbour Island, on the south side of the bay, is Frenchman's Cove, wherein is good anchorage in from 20 to 12 fathoms.

The Bay of Islands was formerly much frequented by vessels in the cod fishery, and stages were erected at Small Bay, which lies a little on the outside of South Head; and the large beach on Swords Point, in Governor's Island, is an excellent place for drying the fish.

From the north Shag Rock to Cape St. Gregory the course and distance are nearly N.E., 8 miles; and thence 13 or 14 miles, on a similar bearing, will carry you to the entrance of Bonne Bay. The land near the shore, from the north Shag Rock to Cape St. Gregory, is low, along which lie *sunken rocks*, $\frac{1}{4}$ of a mile from the shore; but a very little way inland it rises into a high mountain, terminating at the top in round hills.

CAPE ST. GREGORY is high, and between it and Bonne Bay the land rises directly from the sea-shore to a considerable height; it is the most northerly land you can discern when you are sailing along shore between Red Island and the Bay of Islands.

BONNE BAY may be known, at the distance of 4 or 5 leagues, by the land about it, all that on the S.W. side of the bay being very high and hilly, and that on the N.E. side, and thence along the sea-coast to the northward, being low and flat; but at about a league inland is a range of mountains, which run parallel with the sea-coast. Over the south side of the bay is a very high mountain, terminating at top in a remarkable round hill, very conspicuous when you are to the northward of the bay.

This bay extends inwards S.E., nearly 2 leagues, then branches into two arms, one of which runs in to the southward, and the other to the eastward. The southern arm affords the best anchorage; small vessels should ride just above a low woody point at the entrance into this arm, on the starboard side, before a sandy beach, in 8 or 10 fathoms water, about a cable's length from the shore. There is no other anchorage in less than 30 or 40 fathoms, excepting at the head of the arm, where there are from 25 to 20 fathoms water. In sailing into the east arm, keep the starboard shore on

board; and a little way round a point at the entrance will be found a small cove, with good anchorage in 17 to 20 fathoms, but you must moor to the shore. There is a snug cove also close within the north point, with anchorage in 6 or 7 fathoms water. In sailing in or out of Bonne Bay with W.S.W. winds, come not near the weather shore, lest you should happen to be becalmed, or should meet with heavy gusts of wind, as the depth of water is too great to admit of your anchoring.

At 10 miles to the northward of Bonne Bay is Martin Point, high and white; off which, about $\frac{3}{4}$ of a mile, is a small *ledge of rocks*, whereon the sea breaks. Broom Point is low and white, and lies about a league to the northward of Martin Point; about $\frac{1}{2}$ a mile W.S.W. from it lies a *sunken rock*, which seldom shows itself. On the north side of Broom Point lies the Bay of St. Paul, wherein vessels may anchor with off-shore winds; but it is quite exposed to the sea.

COW HEAD lies about 3 miles to the northward of the bay of St. Paul; this is a promontory, having the appearance of an island, it being joined to the main only by a very low and narrow neck of land. About $\frac{3}{4}$ of a mile off this head lies Steering Island, which is low and rocky, and is the only island on the coast between the Bay of Islands and Point Rich. Cow Cove lies on the south side of Cow Head, and ships may lie there, in from 7 to 10 fathoms, sheltered from northerly and easterly winds. Shallow Bay lies on the north side of Cow Head, and has water sufficient for small vessels. At the N.E. side of the entrance is a *cluster of rocky islands*, extending E.N.E. and W.S.W.; and at the W.S.W. side are *two sunken rocks*, close to each other, which generally show themselves: they lie a cable's length from the shore, and there is a channel into the bay on either side of them. Steering Island lies right before this bay, which you may pass on either side; but come not too near its N.E. end, as there are some *sunken rocks* extending from it. This is considered the best situated for a fishery on all the coast; and the ground about its environs are eminently productive.

INGORNACHOIX BAY.—From Steering Island to Point Rich the course is N.E. $\frac{1}{2}$ E., distant 50 miles. Port Rich is the northern point of Ingornachois Bay. From Shallow Bay to the southern point of Ingornachois Bay, the coast is nearly in a straight line, there being neither creek nor cove all the way where a vessel can find shelter from the sea-winds, although there are a few places where they might occasionally anchor with off-land winds. About 6 leagues from Steering Island there is a hill, standing $\frac{1}{2}$ a mile inland, which is commonly called Portland Hill, probably because it resembles Portland Bill in the English Channel, and alters not its appearance in whatever point of view it is taken.

PORT SAUNDERS AND HAWKES HARBOUR.—These are situated within, and to the eastward of Ingornachois Bay. At the entrance lies Keppel Island, which, at a distance, will not easily be distinguished from the main land; there is a passage on both sides of the island. In sailing into Port Saunders there is no impediment or danger; you will leave Keppel Island on your starboard side, and when about $\frac{1}{2}$ a mile within the entrance, you can anchor in 12 or 14 fathoms water; but if you intend to run up to the head of the harbour, keep the port shore on board, in order to avoid a *ledge of rocks* lying near mid-channel. This is considered the best harbour for vessels bound to the southward.

HAWKES HARBOUR.—To enter this harbour, vessels commonly go to the southward of Keppel Island. The starboard shore is shoal, and has a *sand bank*, which stretches along the land, and runs out $\frac{3}{4}$ of the passage over, great part of which dries at low water. Your course in will be E.S.E., keeping nearer to Keppel Island than to the main, until the eastern end of the island, which is a low stony beach, bears N.E. by N. or N.N.E.; then steer S.S.E. $\frac{1}{2}$ E. for a small island you will see situated farther up the harbour: keeping the port shore well on board, run direct for this island; and when you have brought the point at the south entrance of the harbour to bear N.N.E. $\frac{1}{2}$ N., and are at the S.S.E. point of a bay on the starboard side of the harbour, you will then be beyond the shoal ground, and may anchor in 12 fathoms water; or else run within $\frac{1}{2}$ a mile of the small island, and anchor there, which will be more convenient both for wood and water. This is the best harbour for ships bound to the northward. The land round about these harbours is generally low, and covered with wood. You may occasionally anchor outside these, in the Bay of Ingornachois, according as you find the prevailing winds.

POINT RICH is in latitude $50^{\circ} 40' 10''$ north, and longitude $57^{\circ} 28'$ west; it is the south-western point of a peninsula, which is almost surrounded by the sea, being every where of moderate height, and projecting farther to seaward than any other land on this side of Newfoundland, the coast from thence, each way, taking an inward direction.

PORT AU CHOIX.—Rounding Port Rich, on its northern side, you will meet with Port au Choix, small, but yet capable of admitting a ship of burthen, mooring head and stern; to sail in, you should keep the starboard shore on board, and anchor just above a small island lying in the middle of the harbour. In this place, and also in Boat Cove, which lies a little to the north-eastward, there are several stages and places for drying fish.

OLD PORT AU CHOIX lies to the eastward of Boat Cove; it is a small but safe harbour, having at its entrance an island, called Harbour Island, and on its western side some *rocks*, both above and under water. There is also another island lying E.N.E. $\frac{1}{2}$ N., distant nearly a mile from Harbour Island, about which are several *rocks*, some of which stretch out towards Harbour Island, and render the passage very narrow between them. There are 4, 5, 6, and 7 fathoms water between Savage Island and the main, and 4 and 5 fathoms between Savage Island Rocks and Harbour Island, and nearly the same depth between Harbour Island and the western shore. To sail into Old Port au Choix, on the western side of Harbour Island, you must keep the island close on board; but to go in on the eastern side of the island, give the north-eastern point of the island a berth: and having well entered, you may anchor anywhere on the port side of the harbour, only avoiding the starboard side, for a *shoal of sand and mud* runs all along it.

BAY of ST. JOHN.—This is an open and extensive bay, bounded by Point Rich to the southward, and Point Ferolle to the northward, having several islands within it, and some *sunken rocks*; the largest of these islands is St. John's, about $2\frac{1}{2}$ miles in length and $1\frac{1}{2}$ broad, which lies E.N.E., distant $8\frac{1}{2}$ miles from Point Rich; on its south-western side is a small harbour, well calculated for the cod fishery, but too much exposed for shipping, as south-westerly winds commonly drive in a heavy sea. On the south-eastern, or inner side of the island, and between it and One Head Island, vessels may lie much more secure, in 14 or 16 fathoms water, and sheltered from most winds; and this is considered to be the only safe anchorage in the whole bay. West from St. John's Island, a large mile, is Flat Island, having a *rock* above water at its southern end. The channel between St. John's and Flat Island has from 13 to 25 fathoms in it, and they are both bold-to. The Twin Islands lie N.E. by N. from Flat Island, distant a league, and have no danger about them. To the eastward of the Twins are several scattered *rocks* above water, named the *Bay Islands*, having deep water around them, but no anchorage. The land at the bottom of the bay is very high; and there is the little river of Castors, the entrance to which is dangerous and shallow, therefore seldom frequented. From the northern point of this bay a *rocky shoal* extends all the way to Point Ferolle, stretching out $2\frac{1}{2}$ miles from the shore.

POINT FEROLLE lies N.E. by E. $\frac{1}{4}$ E. from Point Rich, distant 22 miles; it is of moderate height, and joined to the main by a neck of land, which divides the Bay of St. John's from New Ferolle Bay, making it appear like an island when seen from a distance; its northern shore is bold-to: and this part of the coast will easily be known by the adjacent table-land of St. John's, the west end of which mountain lies from the middle of Ferolle Point S. by W., and its eastern end S.E. $\frac{3}{4}$ S.

NEW FEROLLE BAY is a small cove lying to the eastward of the point, and is quite flat all over, there being not more than 2 and 3 fathoms at any part; it is quite open to the northerly winds, and has a stage on each side of it, with plenty of room for others.

St. Margaret's Bay is large, and has several islands within it; also various inlets or coves, affording good anchorage, particularly on its western side, which is the best situation for ships, being most clear of danger, and convenient for wooding and watering. On its banks are spruce and fir-trees in plenty, and many rivulets of fresh water.

Dog Island is to the eastward of Point Ferolle, full 2 miles, and only divided from the main at high water. It is higher than any land near it, which gives it the appearance, when seen from the eastward, of an island, situated at some distance from the main.

OLD FEROLLE.—To the eastward of Dog Island, about 5 miles, is Ferolle Island. This lies parallel to the shore, and forms the harbour of Old Ferolle, which is very good and safe; the best entrance to it is at the S.W. end of the island, passing to the southward of a small island in the entrance, which is bold-to. As soon as you are within it, haul up E.N.E., and anchor under the S.W. end of Ferolle Island, in 8 or 9 fathoms, good ground, quite land-locked. There is also good anchorage any where along the inside of the island, and a good channel up to the N.E. end thereof. There are some little islands lying at the N.E. end of Ferolle Island; and on the outside are some *ledges of rocks*, a small distance off.

BAY OF ST. GENEVEIVE.—From the north end of Ferolle Island to St. Geneveive Head the course is E.N.E., $4\frac{1}{2}$ miles; and thence to the west end of Currant Island it is north-eastward, about 3 miles. There are several small islands lying in and before this bay, only two of which are of any considerable extent. The before-mentioned Currant Island is the northernmost of the two, and the largest; it is of a moderate height: and when you are to the E.N.E. of it, the western point appears bluff, but not high; and when you are to the westward of it, it appears flat and white. The other, called Gooseberry Island, lies nearly a mile to the southward of it; and its west point bears from the west point of Currant Island S.S.W. $\frac{1}{2}$ W., nearly a mile. Gooseberry Island has a cross on its S.W. end, from which point stretches out a *ledge of rocks* nearly $\frac{1}{2}$ a mile to the southward; there is also a *shoal* about $\frac{1}{2}$ a mile to the W.S.W. from the point of Currant Island.

The best channel into this bay is to the southward of these islands, between the *rocks* which stretch off them and a small island lying S.S.W. from them (which island lies near the south shore). In this channel, which is very narrow, there are not less than 5 fathoms at low water; and the course in is E. by S., southerly, until you come to the length of the before-mentioned island: passing which, you should haul to the southward, and bring St. Geneveive Head between the small island and the main, in order to avoid the *Middle Bank*. You may anchor either behind the small island, in 5 or 6 fathoms water, or proceed with the said mark on, until the S.W. arm is open, and anchor in the middle of the bay, in 7 or 8 fathoms water. Here wood and water can be procured. There is tolerable good anchoring in most parts of the bay; but the snugest place is the S.W. arm; the entrance to it is narrow, and has only 4 fathoms at low water. In coming into the bay, if you get out of the channel on either side, you will shoal your water immediately to 3 or 2 fathoms.

BAY OF ST. BARBE.—From the west end of Currant Island to St. Barbe Point it is E. by N., $2\frac{1}{2}$ miles, and from St. Barbe Point to Anchor Point it is N.N.E., nearly $1\frac{1}{2}$ mile. Between them lies the Bay of St. Barbe; it runs in S. by E., about 2 miles from Anchor Point. To sail in, give Anchor Point, and all on the east side of the bay, a good berth, to avoid the *sunken rocks* which lie along that shore: you must be well in before you can discover the entrance into the harbour, which is but narrow; then steer south, keeping in the middle of the channel, and anchor as soon as you are within the two points, in a small cove, on the west side, in 5 fathoms water, on sand and mud, quite land-locked. Near this place branch out two arms, or rivers, one called the south, and the other the east; the latter has 3 fathoms a good way up, but the former is shoal. Between the S.W. point of the bay and west point of the harbour is a cove, wherein are *sunken rocks*, which lie a little without the line of the two points. In the open bay are 7, 8, or 9 fathoms; but the N.W. winds cause a heavy sea to fall in here, which renders it unsafe.

From Anchor Point to the extremity of the Seal Islands, the course is N.E. $\frac{1}{2}$ E., a league. Off Anchor Point a *ledge* stretches itself W. by S., about $\frac{1}{2}$ of a mile. There are no other dangers between it and the Seal Island but what lie very near the shore.

The Seal Islands are white and rocky, and must be approached with care on their north and western sides, on account of some *sunken rocks* near them.

From the N.W. Seal Island to the N.W. extremity of Flour Ledge, it is N.N.E., nearly 2 miles; part of this ledge appears at low water, and there are 10 fathoms close on its off-side.

MISTAKEN COVE.—From the north part of Flour Ledge to Grenville Ledge it is about $1\frac{1}{2}$ mile E. by S., and Grenville Ledge lies about $\frac{3}{4}$ of a mile W. by N. from

the eastern point of Mistaken Cove; between which and Seal Islands lies also Nameless Cove and Flour Cove, neither of which are fit for ships.

SAVAGE COVE.—Close to the eastward of Mistaken Cove is Savage Cove, which has a little island in its entrance, and is only fit for small vessels and boats.

Sandy Bay lies 2 miles eastward from Savage Cove, where small vessels may ride in 3 or 4 fathoms water, with the winds from east to S.W.

About E.N.E., 5 large miles from Sandy Bay, is Greenlet Island; between them, at 3 miles distance, W. $\frac{1}{2}$ S., from Greenlet Island, is the north extremity of *Double Ledge*, which extends nearly $\frac{3}{4}$ of a mile from the shore, and has only 8 or 9 feet water on it.

Greenlet Island lies about $\frac{3}{4}$ of a mile from the main; is $\frac{3}{4}$ of a mile in length, very low and narrow, and agreeable in colour to the name it bears; from the east end of it a *ledge of rocks* extends $\frac{3}{4}$ of a mile to the eastward, on which the sea breaks in bad weather. There are 4 or 5 fathoms water in the channel between the island and the main, where ships may anchor, if necessary. To go in from the westward, keep the island close on board, for the deepest water, which is 4 fathoms; and going in from the eastward, keep the main on board. From this island to the opposite part of the coast of Labrador, called Castles, or Red Cliffs, which is the narrowest part of the Strait of Belle Isle, the distance is about $3\frac{1}{2}$ leagues, and they bear from each other N.N.W. and S.S.E.

BOAT HARBOUR.—From Greenlet Island to Boat's Head it is E. $\frac{1}{4}$ N., 8 leagues; between there is no shelter on the coast; but to the south-eastward of Boat's Head is a cove, called Boat Harbour, where small vessels and boats may lie very secure, except with N.E. winds.

Cape Norman lies east, $4\frac{1}{2}$ miles from Boat's Head, and is the northernmost point of land in Newfoundland; this has been already described (see page 35.)

TIDES.—In the STRAIT OF BELLE ISLE the flood, in the offing, sets to the westward 2 hours after it is high water on the shore; but in blowing weather, this stream is subject to many alterations.

Captain Bayfield observes, "Near the shores, on either side, there is usually a regular alternation of flood and ebb, in fine weather, but it is not constant. The flood comes from the northward, along the coast of Labrador, and also from the S.E., from Cape Bauld to Cape Norman. The latter stream, I have reason to believe, is often turned off to the northward by Cape Norman; and the same thing takes place at Greenlet Island, on the Newfoundland side, towards Greenly Island, on the opposite side of the straits. There is, moreover, at times, a stream running from the S.W. for several days together, along the west coast of Newfoundland. This stream occasionally sets from Point Ferolle, obliquely across the strait towards Forteau Bay. Sometimes, and especially with N.E. winds, the current runs directly in an opposite direction along the west coast of Newfoundland, from Point Ferolle past Point Rich. In short, there is no constancy either in the rate or set of these streams; for the winds, and the irregular tides, modify the set and rate of the equally irregular currents in a manner which it is extremely difficult, if not impossible, to calculate upon with any degree of certainty. The prevalent current from the northward comes from between Belle Isle and the coast of Labrador; it is often at the temperature of the freezing point, bringing many icebergs into the strait, and frequently carrying them through it many miles up the gulf. Some of those bergs ground in deep water, while others are continually changing their position. They are much more numerous in some seasons than in others; as I have seen 200 bergs, and large pieces of ice, in the strait in the month of August, in one year, whilst there were not above half-a-dozen to be seen in the same month of the following season.

"*Navigation of the Strait at night.*—From these remarks it will plainly appear, that the navigation of this strait is attended with very great danger in dark or foggy nights, during which no vessel should attempt to run through; for I have found, that with all our experience, we could not be sure of the vessel's position within 10 miles, under such circumstances. On the approach of a dark or foggy night, therefore, it would be prudent to anchor in one of the bays on the north side of the strait, rather than to continue under-way. A vessel bound into the gulf, and running with an easterly wind, will,

however, find no place fit for that purpose until she arrives at Black Bay; and that is not a very good anchorage, for Red Bay cannot be entered by a large vessel with an easterly wind. Loup Bay is the first good anchorage, under such circumstances; and there the vessel would be so far advanced in her run through the strait that it would not be worth while to stop, since she might easily clear every thing in the remaining short distance. But with a S.W. wind, at the approach of night, and appearance of a fog, a vessel bound out of the strait to the eastward, had better stand off and on, under easy sail, tacking, by her deep-sea lead, from the Newfoundland side till morning, if she be not further to the eastward than Port Ferolle; if she be further advanced, she had better endeavour to make Forteau Bay before dark, and anchor there for the night. In light winds or calms, during dark nights or foggy weather, it is better to bring-up with a stream anchor any where in the strait, than to drive about with the tides without knowing whither; but then a look-out must be kept for drifting ice-bergs."

V.—THE COAST OF LABRADOR.

FROM YORK POINT TO SANDWICH HARBOUR.

Variation allowed from York Point to Sandwich Harbour, 3 Points.

YORK, or CHATEAUX BAY, lies about 19 miles N.W. $\frac{3}{4}$ N. from the southwestern point of Belle Isle, and 9 leagues N. $\frac{3}{4}$ W. from the harbour of Quirpon; it may easily be known by two very remarkable hills situated on Castle and Henley Islands, which lie at the entrance of the bay; these rocky hills appear flat at the top, and the steep hills around them have the appearance of castle walls. The islands form the eastern side of the entrance to the bay, while the Capes York and Temple are to the westward; but as the mariner may not be able to discover the above hills at a distance, because of the high land behind, the better marks will be, to observe that all the land to the westward is of a high and uniform figure, terminating at the west side of the bay with a conspicuous nob or hillock, while the land to the eastward of Chateaux Bay is hilly and broken, having many islands near the shore; while to the westward there are none.

To sail into Chateaux Bay, you must leave Castle and Henley Islands on your starboard side, and endeavour to keep Point Grenville, which has a beacon upon it, on with the western point of Henley Island; this point is a smooth *black rock*, having a little *dark rock* just appearing above water off its point; keep this mark on until you get abreast of Whale Island; then, to avoid the *middle rock*, over which are only 9 feet water, and which lies nearly midway between the east point of Whale Island and the black point of Henley Island, haul over close to Henley Black Rock, or borrow towards but not too near, to Whale Island, for here it runs off *shallow and flat*; and when you are so far advanced as to open the narrow channel into Temple Bay, with the view of sailing up into Pitt's Harbour, then haul to the westward, until you bring the outer point of Castle Island a little open of Whale Island; this mark will lead you up into Pitt's Harbour, which is spacious, clear from danger, and well sheltered from all winds; here you may ride in 10 or 14 fathoms, with plenty of timber ready for your use, and every convenience for carrying on your fishery. There is also a narrow passage into Pitt's Harbour, to the northward of Henley Island, through which you will have 3 fathoms water.

A mile to the eastward of Henley Island, lies Seal Island and $3\frac{1}{2}$ miles farther is Duck Island; between is Goose and Bad Bay, full of *rocks*, both above and below the water, and also open to the easterly winds. To the eastward of Seal Island, distant 6 miles, are *St. Peter's Islands*, a cluster of *barren rocks*, within which is St. Peter's Bay, a good place of anchorage, but too much exposed to the soth and south-easterly winds to be much frequented.

CAPE CHARLES.—To the north-eastward of St. Peter's Island is Cape Charles, making with a high hill, steep to seaward, and sloping down inland, so that when you are to the westward of Chateaux Bay, it has the appearance of an island. Cape Charles Island lies S.E. by E. $\frac{1}{4}$ E., distant about $1\frac{1}{2}$ mile from Cape Charles; it is of moderate height, and has several *small rocks* both to the eastward and to the westward of it. From St. Peter's Islands to Charles Island the course is E.N.E., distant 11 miles; between them lies Niger Sound, an inlet about 2 leagues deep, and having several small islands before it. To enter Niger Sound, you may pass either to the southward or northward of these islands, and obtain anchorage on the northern side of the sound, in 9 fathoms water; the course will be nearly N. by W.

The following directions from Cape Charles Island to Sandwich Bay, are chiefly by Mr. LANE.

CAPE CHARLES HARBOUR.—From the north point of Cape Charles Island into Cape Charles Harbour, the course is N.W. $\frac{3}{4}$ N., distant 4 miles; this harbour is formed by Eyre and Little Caribou Islands on the eastern sides, and by the main on the west. There is very good anchorage in from 17 to 22 fathoms water in it, on a muddy bottom, and you may sail either side of the centre island; but the best passage is between it and Little Caribou Island.

From Cape Charles Island to the northernmost Battle Island the course is E.N.E. $\frac{1}{4}$ N., and the distance $4\frac{1}{2}$ miles; this course will carry you clear to the eastward of the *rocks* which lie a large mile to the eastward of northernmost Battle Island, which will appear high and round at the top.

From the northernmost Battle Island to the River Islands, your course will be N.W. $\frac{1}{4}$ W., distant 2 leagues: here, to the westward of Pocklington, which is one of the River Islands, you will find anchorage in 30 and 35 fathoms water, with a bottom of mud, and vessels may pass to the southward of these islands up the River St. Lewis.

CUTTER HARBOUR.—From the south point of Pocklington Island to Cutter Harbour, the course is W. $\frac{3}{4}$ S., distant a mile: in this harbour there is good anchorage for small vessels.

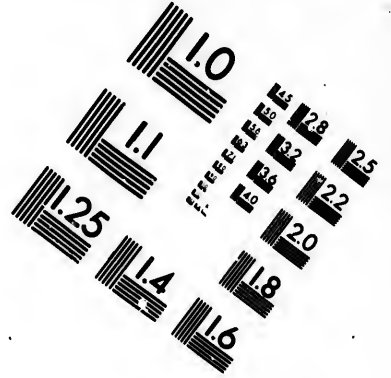
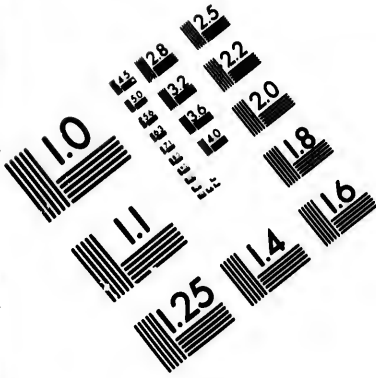
ST. LEWIS RIVER.—From the northernmost Battle Island to the entrance of the River St. Lewis, the course is N.N.W. $\frac{3}{4}$ W., distant 7 miles; steer in N.W. $\frac{1}{4}$ W., for 5 miles, then N.N.W. $\frac{1}{4}$ W., 8 miles, to Woody Island. When you are about 4 miles up this river, from its entrance, you will find good anchorage, and this will continue until you arrive at Woody Island; but above that, the river becomes intricate, and has many *shoals*. The north point of the river is low for about 2 miles up, then both sides become rather high and woody; at the head of the river are different kinds of very fine wood, birch, fir, juniper, and spruce; and the river is plentifully stored with salmon.

ST. LEWIS'S SOUND.—A mile to the northward of the north point of St. Lewis River lies the entrance to St. Lewis's Sound, which runs up nearly N.W., about 3 miles, having very good anchorage at its upper part; but care should be taken lest a *shoal*, which stretches off from a sandy beach on the port side, about 2 miles within the entrance, should do you any injury; you will, therefore, be sure to give this a good berth in passing.

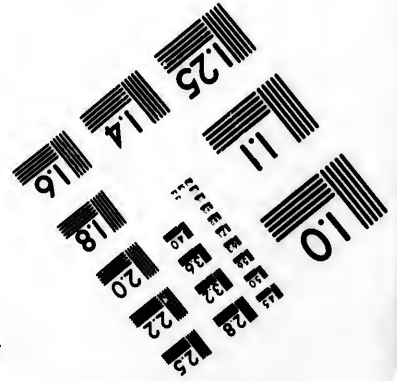
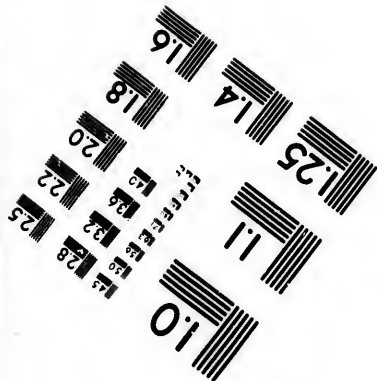
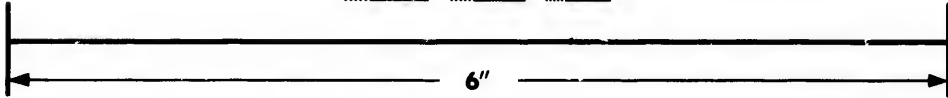
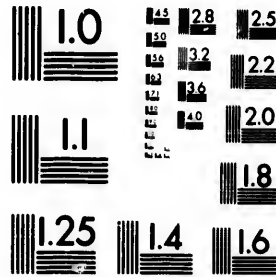
DEER HARBOUR.—From the northernmost Battle Island to the entrance of Deer Harbour, the course is N.N.W. $\frac{1}{2}$ N., distant $2\frac{1}{4}$ leagues. This is considered to be a very good harbour, secure from all winds, and in which vessels will find anchorage in from 10 to 18 fathoms; there is no danger in entering; and the best anchorage is at the back of Deer Island, called also Marnham Island. Port Marnham is formed by the east end of Marnham Island, and the main to the north and eastward of it.

CAPE ST. LEWIS.—From the northernmost Battle Island to Cape St. Lewis, the course is N. $\frac{1}{4}$ W., distant 5 miles; this cape is high, ragged land. At $\frac{1}{4}$ of a mile from the point there are *two flat rocky islets*, and *several sunken rocks*, about the point of the cape; round the point is the entrance of a small cove running in S.W. $\frac{1}{4}$ W., $\frac{1}{2}$ a mile; it is commonly called Deep Water Creek, being very narrow, and having from 20 to 40 fathoms within it. About $1\frac{1}{2}$ mile N.N.W. $\frac{3}{4}$ N. from the cape is Fox Harbour, which is small, and fit only for shallops, but appears to be a convenient place for the fisheries.





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PETTY HARBOUR.—From the northern part of Cape St. Lewis to the south head of Petty Harbour Bay, the course is about N.N.E. $\frac{1}{2}$ E., distant $1\frac{1}{2}$ mile; the shores are bold and lofty; the entrance is $1\frac{1}{2}$ mile wide; and the north point bears from the southern point N.E. by N.; the bay runs up nearly N.W. by N., full a mile, having from 20 to 40 fathoms water in it. At the bottom of the bay you will perceive Petty Harbour; the entrance is to the northward of a low point of land, which shuts the harbour in from the sea, so as to render it very difficult to distinguish its situation; it is not above 50 fathoms broad at the entrance, with 5 fathoms mid-channel, and 3 towards the sides; but this narrow passage continues only a short way: for having passed through it, the harbour opens wide, and vessels will have plenty of room, and may anchor in any part, in from 7 to 12 fathoms, lying land-locked.

From the north head of Petty Harbour Bay to Point Spear, the course is N.E. $\frac{1}{2}$ N., distant $2\frac{1}{2}$ miles; and from Cape Lewis to Cape Spear, in nearly the same direction, 6 miles; between are Barren Bay and Spear Harbour. Barren Bay is a little to the northward of the northern part of Petty Harbour Bay, and affords no shelter; but Spear Harbour, which lies to the southward of Point Spear, is a very excellent harbour. In coming from the northward, and making Point Spear, you will open two islands, in the bottom of a small bay; the best passage into Spear Harbour is between these islands; keep the northern islands close on board, there being 4 fathoms alongside of it, and after you get about a cable's length within the islands, steer for the middle of the harbour, and anchor in 7 or 8 fathoms; there is good room to moor. Small vessels may go on either side of the islands, the least water being 2 fathoms: but you ought to observe, that in coming from the southward, you will only be able to distinguish one island, for the northernmost islands will be shut in with the land, so as not to be seen until you get within the heads.

SOPHIA, CHARLOTTE, AND MECKLENBURGH HARBOURS.—From Point Spear to the entrance of these three harbours, the course is N.W. by N., about 3 miles; between are several small but high islands, lying within $\frac{1}{2}$ a mile of the shore; these are commonly called Spear Islands; they are bold-to, and there are channels between them with 20 fathoms water. N.E. by E. $\frac{1}{2}$ E. from the southern head of the entrance to the three harbours, lie two small islands, close together, and therefore named the Double Island; these appear to be as high as they are broad. About a cable's length to the eastward of these islands, are *two sunken rocks*, over which the sea, in bad weather, constantly breaks. Nearly in the middle of the entrance, also, lie two islands, being so close to each other as to seem one island; these are steep-to, and ships may pass on either side of them, in 12, 13, and 14 fathoms, anchoring within them, in Queen's Road, in 16 fathoms; but to the southward of these islands you will find the widest passage, and most room for ships to work out.

Sophia Harbour.—The first and southernmost of these three harbours is Sophia Harbour, running in S.S.W., about $1\frac{1}{2}$ mile, with from 10 to 15 fathoms water; it then trends away, round a low point to the eastward, and becomes a mile broad; it is thence shoal water, and only fit for small vessels.

Port Charlotte is the middle harbour, and fit for any ship; there is a low flat island on the starboard side of its entrance, from which runs a *reef of rocks* $\frac{1}{2}$ of the channel over; to avoid this, keep the southern side on board: you will then have 9 fathoms close to the shore, until you get $\frac{1}{2}$ of a mile within the harbour; you may then anchor in any part, in from 12 to 17 fathoms, only giving the starboard side a berth, to avoid a *reef* that lies on that side.

Mecklenburgh Harbour is the northernmost of the three harbours, and turns in N.N.W. $\frac{1}{2}$ N. and N.W. by N., about 2 miles; in the lower part of this harbour there are 20 fathoms; but as you advance the water lessens, and in the upper part there is no more than 12 fathoms for ships to moor in. To sail up to the head of the bay, you must keep the port side nearest, in order to avoid the *ledge of rocks* that lies on the starboard, about 30 fathoms from the shore. These rocks lie within the narrowest part of the harbour, and above the low point on the starboard side; the best anchorage is at the head of the harbour.

ST. FRANCIS HARBOUR.—From Point Spear to Cape Francis, the course and distance are nearly north, 6 miles, and from the islands at the entrance of the three harbours to Cape St. Francis, N.E. $\frac{1}{2}$ N., about 5 miles; between them, and nearly $\frac{1}{2}$ a mile

to the westward of the cape, is St. Francis Harbour. This is a snug and secure harbour, though small, and generally filled with vessels during the fishing season, considerable fisheries being carried on in its vicinity. There are two entrances to this harbour, one being to the northward, the other to the south-westward of Pigeon Island, this island lying directly before its entrance; the south-eastern channel leads to a small but narrow inlet, called Round Harbour; every where clean ground, with 10 fathoms in the channel as you enter, and the depth gradually decreasing as you advance towards its head, where you have 5 and 3 fathoms. In entering to the south-westward for St. Francis Harbour, you should beware of, and give a berth to, the western side of Pigeon Island, for a *rocky reef* runs off it; give this a berth; proceed on N.N.E. $\frac{1}{2}$ N., and having got fairly between the two points of the harbour, you will perceive, on your starboard side, a *small white rock*, to which go not nearer than 7 fathoms, steer up north, and having passed mid-channel, or rather nearer the starboard shore, the rocks above water, which you will see on each side of you, turn westerly, and anchor in 4 or 5 fathoms. Small vessels go to Birnell's Beach, or up to the cove at the northern extremity of the harbour.

Cape St. Francis is the eastern point of an island, between which and Granby Island is a very narrow passage for boats, with 4 fathoms water within it. From this cape, in a N.N.-westerly direction, about $\frac{1}{4}$ of a mile, is Indian Point, between which and Jasper Islands south-eastern point, is an opening leading into Indian Bight and Shoal Tickle, two narrow coves, the latter being shallow, and with only 2 and $1\frac{1}{2}$ fathom water in it. To the northward of Indian Point are Hare and Fox Islands, having a narrow passage running northward between them. On crossing from Indian Bight to the channel, you will have deep water, but when you enter the passage it will shallow to 5, 4, 3, and 2 fathoms; this flat will continue for $\frac{1}{4}$ of a mile; you then deepen your water again to 5, 7, 10, and 12 fathoms. Vessels frequently anchor in this place, on the western side of Hare Island, or rounding the northern end of Fox Island, run through Pearce's Tickle into Sealing Bight.

SEALING BIGHT is a very commodious and convenient place for the fisheries. The best anchorage is on the northern part of the bay, to the westward of Jasper Island; here you may safely ride in 8, 10, or 11 fathoms, or farther in, with less water. There are several coves, situated along shore, to the northward of this anchorage, where small vessels may anchor. Fresh water can easily be obtained; but wood is scarce. The southern entrance to this place is between Indian Point and Jasper Island on one side, and Hare and Fox Island on the other; the water is deep, and there is no danger, except a *reef*, which stretches out to the south-westward from Gull Island, over which the sea breaks very high in stormy weather; it will, therefore, to avoid this reef, be always prudent to borrow close towards Indian Point, in either sailing in or out of Sealing Bight. Merchantman Harbour is about 2 miles W. $\frac{1}{2}$ S. from St. Francis Island; it is small, but has from 7 to 15 fathoms water.

FISHING SHIP HARBOUR.—From St. Francis Island to the northernmost Fishing Island, the course is N.N.E. $\frac{1}{2}$ N., distant 3 miles. The Fishing Islands are three in number; the two northern ones are connected by a beach, which, with the main, forms Fishing Ship Harbour, where vessels may ride land-locked, and secure from all winds, in from 5 to 14 fathoms water, the entrance being to the southward of the southern Fishing Island. The best passage will be between the two western islands, that entrance bearing from Hare Island N. by W. There is no danger in this channel, and vessels may sail right through it, in nearly a N. by W. direction, up to the very head of the harbour, and anchor in 12 fathoms, having good room for ships to moor. There are two other passages into this place, one to the westward from the entrance of Gilbert's River, the other to the northward of all the Fishing Islands; the latter has 7 fathoms throughout, but is so narrow that you will have some difficulty in discovering the opening.

GILBERT'S RIVER.—Between Fishing Islands and Granby Island is the northern entrance to Gilbert's River; the southern entrance is between Denbigh Island and the main, and this is much the wider of the two; there is also a channel between Denbigh and Granby Islands. The passage in has deep water every where. The course of the river is nearly N.W. by N., for about 6 miles; it then divides into two branches, one running N.W. by N., 7 or 8 miles, the other S.W. by W., about 6 miles. Both these branches are full of *rocks, small islands, and shoals*; but in the

middle the anchorage is good all the way up, from 20 to 10 fathoms. This river has also a passage out to sea, between Hare and the Fishing Islands.

CAPE ST. MICHAEL.—At 6 miles N.N.E. $\frac{1}{4}$ N. from the northermost Fishing Island, and 16 miles N.N.E. $\frac{3}{4}$ N. from Point Spear, is Cape St. Michael, high and steep, and easily known by a large bay to the northward of it; it lies in latitude $52^{\circ} 47'$ north.

OCCASIONAL HARBOUR.—About $2\frac{1}{2}$ miles to the southward of Cape Saint Michael is Occasional Harbour, easily known by the *Twins, two large rocks*, lying $\frac{3}{4}$ of a mile outside of the entrance; they are very near each other, and vessels may pass on either side of them; the entrance to the harbour is between two high lands, and runs in W. by N. for 2 miles, then N.W. by N.; both sides are steep-to, without any dangers, and having good anchorage, in from 10 to 7 fathoms, about 2 miles from the entrance. The wind between the high land sets right into or out of the harbour.

ST. MICHAEL'S BAY.—From Cape St. Michael's to Cape Bluff the course is nearly N.N.E., about $7\frac{1}{2}$ miles; and these two capes form the points of entrance to the Bay of St. Michael, which contains a vast number of islands, inlets and rivers; the largest island is named Square Island, lying at the mouth of the bay, and being $3\frac{1}{2}$ miles long and very high; its N.E. point forms a lofty round hill, and makes, in coming from the southward, like a separate island, being only joined by a narrow neck of land; the best anchorage for small vessels is on the southern side of St. Michael's Bay; to go there you should keep Cape St. Michael's shore on board, then run along the south side of the first island you meet with, which is called Long Island, till you get nearly to its western end; there you may anchor, in from 12 to 20 fathoms, land-locked, and can work out to sea again on either side of the island. From Cape St. Michael to the entrance of Square Island Harbour, the course is N.N.W., $3\frac{1}{2}$ miles; at the entrance lies a small island of moderate height; to the westward of which is the best passage into the harbour, there being only 2 fathoms in that to the eastward of it. About a league N.N.W. from Square Island Round Hill, is the entrance to Deadman's Harbour, which is formed by a number of little islands, and fit only for vessels of small dimensions. There is a passage between these islands and Cape Bluff, by which vessels may put out to sea.

Cape Bluff is very high land, rugged at top, and steep toward the sea; it may be seen 15 or 16 leagues. Cape Bluff Harbour is a small place, and unfit for large vessels; to sail into it you should keep the cape on board until you reach a small island, which you should pass to the eastward, and then anchor. The several bays and inlets in St. Michael's Bay are well stored with wood.

From Cape Bluff to Barren Island, the course is north-eastward, about a league; and from the south point of Barren Island to Snug Harbour, N.W. by W., $1\frac{1}{4}$ mile. Snug is a small harbour, but in it is very good anchorage, in 26 fathoms, and no danger to be apprehended either in sailing in or out of it. About a mile to the northward of Barren is Stony Island; and within these islands on the main are Martin and Otter Bays; in the northernmost is good anchorage, and no invisible danger in entering. Wood and water are plentiful.

DUCK HARBOUR lies on the western side of Stony Island, and is a very convenient place for small vessels; large ships may also anchor between the west point of Stony and Double Islands, in from 20 to 24 fathoms, sailing from thence to seaward on either side of Stony Island in great safety.

HAWKE BAY.—About a mile to the northward of Stony Island lies Hawke Island, within which is Hawke Bay, running in westerly 2 leagues; it then divides into two branches, one going W. by S., 6 miles, the other N. by W., 5 miles; the shores of these are well supplied with wood. After you get within Pigeon Island the anchorage is good up to the very head of both branches.

EAGLE COVE lies on the south side of Hawke Island; this place affords good riding for large ships in 30 and 40 fathoms water, and also for smaller vessels in 7 and 8 fathoms at the upper end of the bay.

CAPLIN BAY.—On the main, within Hawke Island, and nearly 5 miles E. by N. from Hawke Bay, is Caplin Bay, having good anchorage and plenty of wood.

PATRIDGE BAY lies $4\frac{1}{2}$ miles to the northward of Hawke Island; the anchorage is good, but the bay is difficult of access, unless to those who are well acquainted with the place, on account of the numerous small islands which encumber its entrance; but the land hereabout may be very easily known, for the southern point of the bay is a remarkable high table hill of very barren appearance, and all the land between it and St. Michael's Cape is high, while that to the northward is low.

SEAL ISLANDS.—From Cape St. Michael to the southernmost Seal Island, the course is N.E. $\frac{1}{2}$ N., distant 9 leagues, and from thence to Round Hill Island N.E., $11\frac{1}{2}$ miles; this latter island is the easternmost land on this part of the coast, and may always be recognised by a remarkable high round hill on the western part of it.

SHALLOW BAY.—From Round Hill Island to Spotted Island, the course is N.N.W. $\frac{1}{2}$ N., distant $4\frac{1}{2}$ miles; and from Spotted Island, the land turns N.N.-Westerly, and is fronted with numerous islands. From the southernmost Seal Island to White Rock, the course is N.N.E. $\frac{1}{2}$ E., about 5 miles; and from this rock to enter Shallow Bay, you must steer W. $\frac{1}{2}$ S., nearly 4 miles; there is very fair anchorage within this bay, and no danger, except a small rock which lies off a cove on the port hand, about $\frac{1}{2}$ over the bay; this rock is visible at low water, and at other times the sea breaks over it. There is little wood visible on the shores of this bay.

From White Rock to Porcupine Island the course is N.N.W., distant 2 leagues; this island is high, barren, and steep-to; vessels may pass on either side of it, to Porcupine Bay, where the riding is good, but there is little or no wood.

SANDY BAY lies on the southern part of the island of Ponds, and N. $\frac{1}{2}$ W. from White Rock, from which it is distant 5 miles; there is good anchorage in this bay, with 10 fathoms water, on a bottom of sand, and would be a very convenient resort for the fishing ships, but for the total absence of wood. Between this bay and Spotted Island, are numerous islands and rocks, both above and under water, rendering this part of the coast extremely dangerous.

SPOTTED ISLAND is high barren land, and may be recognised by several white spots on its eastern side; it is about 3 miles long, and of nearly a similar breadth; the northern part lying in latitude $53^{\circ} 25'$ north. To the westward, and inside this island, is Rocky Bay; to sail into this bay, you should run in to the northward of Spotted Island, and go between either of the islands that lie before the entrance of the bay; but there is no good anchorage in it, the bottom being so rocky, until you get between Level Point and Eagle Island, where you may ride in 8 or 10 fathoms, the ground good and clean, only taking care to give Level Point a free berth; the best anchorage will be on the western side of Eagle Island in 8 or 9 fathoms, mud. In passing between Eagle Rocks and Duck Rocks, you may borrow on either side to within $\frac{3}{4}$ of a cable's length, or you may run up and anchor on the southern side of Narrow Island in Narrow Harbour, and be handy for both wooding and watering.

From Spotted Island to Wolf Rock the course is N.N.E. $\frac{1}{2}$ N., about 18 miles; this rock is above water, and lies 10 miles from the main; there are some *sunken rocks* about it, and several islands between it and the coast. About 2 miles to the northward of the entrance to Rocky Bay is Indian Island; this is remarkable high land, particularly at the western end. Between the island and the main is tolerably good shelter for small vessels, and it appears to be a fit place for a seal fishery.

SAND HILL COVE.—This place is so called from several sand-hills lying on the southern side of its entrance; it is situated full 4 leagues to the westward of Indian Island; here the anchorage is good about $\frac{1}{2}$ a mile up from its entrance, in 4 or 3 fathoms water, sandy bottom. When you are sailing into this cove, you should take care to give the north point a good berth, because of a *ledge of rocks* which stretch off about a cable's length from the point, and run westward along shore the length of 2 cables.

TABLE BAY.—The southern head of this bay lies about 2 leagues N. by W. from Sand Hill Cove, and may be known by a remarkable table hill on the north side of the bay, about 8 miles within the entrance; this hill may be seen from the Wolf Rock, which lies N.W. $\frac{1}{2}$ N., $7\frac{1}{2}$ leagues from the entrance of the bay. In this bay, about 4 miles from its entrance, lies Ledge Island, so called from a *ledge of rocks* stretching westerly from the island up the bay for 2 miles. On the southern side of this island is anchorage, in 12 or 14 fathoms, in what is called South Harbour; or you

can run farther up, and anchor in Table Harbour. On the north side of the bay, just within Ledge Island, lies North Harbour, having very good anchorage in it. In sailing up to Table Harbour, you should take care to keep the main land close on board, in order to avoid a *rock* that lies half-way between the ledge that runs off Ledge Island and the main.

THE GANNETS are a cluster of islands, lying from 7 to 11 miles off the main land; the outermost island bears from Wolf Rock N.N.W. $\frac{3}{4}$ W., distant 10 leagues.

CURLEW HARBOUR lies nearly S.W. of the Gannet Islands, on the main, and may be distinguished by a green round island, lying before its entrance; the channel into the harbour is between this island and a low point to the southward, having a *small rock* above water close to the point. There is no danger in sailing into this place; the best anchorage will be about a mile within its entrance; here large ships may ride in safety, bringing the small rock off the entrance point, on with the northern point of Long Island; they will then ride in 14 or 15 fathoms water, good holding ground. Long Island lies about $1\frac{1}{2}$ mile N. by W. from Green Island. Small vessels run higher up the bay, and generally anchor in from 10 to 7 fathoms. On the southern side of the harbour is a *shoal*, lying at a small distance from the shore. Wood is scarce in this bay, but water is plentiful.

ISTHMUS BAY.—This bay lies round the western point of Curlew Harbour; sailing from whence, you should endeavour to keep Great Island on board, in order that you may go clear of a *shoal* that stretches off the point towards the island. There is also another passage into Isthmus Bay, between the western point and a small bare *rock*, of moderate height, that lies off the south point of the Great Island; this channel is narrow, and has a depth of 3 fathoms within it. Both wood and water may be obtained here.

HARE HARBOUR.—At a league to the westward is Hare Harbour, fit only for small craft, the bottom being foul, except towards the head, where you may anchor in $3\frac{1}{2}$ fathoms water, the ground tolerably good. Hare Island, which lies before the entrance to the harbour, is high land. The eastern point of Huntingdon Island lies about 2 miles to the northward of Hare Island, and W.S.W. $\frac{3}{4}$ W., about 13 miles from Gannet Island; it is moderately high, and in length, from east to west, 7 miles; off its eastern point are some small islets, named Sadler's and Leveret's Islands, and a little to the northward of the latter is a *rocky flat*; these lie $1\frac{1}{2}$ mile off the extreme point of Huntingdon Island. There is a safe passage above a mile wide, along the southern side of Huntingdon Island, which leads into Huntingdon Harbour, opposite which you may ride safely in from 5 to 13 fathoms water; farther in towards the island it shallows, but the best anchorage is behind Egg Island, in 6 fathoms, near that island; here you will be secure from all winds, and ride very convenient for both wooding and watering, there being abundance of both on this island.

SANDWICH BAY, called by the natives *Netsbuctohe*.—On the south-western side of Huntingdon Island are Earl and Diver Islands, on either side of which is a passage into Sandwich Bay; but the channel between Diver Island and Earl Island, called Diver's Tickle, is very narrow, and has in some places not more than 6 feet water, while that between Diver and Huntingdon Islands is over a sandy flat of 9, 12, and 18 feet water, and consequently not to be attempted by large vessels. To the eastward is Cartwright's Harbour, leading to Favorite's Tickle, and thence to Sandwich Bay; this has deeper water, and by keeping the southern land well open of Earl's Island, you will go through it, until you reach the Narrows, when the two points forming the Narrows must be brought on with each other, and this will lead between the eastern small island and the main, in 4, 7, and 9 fathoms; between the Narrows is 18 fathoms. Sandwich Bay is a very fine harbour, 6 or 8 miles broad, and 6 leagues deep, with plenty of wood and water, and four rivers running into it, abounding with salmon. There is very good riding in a cove on the eastern side of the bay, and also on the northern side under a mountain; from the shore, at the foot of the mountain, and 5 miles to the westward, the soundings stretch gradually off the shore, from 5 to 25 fathoms, muddy ground, and extend full 3 miles from the land. The passage into the bay, on the western side of Huntingdon and Earl Islands, is the widest and best channel; for that to the southward we have just shown to be narrow, shallow, and inconvenient. To enter to the northward of Huntingdon Island, you must beware of the *flats* which lie a little to the northward of Leveret's Island; there

is deep water at the entrance, and you will see the island of Plantation to the northward, a little to the westward of which is Henrietta's Island; between these two is Independent Harbour, a snug retreat, running in north, and having every convenience for the fisheries. Directly before this harbour, and in the fairway of the channel to Sandwich, are the Double Islands; in entering you will leave Wedge Island and Bellows Rock to the northward, and Gull Island to the southward, and pass on either side of the Double Islands; your course then will be N.W. by W., $4\frac{1}{2}$ miles; having got beyond the N.W. point of Huntingdon Island, you will perceive Entrance Island lying midway between the point and opposite shore; the channel now bends to the south-westward, and is bounded by the North River Flats, and to the southward by Huntingdon Flats, the deep water passage being about a mile broad; you may sail in on either side of Entrance Island; proceed W. by S. towards Main Tickle Point, from off which point a spit extends E.N.E., $1\frac{1}{2}$ mile, contracting the channel, and making the navigable passage very narrow for large ships to enter: on the starboard side are the two Brenton Islands, situated in Table Hill Cove; when you get these open of each other, a line passing directly between them, or when the North Brenton opens its own length to the eastward of the southern one, you will clear the spit in $4\frac{1}{2}$ fathoms; when these islands come on with each other, you will pass over the spit in 2 fathoms water: the cross mark is Green and Leading Mark Islands in one: these lead on to the centre of the spit, and are two islands situated on Huntingdon Flats; the leading-mark to go through the Main Tickle Passage is Leading Mark Island on Old Man's Head; this will carry you clear of the shoals on both sides in from 6 to 14 fathoms, right into Sandwich Bay: to sail out of the bay bring the hollow part of Leading Mark Island in one with the gap of Old Man's Head, until you are within 3 cables' length of the former; then give the island a berth of equal distance in passing, and steer direct for Entrance Island.

FROM CHATEAUX BAY TO CAPE WHITTLE, AT THE ENTRANCE OF THE GULF OF ST. LAWRENCE.

Variation allowed 34 to 28 degrees.

FROM York Point, the southern entrance of Chateaux Bay, to Wreck Bay, the course is W. $\frac{1}{2}$ S., $10\frac{1}{2}$ miles; the coast is straight and bold, but affords no shelter. Barge Bay lies W. by S., about 5 miles from Wreck Bay, and affords no anchorage. Greenish Bay lies about $5\frac{1}{2}$ miles W. by N. from Barge Bay; this bay is 2 miles wide at the entrance, and 2 miles deep; but it is open to the S.E., and the ground not good for holding, although it is occasionally used by small vessels. The *Sunk Ledge* is a cluster of rocks, awash at low water, lying S.E. $\frac{1}{2}$ E., about $\frac{1}{2}$ a mile from the Twin Islands, which are close to the east point of Red Bay.

RED BAY.—This is an excellent harbour, and may always be known by Saddle Island, which lies at its entrance; this island rises up at each end, and sinks down in the middle, somewhat similar to a saddle; there is also a remarkable round hill on the western side of the bay, and opposite to the west end of Saddle Island, which will tend to point out the harbour; the land on the west side of the bay is high, the eastern side rather low, and the head of the bay is high and woody. To the westward of Saddle Island, at the distance of $\frac{3}{4}$ of a mile, is West Bay, $\frac{3}{4}$ of a mile deep and $\frac{1}{2}$ of a mile wide, where there is anchorage with westerly winds in 10 or 12 fathoms water, but it is open to easterly winds. The outer harbour of Red Bay is between Saddle Island and Harbour Island, at the entrance of the Inner Harbour, and the depth is from 6 to 9 fathoms. Immediately to the N.E. of this anchorage is the entrance of the Inner Harbour, which is between Harbour Island and the main to the eastward; it is 100 fathoms wide, but shoal on either side, narrowing the deep water channel of 7 fathoms, to about 50 fathoms in breadth. Within, there is a capacious basin 16 or 17 fathoms deep, muddy bottom, where any number of vessels may safely winter. It is easily entered with a leading wind, but there is not sufficient room for a large vessel to beat in. There is no entrance to the eastward of Saddle Island, except for boats.

At $3\frac{1}{2}$ miles W. by S. from Red Bay, lies Carrol Cove, very small, and only used by a few fishermen. Two small islands lie near the eastern point of Black Bay, called

Little Modeste Islands. A *dangerous rock*, awash at low water, lies S.E. by S., $\frac{1}{2}$ a mile from the west end of the westernmost isle; this rock must be carefully avoided.

BLACK BAY lies to the W.S.-westward, distant 11 miles from Saddle Island; the anchorage here is tolerably good, but too much exposed to the S.E. winds. S.W. by S. from the western point of entrance to Black Bay, distant $\frac{3}{4}$ of a mile, is Modeste Island; it is small and low, but vessels frequently run into a place within the island, called St. Modeste Bay, and anchor, but this, though occasionally used, cannot be recommended.

DIABLE BAY lies 4 miles to the westward of Black Bay, and nearly midway between is Cape Diabie; and 3 miles farther westward is Loup Bay, which may be readily known by some remarkable red cliffs, which continue full 2 miles, and form the eastern point of the bay; this is high table land, terminating with steep cliffs towards the sea. The entrance to Loup Bay is about $1\frac{1}{2}$ mile wide, the two points of the cove bearing from each other S.W. and N.E.; there is good anchorage at the head of this cove, in 10 fathoms water, $\frac{1}{4}$ of a mile off shore, with the entrance of the river N.E., and also on the S.W. side, in Schooner Cove, where small vessels may lie safely, in 7 fathoms, on a bottom of sand. At this cove is a fishing establishment and several houses.

FORTEAU BAY lies 4 miles to the westward of Loup Bay; the shore between them is rather low. Forteau Bay is about 4 miles broad, and runs in nearly 3 miles; on the western side, near the head of the bay, is good riding, in from 10 to 13 fathoms, but exposed to the southward. Off the east point of the bay is a *rock*, which appears like a shallow under sail; and on the western side of the bay is a fall of water, which, on coming from the eastward, will easily be perceptible. At the head of the bay is a fine river, abounding in salmon; this is considered the best roadstead in the strait of Belle Isle. The Jersey fishing-vessels resort here during the summer, and have a large fishing establishment on the west side of the bay, opposite to which is the best anchorage. W. by N., $7\frac{1}{2}$ miles from the western point of Forteau Bay, is Wood Island; and $1\frac{1}{2}$ mile westward of that is Greenly Island; the former of these is of moderate height, and has a good passage round it; it lies in front of Blanc Sablon Bay, where a vessel may occasionally find anchorage; but the ground is loose sand, and will not hold. The channel between Wood and Greenly Islands is good, and has 11 fathoms water in it; there is a cove on the eastern side of Greenly Island, where a fishery is sometimes carried on; there is also a passage between Greenly Island and the main, which leads to Bradore Bay and Harbour; but you should be careful to give Grand Point a good berth in passing, as a *dangerous reef* lies directly off the the point, extending nearly $\frac{1}{2}$ a mile; and rocks, above and under water, line the shore above a mile to the eastward of the reef, running off shore $\frac{1}{4}$ of a mile in some places.

The safest course from Greenly Island, by a vessel bound up the St. Lawrence, is W. by S., which will clear all danger up to the east point of Anticosti, bearing from the south point of Greenly Island south $52^{\circ} 30'$, (true,) distant 218 miles. In this part of the navigation the current through the Straits of Belle Isle should be taken into consideration, and that, in addition to the dangers on the coast, stragglings ice-bergs are frequently met with.

BRADORE BAY.—From Grand Point to Point Belle Amours, the course is about N.W., 9 miles; and Bradore Harbour lies in the N.E. corner of the bay, having Ledges Island, which is surrounded by islets and rocks, lying directly before it; southerly winds send in a heavy sea, which renders this bay very dangerous. Paroquet Island lies about $1\frac{1}{2}$ mile N. by W. $\frac{1}{2}$ W. from Grand Point; and $1\frac{1}{2}$ mile farther, in the same direction, lies the south point of Ledges Island; between these islands is the entrance to Bradore Harbour. There is no passage on the N.W. side of Ledges Island into the harbour, as it is all studded with islets and rocks. Point Jones is on the main land, nearly opposite the centre of Ledges Island; here are the houses and flagstaff. At Mr. Jones's establishment, on the eastern side of the channel, the principal dangers going in are, the *Gull Rock* and *Ledge*, which bear S.W. by W. from Jones's Point, on which the houses stand, distant 280 and 490 fathoms respectively. The rock just covers at high water, and can be seen, but the ledge is *extremely dangerous*, having 2 fathoms least water over it. On the west side of this ledge, the western ends of Paroquet and Greenly Islands are in one.

BRADORE HARBOUR.—When coming from the eastward, give Grand Point a berth of full $\frac{1}{2}$ a mile; or in hauling round to the northward, take care that the west end of Paroquet does not bear to the westward of north, for the reef is *very dangerous*, and there is no warning by the lead. You may pass the west side of Paroquet within $\frac{1}{2}$ of a mile; having passed it, haul to the eastward, until the western extreme of Greenly Island be $\frac{1}{2}$ a point open of Paroquet, bearing S. $\frac{1}{2}$ W., which will clear both rock and ledge. Then steer with this mark on N. $\frac{1}{2}$ E., until Jones's house bears E.N.E., and the N.E. island appears as the N.E. extreme of the Ledges, bearing N.E. by N.; steer now for the latter, leaving the Gull Rock to the eastward, and looking out for another *small rock* on the opposite side, after passing which the channel is clear, keeping nearer the islets than the main; when opposite Jones's houses, a run of about 700 fathoms will take you to the entrance of the harbour, when you must haul sharp round to the westward, between the islets, into the harbour: this entrance is 80 fathoms wide, and 7 fathoms deep. This harbour will only accommodate a few vessels, which will lie land-locked, in from 4 to 17 fathoms; but farther up the bay there is more room and deeper water for anchorage, the passage to which is all clear, by keeping nearer to the islets than the main.

When coming from the westward, beware of the *reefs* which extend $\frac{1}{2}$ of a mile from the S.W. end of Ledges Island. To give these a good berth, do not bring Paroquet to the southward of S.E. by E., until Jones's house bears N.E. by E.; then steer for it, until the marks come on for clearing the Gull Rock and Ledge, and proceed as before.

BELLE AMOURS HARBOUR lies on the N.W. side of Bradore Bay. This is a fine little harbour, where a great number of ships may lie land-locked, and might winter as securely as in a dock. Water may be had in the N.W. corner of the harbour, also at the head of the north cove; but wood for fuel is very scarce. Point Belle Amours forms the west, and Stony Point and flat rocks the east side of the channel leading into the harbour. Stony Point is low and green, and bears E.N.E. $\frac{1}{2}$ E., $1\frac{1}{2}$ mile, and the flat rocks (which lie S. by E., $1\frac{1}{2}$ mile from it.) E.S.E. $\frac{1}{2}$ E., $1\frac{1}{2}$ mile from Point Belle Amours. There is a *rocky patch*, of 13 feet, lying nearly midway between the flat rocks and Point Belle Amours. Westward of this are *other patches*, of $3\frac{1}{2}$ fathoms, and this is about the depth of the western passage; but in the eastern passage, between the flat rocks and 13 feet patch, are from 6 to 17 fathoms.

To enter the harbour from the eastward by the eastern passage, leave the flat rocks on the starboard side, distant $\frac{1}{2}$ of a mile, and steering in N. by W. $\frac{1}{2}$ W., you will see Harbour Point open to the westward of Stony Point right a-head, (Harbour Point is a bare granite hill, 150 feet high, with several beacons of stones upon it,) you may approach it within 100 fathoms, taking care not to approach the west side of Stony Point within a good cable's length: then steer north, until you are abreast of the rock above water off it, when you may steer a little to the westward, so as to bring Harbour Point and Pond Point in one, (the latter point is nearly opposite to Stony Point.) Keep them in one, in order to round the north extreme of the flat, and you will have 4 fathoms, until Mark Point (the extreme on the north within the harbour,) comes on with Peak Point (a remarkable rocky point in the middle bay, seen over the low land at the head of the harbour), bearing W. $\frac{1}{2}$ S.: when this mark comes on, haul sharp round to the westward, keeping a full cable's length from the high north shore, until you are well within the sandy spit; then haul to the southward, and anchor any where, in 5 to 7 fathoms, mud.

To enter the harbour by the western passage, which is best with westerly winds, keep Point Belle Amours E.N.E., northerly, and take care not to shut in Stony Point behind it, for fear of the *Middle Ledges*, which lie off the Middle Point; the outermost, with 15 feet over it, lies 600 fathoms off shore, having no passage between. Pass Point Belle Amours at the distance of 200 fathoms, and keep at that distance from the shore till past Pond Point; then haul in gradually to within a cable's length of the east side of Harbour Point, and proceed, as before directed.

From Point Belle Amours to Whale Island, the south-eastermost of the Esquimaux Islands, the course is west, 10 miles; and from Greenly Island N.W. by W. $\frac{1}{2}$ W., 18 miles; between this space on the main are several islets and harbours; the principal of which are Middle Bay, Five-Leagues Harbour, Salmon Bay, and Bonne Esperance Harbour.

MIDDLE BAY lies about 2 miles to the westward of Point Belle Amours; between which lies Middle Point, off which are the Middle Ledges. This bay is a fine open roadstead, free from all danger, more than a mile wide, and extending inland 2 miles to the N.N.E. $\frac{1}{4}$ E. In the outer part of the bay the shores, for the first mile, should not be approached within 150 fathoms; but farther in it is quite bold; in this bay are 4 to 13 fathoms, sandy bottom. Water may be obtained at Isthmus Cove, on the east side, or at the head of the bay, where there are a few small trees. There is sufficient room for the largest ships to beat in and out of this bay; it, therefore, affords a very convenient occasional stopping place for vessels, it being the only open roadstead on this part of the coast.

The *Middle Ledges* and the *Barrier Reefs*, which lie to the westward of Five-Leagues Point, are the only dangers in the way of vessels approaching Middle Bay from the east or west, there being no islands off its entrance.

Five-Leagues Harbour lies to the westward of Five-Leagues Point, and about $1\frac{1}{2}$ mile westward of Middle Point; it is a small cove, and only fit for small schooners. Salmon Islet lies W. by N., $3\frac{1}{2}$ miles from Five-Leagues Point; there are several scattered ledges lying between them; it is nearly joined to the S.E. part of Caribou Island by a *spit of sand*; shoal water extends nearly 400 fathoms south-eastward from Salmon Islet. The eastern entrance into Salmon Bay lies to the eastward of this islet and Caribou Island; but as there are only 6 feet water, it will only admit small vessels. There is plenty of water in the western passage to this deep bay, which is through Bonne Esperance Bays and round the north end of Caribou.

BONNE ESPERANCE HARBOUR lies to the westward of Caribou Island; this is a spacious, well-sheltered harbour, with sufficient water for large vessels. There are several entrances into this harbour, all having a number of islets before them. The principal entrance is from the southward, and lies E. by N., 3 miles from the south point of Whale Island.

Between the Straits of Belle Isle and Salmon Bay soundings, in moderate depths of water, extend sufficiently far off shore every where to warn a vessel of her approach to the coast at night, or in foggy weather.

Whale Island, before mentioned, lying 3 miles southward of Esquimaux Island, is about $\frac{3}{4}$ of a mile long, and $\frac{1}{4}$ of a mile broad; it is about 100 feet high, in the centre of the island, on which there is a pile of stones supporting a pile of drift-wood. All vessels bound to Bonne Esperance endeavour to make this island. From the S.W. point of the island, a *reef of rocks* runs off 300 fathoms; but off its N.E. point only 70 fathoms. There is a *ledge*, of 9 feet water, lying W. $\frac{1}{4}$ S., 350 fathoms from its S.W. point; and also *several rocks*, dry at low water, 100 fathoms off shore, on the east side of the same point.

Esquimaux River—The island of Esquimaux lies at the mouth of this river, about 3 miles northward of Whale Island; it is about 8 miles in circumference: there are numerous islands outside of it, and it cannot be distinguished from the main land, from a vessel off the coast. The eastern entrance into the bay is a very narrow channel between the east side of the island and the main, running in N.N.E., $1\frac{1}{2}$ mile, where it opens into a wide space, with two islets in it. There is a trading post on the west side, about 2 miles above the Esquimaux Island; this river abounds with salmon. There is more room and deeper water to the westward of Esquimaux Island, but it is so studded with islands, that no directions can be given to be of any service to a stranger.

The Esquimaux Islands may be said to commence off Salmon Island, and extend to the westward 14 miles; some of them are full 4 miles from the main land; they are mostly bare of trees, and are of all sizes and heights under 200 feet. Within this numerous group of islands and the main are various good bays and places of shelter; but the entrances into them are so intricate, narrow and dangerous, that no person, unless well acquainted, should attempt to navigate a vessel through them.

From Whale Island south point to the southern part of Fort Rocks, the course is W. by N., $4\frac{1}{2}$ miles; these are a number of low *rocks* extending 650 fathoms S.W. from the S.W. point of Old Fort Island. Mermot Island lies W.N.W., $1\frac{1}{2}$ mile from the Outer Fort Rock; it is low, and has a *ledge* off it, $\frac{1}{4}$ of a mile to the S.W. The entrance to Old Fort Channel lies between Mermot and Fort Rocks; being in mid-channel, the

course in, through the channel, to Old Fort Bay, is N.E. $\frac{3}{4}$ N., with very deep water all the way, at the distance of 4 miles.

To the northward of Mermot Island is the Eider Group, and to the westward of them the Dog Islands, surrounded by innumerable *rocks* and *ledges*. The outermost of these rocks lie W. by N., distant 4 miles from the outermost Fort Rock: the southwesternmost of these islands are very low, but the highest islands, though small, are of considerable elevation, and lie next the main. There is anchorage between these islands and the main; the best way to approach it is by running down with a westerly wind from Shecatia, close along the main land, within all the rocks and ledges; there is deep water all the way.

The *Porpoise Rocks* lie W.N.W. $\frac{1}{4}$ W., $3\frac{1}{2}$ miles from the Outer Dog Rocks, and about $\frac{3}{4}$ of a mile from the main. About 3 miles farther westward lies the *Boulet Rock*; this is a smooth, round, backed island, green at the top. The opening of Lobster Bay lies $1\frac{1}{2}$ mile E.N.E. from the rock; together they serve to point out the position of a vessel off the coast. The *Peril Rock*, which is the outermost and most dangerous, dries at half-tide, and lies $1\frac{1}{2}$ mile S.S.W. from the Boulet.

Rocky Bay lies a mile to the eastward of Lobster Bay; it runs in N.E. by E., $1\frac{1}{2}$ mile, between steep and high rocky shores, in the upper part of which is good anchorage. Here is a house and fish stage; this place is frequented by the fishermen. Lobster Bay runs inland, about 4 miles in a N.E. direction, between high, steep, and rocky shores; here is anchorage when about half-way up, on a muddy bottom, but it is exposed to S.W. winds. Narpatepee Bay, which lies $3\frac{1}{2}$ miles to the westward of Lobster Bay, is a straight and narrow inlet, very similar to Lobster Bay; it runs in N.E. $\frac{1}{2}$ E., about $4\frac{1}{2}$ miles. These three bays are all open to south-westerly winds, and cannot be recommended to shipping, as you can only get out of them with a northerly wind, being so narrow.

Shecatia Island lies W.N.W., $3\frac{1}{2}$ miles from Boulet Island, and near it, to the westward, lies Mistanoque Island, separated from it by an unnavigable channel; these islands lie very near to the main. Mistanoque Harbour is on the north side of the island, directly opposite the mouth of the bay. In this harbour are from 15 to 20 fathoms, muddy bottom; however, you may anchor in less water a short distance to the eastward, but the channel there is narrow, and vessels must moor in any case.

The south passage to this harbour is between Enter Island and the west shore of Mistanoque; it is the best, being 400 fathoms wide, and 40 fathoms deep, and bold-to on either side. When you arrive at the western entrance, which is 80 fathoms broad, give the N.W. point of the island a berth of about 50 fathoms; and as soon as you have entered the narrow channel, then borrow over to the island again, to avoid a *shoal* on the west side of the entrance of the bay. The eastern passage is between Shecatia and the main, and is only fit for small vessels; in the narrowest part it is only 30 fathoms wide, and 3 fathoms deep. There is nothing immediately outside of Shecatia, Mistanoque, Enter, or Divers Islands; so that no other directions seem necessary, than to run through the centre of either channels, which may be preferred. This harbour having the advantage of two entrances, renders it preferable to many harbours on this coast.

In the Bay of Mistanoque the anchorage is good up near the head; the channel is both long and narrow, running up N.E. $\frac{1}{2}$ N., about 3 miles. The island and the main land, at the entrance, has a barren appearance, and is high; but both wood and water may be obtained in the bay.

SHECATICA BAY runs close in to the westward of Mistanoque Island, and extends many miles up the country, its course bending to the northward, and having various branches and turnings, with numerous islands, capable of giving shelter to vessels of all descriptions; but these are little frequented, the passages being too narrow for strangers to attempt the navigation of.

SHAG ISLANDS AND ROCKS.—Nearly W. $\frac{3}{4}$ S., distant above $2\frac{1}{2}$ leagues from the island of Mistanoque, are the Shag Island and Rock. The island is small, high, and has a round-peaked hill in the middle, looking green. To the eastward of it are a number of *rocks* above water; the outermost, lying S.E. by E., 2 miles from the island, is the *Shag Rock*. When $\frac{3}{4}$ of a mile from the Shag Rock, the south point of Shecatia will bear E.N.E., 8 miles; running on this course will take you a mile to the southward of the *Three Rocks* lying nearly midway between them.

CUMBERLAND HARBOUR lies N. by E. $\frac{1}{2}$ E., about 3 miles from the outer Shag Rocks, and may readily be distinguished by a remarkable high hill on the main land, appearing like a castle at its summit, being a steep cliff, looking like walls; this hill lies N. by W., nearly $3\frac{1}{2}$ leagues from the entrance to the harbour. The outer islands, which form the harbour, are called the Duke and Cumberland Islands; these are moderately high, the eastern one making in two round hills. The harbour should be approached from between the Shag Rocks and the Three Rocks, which bear E.N.E. and W.S.W. of each other, distant $2\frac{1}{2}$ miles.

In entering this harbour there is no danger but what appears above water, except a *small rock*, which lies S. by W., about $\frac{1}{2}$ a mile from the western head. The entrance to the harbour is $\frac{1}{2}$ of a mile wide, and the inlet $\frac{1}{2}$ a mile long. From the eastern head you must steer for the inner point on the western side, and keep along it to the inner point, bearing N. by W. $\frac{1}{2}$ W., $\frac{3}{4}$ of a mile from the outer east point of entrance; and after you reach that point, haul over to the eastward, and anchor in from 20 to 7 fathoms, excellent ground, and room enough for any ships. This is by far the most commodious and best harbour on the coast, and also the easiest of access. Fresh water is plentiful, but for wood you must go to Shecatia Bay.

SANDY ISLAND HARBOUR is on the south side of Sandy Island, and bears N.N.W. $\frac{1}{2}$ W., about $2\frac{1}{2}$ miles from Shag Island. To sail into this, you should pass to the eastward of the Egg Rocks, which bear N.W. by W., about $1\frac{1}{2}$ mile from Shag Island, keeping the starboard point of the bay on board; you will then perceive a *small rock* above water to the northward, lying off the entrance of the harbour, which you may pass on either side, and then steer in N.N.E. $\frac{1}{2}$ E. for the harbour, there being no other danger. Here you will have room enough to moor in 5 and 6 fathoms water, with good ground and safe riding. There is no wood here, but water is plentiful.

PORT AND RIVER ST. AUGUSTINE.—The entrance to the port is to the westward of St. Augustine's Chain, and 7 miles W. $\frac{1}{2}$ S. of Shag Island. It is a very small harbour, and the passage in is intricate, but small vessels can moor in it. Here is a seal-fishing and trading post.

THE RIVER ST. AUGUSTINE is $4\frac{1}{2}$ leagues from the entrance of the square channel which is between Shag Rock and the St. Augustine Square, and lies to the N.W., having several islands lying in the passage; but the river is shallow, and only fit for boats to enter. There is a *sandy bar* across, which dries at low water. At 2 miles up it divides into two branches, one running to the northward, and the other to the north-westward, for 14 or 15 leagues. Wood and water are plentiful.

From St. Augustine's Chain to the bluff head of Great Mecattina Island, the course and distance are W. by S. $\frac{1}{2}$ S., 7 leagues. The coast is lined with islands, within and about which are many harbours. The main land, in sailing along this part, from Shecatia to Ha-Ha Bay, cannot be seen; and the adjacent islands are so high, so numerous, and near each other, that although there are navigable passages between them, yet you cannot discover their entrances, nor perceive them to be islands, until you get near, and entangled among them.

EAGLE HARBOUR.—This lies at the western end of Long Island, to the eastward of Ha-Ha Bay, and is formed by a cluster of islands, being capable of holding a great number of vessels in security; in it are from 20 to 10 fathoms water, the ground holding well: but the entrances to it are too narrow and intricate for any thing but small vessels: the deepest of the entrances has only 3 fathoms in it. The approach to this harbour is on either side of the Fox Islands, which bear N.E. $\frac{1}{2}$ N. from Treble Hill Islet, distant 9 miles.

This part of the coast is very dangerous for any vessel to fall in with in dark and foggy weather, on account of the infinite number of small low *islets* and *rocks* about it, many of the latter being under water, and to avoid which, no practical mark can be given; it will, therefore, always be advisable and prudent to keep off the coast to a considerable distance.

HA-HA BAY lies on the main, to the westward of Eagle Harbour, and has several small islands at its entrance, forming separate entrances; the best of these is that which lies between Seal Point and Round Island, leaving all the islands on the starboard side; this is a wide and safe passage, having no danger but what is visible. Ha-Ha Bay runs in to the N.E. by N., 8 miles, and has many islands at its head, on

the starboard side. Within these islands, to the eastward, are numerous anchorages, with from 9 to 20 fathoms water; vessels may also occasionally anchor all along the eastern side of the bay, in 12 and 14 fathoms, muddy bottom, but on the western side the water is too deep. N.N.E., about 2 miles from the entrance on the west side, is a high bluff head; round this head N.W. by W., $\frac{1}{2}$ a mile, is a small but safe harbour for small vessels, in which you will have 12 fathoms, good ground; this harbour is formed by an island, on either side of which there is a narrow but safe passage.

FISH HARBOUR is to the southward of Ha-Ha Bay, and N. $\frac{1}{2}$ W., $4\frac{1}{2}$ miles from the Bottle, at the north end of Great Mecattina Island, and runs in westerly; it is small, and formed by an island covered with wood. You may sail in on either side of the island; but the northern passage is considered to be the better of the two. In the bay to the southward of the island, is a *ledge of rocks*, partly visible at all times. S.S.E. $\frac{1}{2}$ E. from the Woody Island lies a *rock*, on which are only 2 feet at low water. You may anchor in the harbour at the back of this island in 7 or 8 fathoms, and have plenty of room to moor. Off the northern point of the entrance to this harbour, called Seal Point, are two little islands, and a small sandy cove, where a seal fishery is carried on; and it is also a trading post.

Between Fish Harbour and Ha-Ha Bay there is a very remarkable round high hill, making in a peak, which may serve as a land-mark to point out either of these places of anchorages.

GREAT MECATTINA ISLAND lies 2 miles off Red Point, on the main land; it is $3\frac{1}{2}$ miles long, and about 3 miles broad, being the most remarkable land at this part of the coast; it rises up in the middle to the height of about 500 feet, which is much higher than either of the ends; it is granite, and is easily distinguished from its position, being about 5 miles E.S.E. of the high land of Mecattina. Its E.N.E. point makes like a bluff head; and round this head to the northward, within a cluster of small islands, is a cove running in about a mile; in this cove vessels can safely anchor in from 14 to 20 fathoms, good ground, and may obtain both wood and water.

In entering this harbour you may pass safely on either side of the cluster of small islets lying off its mouth. If entering the south passage, keep Bluff Head on board; if by the north passage, pass between the cluster of islets and a *small rock* by itself, lying $\frac{1}{2}$ of a mile N.W. of them, and a cable's length from the Great Island.

Treble Hill Island lies 3 miles E. by S. from the centre of Great Mecattina. *Flat Rock* lies S.S.E. $\frac{1}{2}$ E., 3 miles from the south point of the island. The Murr Islands lie about S.W., $\frac{1}{2}$ miles from the same point; they are about $\frac{1}{2}$ of a mile apart, of considerable height, flat at the top, and precipitous all round; all the above islands are bold-to, and swarm with sea-fowl. The *Murr Rocks* lie $\frac{1}{2}$ a mile S.E. of the southern island; and N.E. by E. from these rocks, $\frac{1}{2}$ of a mile, lie the *Murr Ledges*, on which the sea generally breaks. The Murr Islands and Rocks are the most southerly of any on the coast.

MECATTINA HARBOUR.—This harbour is formed behind Mecattina Island on the main; it is safe but small, yet will admit vessels of burthen, there being not less than 3 fathoms at low water in either passage to it; but they must moor head and stern, there being no room to moor otherwise. This harbour lies $3\frac{1}{2}$ miles N.W. by W. $\frac{1}{2}$ W. from Round Head in Great Island, and $6\frac{1}{2}$ miles N. by W. $\frac{1}{2}$ W. from the Murr Islands; it is only 28 fathoms wide in the western entrance, and 60 or 70 fathoms wide within. It may be safely taken by small vessels in fine weather, but not in stormy weather, the entrance being so narrow; the least neglect in the steering might place the vessel on shore.

To sail in through the western passage there is no danger; but to sail in through the eastern channel you must observe the following directions:—From the eastern point of Mecattina Island steer N. by W. towards the main land, keep that close on board, until you get the western point of the island on with the point of Dead Cove; this is a small cove on the main, which lies open to the eastward; the land which forms it is very low, with some brush-wood upon it; then sail on, in that direction, until you get above a stony point, which is the north side of the said cove; or until you bring the north point of Gull Island, which is a small island lying E. by N., distant a mile from Mecattina Island, on with the E.N.E. point of Mecattina Island, you will then be within a *spit of rocks* which stretches off the island, and must haul in for Mecattina Island, in order to avoid a *ledge* which runs off from the point of Dead Cove; and when you bring the

western passage open, you may anchor in 6 or 7 fathoms water. Vessels coming from the eastward, and bound for the harbour of Mecattina, in passing to the northward of Gull Island, should be careful either to keep Gull Island or the main land on board, in order to avoid a *sunken rock* that lies near half-way between Gull Island and the main, on one part of which there is not above 3 feet water. The highest part of the land between Grand Point and Ha-Ha Bay is directly over the harbour of Mecattina.

The GRAND POINT of MECATTINA, in latitude $50^{\circ} 44' 10''$ north, and longitude $59^{\circ} 2' 30''$ west, is the extremity of a promontory, which runs out from the main land; it is low at the point, but rises inland, sloping gradually up until it becomes nearly 700 feet in height, and is the highest land on the coast between Bradore and the high land in the vicinity of Mingan; it may easily be recognized by the adjacent islands and rocks which are about it; the nearest is a *small low rock*, not far from the point. Two of these islands are much larger, and rise much higher than the others, and called the Dyke Islands; the outermost are small, low, rocky islands, lying $2\frac{1}{2}$ miles off the point; they all lie in a S.S.E. $\frac{1}{2}$ E. direction from the point.

BAY DE PORTAGE.—N.W. by N. $\frac{1}{2}$ N. from the Murr Islands, distant 2 leagues, and a mile to the westward of Mecattina Harbour, is Portage Harbour, having Mutton Island between them. The bay runs in $1\frac{1}{2}$ mile to the northward; but the deep-water anchorage only extends about 2 cables' length within the entrance, the land over which makes in a valley, each side being high: at its entrance lies an island of moderate height, which forms the harbour; you may enter on either side of this island; but the eastern passage is fit only for small vessels, there being only 2 fathoms in some parts of it at low water. The western channel is about a cable's length wide, with from 6 to 8 fathoms in it. So soon as you are within the island, haul to the eastward, and anchor off the cove; large ships must be careful to avoid *two sunken rocks*, on which are only $2\frac{1}{2}$ fathoms at low water: the northernmost of these lies from Mutton Island S. $\frac{1}{2}$ W., distant 400 fathoms. The southernmost rock bears from the Seal Rocks N.E., distant $\frac{1}{2}$ a mile; they are bold-to, and vessels may borrow within a cable's length of the Seal Rocks, but Mutton Island is quite bold. Mecattina and Portage Harbours are much frequented by schooners in the whale fishery.

The Great Island of Mecattina being the most remarkable point of land about this part, vessels frequently make it their point of departure, and shape their courses from it to other places. When without the Murr Rocks a W. by S. course, 55 miles, will take you without the rocks to off Cape Whittle; but this course will take you very near to St. Mary's Reefs. From the Murr Islands to Wood Island, near Grand Point, at the entrance of the Straits of Belle Isle, the course is E. $\frac{1}{2}$ N., 75 miles; continuing on the east course 60 miles farther, brings you to the eastern entrance of the straits. Variation 3 points west.

LITTLE MECATTINA ISLAND, which is $7\frac{1}{2}$ miles long, in a N.N.E. direction, and 3 miles wide, lies W.S.W. $\frac{1}{2}$ W., 15 miles from Cape Mecattina; between them is a large bay, studded with numerous islands and *rocks*, which should have a good berth given to them. This island is nearly cut into two parts by Sallaberry Bay, on the west side. The northern part of the island is low, and composed of moss and sand, and is joined to the southern part by a very narrow isthmus. The southern part of the island is high, being 500 to 600 feet above the level of the sea.

Little Mecattina River is large, and about $2\frac{1}{2}$ miles N.N.W. of the north part of the island; it has a fall of 30 feet over granite. Between the island and the main there is no channel for vessels.

HARE HARBOUR.—This harbour lies on the east side of Little Mecattina Island; it has room and depth enough for large ships; but there are several *rocks* and *ledges* in it, which make it difficult to strangers: although it is open to the southward, it is a very secure harbour.

To enter this harbour from the eastward, pass to the southward of the *Fin, Scale*, and *Single Rocks*, giving them a berth of about $\frac{1}{2}$ a mile. The Single Rock is just awash, and has *three sunken rocks* near it, and should not be approached nearer than $\frac{1}{2}$ of a mile, as the sunken rocks are 150 fathoms from it. There is nothing in the way to the westward of the line from Single Rock to the Eden Islands, excepting the *Cat Rocks*, above water, and *Staff Islet* and its *ledges*. When abreast of the Single Rock, haul round to the north-westward, by degrees, and when you are $\frac{1}{2}$ a mile to the west-

ward of the rock, the entrance of the harbour will bear N.N.W., with nothing in your way, and you may steer directly for it.

In coming from the westward, steer N.N.E. $\frac{1}{2}$ E., passing Point Antrobus, the eastern point of Little Mecattina Island, at the distance of $\frac{1}{2}$ of a mile; continue on N.N.E. $\frac{1}{2}$ E., leaving the Cat Rocks and Staff Islet and ledges on your port hand, coming no nearer the latter than $\frac{1}{4}$ of a mile; and, when abeam, you will see the entrance of the harbour bearing N. $\frac{3}{4}$ W., distant a mile: it cannot be mistaken, because there is no other channel through which you can see clear into the harbour. The entrance, 170 fathoms wide, and 20 fathoms deep, is between Daly and Price Islands; or, from the former position abreast of Staff Islet, continue on N.N.E. $\frac{1}{2}$ E., 300 fathoms farther, till the entrance bears N.N.W., then haul directly in for it, leaving Eden and Price's Island on your right, and Daly Island on your left, or westward is quite bold.

About 170 fathoms within the entrance, on the east side, is the *Watch Rock*, above water, and farther in, the *Bold Rock*, a very *small islet*. On the west side lies *Safe Rock*, bearing N. $\frac{1}{2}$ W., 200 fathoms from the east side of Daly Island; it is above water, and very small, but bold-to; midway between Safe Rock and Bold Rock lies *Rag Ledge*: it just dries at low water; this latter is the principal danger, but it can be always seen from aloft, and has a clear passage on either side, a full cable's length wide; when within this ledge you may choose your anchorage by the lead, as there are some *rocky patches*, of 4 to 6 fathoms, to be avoided; the bottom is generally mud, with from 14 to 9 fathoms. In running farther up the harbour you should keep more than half-way over from the islands on the eastern side, towards the west, to avoid the *Foul Rock*, of only 2 fathoms; it bears north, 600 fathoms, from Price Island. There is anchorage, nearly $\frac{1}{2}$ a mile farther up than this ledge, to the eastward of Cluster Point; this is the most secure berth in the harbour.

Nearly all the harbours on the coast of Labrador have numerous rocks and islets before their entrances; therefore a good chart, with plans of the harbours, on a large scale, would be much better to a stranger than any written directions that could be given.

Cape Mackinnon is the south point of Little Mecattina Island, and lies W. by S., 3 miles from Point Antrobus. *Spray Reef* is small, and just awash at low water; it lies W.N.W. $\frac{3}{4}$ W., $1\frac{1}{2}$ mile from Cape Mackinnon. This reef lies nearly in the centre of Aylmer Sound, and has deep water all round it. There is no good anchorage in Aylmer Sound, until you are to the northward of the Doyle Islands. Lou Road lies within, or to the N.E. of the Doyle Islands, between them and Luisa Harbour; this is a fine open roadstead, in which vessels may anchor, in from 12 to 4 fathoms, over a muddy bottom. It is sheltered by the Doyle Islands to the S.W., and the passage in is close to the eastward of the islands; the only danger in the way is Spray Reef, before mentioned, and some *ledges* lying to the eastward of the eastern Doyle Island, near the mouth of Salaberry Bay.

Harrington Islands form the S.W. side of Aylmer Sound, of which Cape Airy is the southern point, and lies 5 miles S. by S. from Cape Mackinnon. *Black Reef* lies off Cape Airy, from which it bears S. by W. $\frac{1}{2}$ W., 2 miles, composed of *low black rocks*, above water, about 150 fathoms in diameter. *Major Reef*, which is awash at low water, bears W. by N., $1\frac{1}{2}$ mile from Cape Airy; in the same line of bearing, and $4\frac{1}{2}$ miles from the cape, are the Natagamu Islands; they are small, with a remarkable mound on the largest of them. Natagamu River lies $1\frac{1}{2}$ mile N. by W. from the islands; it is a large stream, with deep water at the narrow entrance, which continues up to the falls; these descend perpendicularly 50 feet, on either side of an island, and are N.E. by E., $1\frac{1}{2}$ mile from the entrance, and can partly be seen from the sea.

St. Mary's Islands lie W.S.W., 10 miles from Cape Airy, and 7 miles off the main land; they are of bare steep granite, bold all round, and are about 200 feet above the sea. Cliff Islands lie about $\frac{1}{2}$ a mile to the westward; and a little farther, in the same direction, lie the Boat Islands, about $2\frac{1}{2}$ miles W. $\frac{1}{2}$ N. from St. Mary's.

St. Mary's Reefs, the most dangerous off this part of the coast, are *four ledges*, under water, on some of which the sea breaks, and extend about a mile; they lie about 6 miles W.S.W. $\frac{1}{4}$ W. from the S.W. end of St. Mary's Islands. The *Tender's Reef* is small, and is awash at low water; it bears N. by W. $\frac{1}{2}$ W., near a mile from the northernmost St. Mary's Rock. The S.W. Islands lie about $1\frac{1}{2}$ mile north-westward

of the Tender's Reef; they are a group of small islands, the westernmost of which is high and round. There is a clear passage between the Tender's Reef and S.W. Islands; and also between the Boat Islands and St. Mary's Reef.

WATAGHEISTIC ISLAND AND SOUND.—The island is hilly, and lies near the main, within, and to the northward of St. Mary's, Cliff, and Boat Islands; it is about 3 miles long, by $1\frac{1}{2}$ mile broad, and lies in the mouth of a large bay, so as to form a large sound within it, in which there are several good anchoring places; but these will be very difficult for a stranger to make out, as they cannot be reached passing through 7 miles of dangerous navigation; they should not be attempted but under absolute necessity. The eastern entrance, between Watagheistic Island and the main, is narrow and intricate; but the western entrance is $\frac{1}{2}$ mile wide, and it may be passed through with proper care, though there are several ledges and rocks in it; but outside of either of the entrances there is no good anchorage.

Cove Island lies to the eastward of Watagheistic, and 4 miles N.N.W. from the north point of St. Mary's Island; and there are rocks, both above and under water, thickly scattered all the way to the Netagamu Islands.

Etamamu River enters a bay 4 miles N.E. of the eastern entrance of Wapitagun; the bay is full of islands and rocks; near the mouth of the river there is a trading post and a salmon fishery.

South Maker's Ledge is a small rock, which is never entirely covered when the sea is smooth; it bears west, 9 miles from St. Mary's Rocks, and S.E. $\frac{1}{4}$ E., $6\frac{1}{2}$ miles from Cape Whittle; but the *Cormorant Rocks* lie directly between them, leaving a channel between the rocks and the ledge nearly $2\frac{3}{4}$ miles wide; the soundings between them are very irregular. This is the most dangerous ledge in this part of the coast.

Mistassina Stone is a very remarkable block of granite; it resembles a mortar when seen from the S.W., and has been called the *Gun* by the fishermen. It serves as an excellent guide to the eastern entrance of Wapitagun, which is $\frac{2}{3}$ of a mile to the eastward of it, and N. by E., $3\frac{1}{2}$ miles from South Maker's Ledge.

WAPITAGUN HARBOUR lies between Wapitagun Island and the Outer Islands; the latter are so close together that they appear like one island from the sea, but they completely shelter the harbour, which is a long narrow channel, running east and west between them. There is no difficulty in making this harbour, for South Maker's Ledge lies directly opposite, and Lake Island is immediately to the westward of it, which is remarkable for its precipices of red granite, 100 feet high. These red cliffs are higher than any other near; but they are stained white in places by the cormorants. From Cape Whittle, the western point of Lake Island, the western entrance of the harbour bears E.S.E. $\frac{1}{2}$ E., 3 miles; N.N.W. $\frac{1}{2}$ W., 4 miles from South Maker's Ledge; N. $\frac{1}{2}$ E., nearly a mile from Slime Rock, the north-easternmost Cormorant Rock; and 2 miles westward of Mistassina Stone. This entrance is about 80 fathoms wide; but there are parts of the channel, within the eastern entrance, not more than 60 fathoms wide; and the harbour itself is narrow, and only fit for small handy vessels of 150 or 200 tons.

This harbour is secure from all winds, and sufficiently large and deep for vessels of any size, when once they are in; but both the eastern and western entrances are so extremely narrow between the islands; and it is necessary to turn round short at right angles, when coming in by the western entrance, which is the one generally used, because the westerly winds are the only clear winds, and it is only in clear weather that a vessel can venture near such a place. Great promptness and attention in the management of the sails of a vessel are necessary in entering such narrow and intricate channels.

The flood-tide from the eastward and ebb from the westward run past the entrances of Wapitagun, at a rate varying from $\frac{1}{2}$ to 1 knot; but the streams are much influenced by the winds. High water, full and change, at 10h. 30m.; springs rise about 5 feet, neaps 3 feet.

CAPE WHITTLE is in latitude $54^{\circ} 10' 45''$ north, and longitude $60^{\circ} 10'$ west. Water may be had on Wapitagun and Lake Islands; but for wood you must go to the main land.

REMARKS.—The land from the Grand Point of Mecattina to Cape Whittle is skirted by many islands and rocks, some of which are 7 and 8 miles from the shore; therefore, in coasting along, the land should always have a wide berth given it, as it is as dan-

gerous as can be imagined to a stranger falling in with it in the night, or in thick weather. It is seldom visited, and only by a few Quebec trading-schooners, fishermen, and eggers.* All the islands along the coast of Labrador have a barren appearance, the outer ones being for the most part small, low, rocky islets, and the inner ones large and high, covered with a sort of green moss. The depth of water near the outer islands is often very great, being 70 or 80 fathoms, so that there is no warning by the lead. From the quantity of wreck found among these islands, no doubt many melancholy shipwrecks have taken place, which have never been heard of; even if the unfortunate crews landed on these barren rocks, they would perish by cold and hunger. The course of the tides flowing along the coast are irregular, depending much on the prevailing winds, after settled weather; spring-tides will rise 6 or 7 feet, neaps about 4 feet.

Magnetic Bearings and Distances, in Nautical Miles, from place to place on the different Coasts of the Island of Newfoundland.

EAST COAST—FROM CAPE RACE TO CAPE NORMAN.

Variation 25° to 34° West.

	BEARINGS.	MILES.
From Cape Race to the Virgin Rocks	S.E. by E.....	87
" Cape Ballard	N.E. $\frac{1}{2}$ E.....	8
Cape Ballard to Cape Broyle.....	N.E. $\frac{1}{4}$ N.....	19
" Cape Spear	N.E. $\frac{1}{4}$ N.....	47
Cape Spear to South Head	N. by E. $\frac{1}{4}$ E.....	11
South Head to Cape St. Francis	N. $\frac{1}{4}$ W.....	8
Cape St. Francis to Harbour Grace.....	W. $\frac{1}{2}$ N.....	16
" north end of Belle Isle	S.W. $\frac{1}{4}$ W.....	11
" Bacalhao Island	N.N.E.....	16
Bacalhao N.E. end to Breakheart Point	N.W. by W.....	5
Breakheart Point to Random Sound entrance	W. by N. $\frac{1}{4}$ N.....	27
" Trinity Harbour	N.N.W. $\frac{1}{2}$ W.....	20
" Catalina Head	N. by W. $\frac{1}{4}$ W.....	23
Catalina Head to Cape Bonavista.....	N. $\frac{1}{4}$ E.....	11
Cape Bonavista to Barrow Harbour.....	W.N.W. $\frac{1}{4}$ W.....	20
" Young Harry Rocks	N.N.E. $\frac{1}{4}$ E.....	5
" Stink Islands	N. $\frac{1}{2}$ E.....	29
" Cape Freels.....	N. $\frac{1}{4}$ E.....	36

* The "Egging Business."—It is reported that in some seasons full 20 small schooners, or shallops, from 20 to 30 tons, load with eggs from this coast. Halifax is the great market for them, where they at times fetch a much higher price than hen's eggs. They are also taken to Boston and other places; and are stowed in the hold in bulk.

These men (the eggers) combine together, and form a strong company. They suffer no one to interfere with their business, driving away the fishermen, or any one else that attempts to collect eggs near where they happen to be. Might makes right with them, if our information be true. They have arms, and are said by the fishermen not to be scrupulous in the use of them. As soon as they have filled one vessel with eggs, they send her to market; others follow in succession, so that the market is always supplied, but never over-stocked. One vessel of 25 tons, is said to have cleared £200 by this "egging business" in a favourable season.—*Nautical Magazine*, vol. xvii., p. 667.

Magnetic Bearings and Distances.

	BEARINGS.	MILES.
From Cape Freels to Funk Island	N.E. $\frac{1}{2}$ E.	30
" Offer Wadhum E. Grund.....	N. $\frac{1}{4}$ E.	21
" Snap Rock	N. by E. $\frac{1}{2}$ E.	40
" Cape Fogo	N. by W.	31
Cape Fogo to Funk Island	E.S.E.	31
" Snap Rock	N.E. by E. $\frac{1}{2}$ E.	18
" Barrack Rock	N.N.E. $\frac{1}{2}$ E.	8
Fogo Island west end to Tolinguet Harbour	W.N.W.	18
Tolinguet Harbour to Cutwell Harbour	N.W. by W. $\frac{1}{2}$ W. ...	32
" Nipper Harbour	N.W. $\frac{1}{4}$ W.	41
" Cape St. John	N.N.W.	32
Cape St. John to Partridge Island	N.W. by N.	28
" St. Barbe Island east point	N. $\frac{1}{2}$ E.	15
" south point of Bell Island	N.N.E. $\frac{1}{2}$ E.	41
Bell Island N.E. point to Grois Island.....	N. $\frac{3}{4}$ E.	7
Grois Island N.E. point to Cape Goose	N.N.E.	19
Cape Goose to Cape St. Anthony	E. by N. $\frac{1}{4}$ N.	5
Cape St. Anthony to Cape Bauld, Quirpon Island.....	N.E.	18
Cape Bauld to the south point to Belle Isle	N.E. by N.	14
" Cape Norman.....	N.W. by W.	19

SOUTH COAST—FROM CAPE RACE TO CAPE RAY.

Variation 25° to 23° West.

From Cape Race to Mistaken Point	W. $\frac{3}{4}$ N.	5
Mistaken Point to Cape Pine.....	W.N.W.	15
Cape Pine to Cape Freels	N.W. by W.	4
Cape Freels to Lance Point	N.W. by N.	20
Lance Point to Cape St. Mary	N.W. by W.	7
Cape St. Mary to Cape Chapeau Rouge	N.W. by W.	49
" Point Breen	N. by W.	9
Point Breen to Red Island, Placentia Bay	N.N.E.	24
" Gibraltar Rock.....	N.E.	16
Cape Chapeau Rouge to the south point of Pierre } Island	W. $\frac{1}{2}$ N.	34
St. Pierre, Point Seches to Cape Angeac, Petit } Miquelon.....	N.W. $\frac{3}{4}$ W.	6
Cape Angeac to Cape Ray.....	N.W.	130

WEST COAST—FROM CAPE RAY TO CAPE NORMAN.

Variation 23° to 34° West.

From Cape Ray to Cape Anguilla	N. $\frac{3}{4}$ E.	18
" St. Paul's Island	W.S.W. $\frac{3}{4}$ W.	40
" Cape North	W.S.W. $\frac{1}{2}$ W.	53
Cape Anguilla to Cape St. George	N.E. by N.	35
" Indian Head, George's Harbour	E.N.E.	51
Cape St. George to Indian Head	E.S.E. $\frac{1}{4}$ E.	30
" Red Island	N.E.	6
Red Island to Cape Gregory	E.N.E.	62
Cape Gregory to Green Point	E.N.E. $\frac{1}{4}$ E.	21

MILES.		BEARINGS.	MILES.
30	From Green Point to Cape Rich	N.E. $\frac{1}{2}$ E.	63
21	Cape Rich to Flat Island	N.E. $\frac{1}{4}$ E.	9
40	Flat Island to Point Ferrol	E.N.E.	14
31	Point Ferrol to the Flour Rocks	E.N.E.	24
31	Flour Rocks to Cape Norman	E. $\frac{1}{4}$ S.	38

COAST OF LABRADOR—CAPE SPEAR TO CAPE WHITTLE.

Variation 34° to 28° West.

41	From N.E. point of Belle Isle to Point Spear	N. $\frac{1}{2}$ E.	30
7	" " Cape St. Lewis	N. $\frac{1}{4}$ E.	24
19	" " Caribou Island	N. $\frac{1}{2}$ W.	19
5	" " Castle Island, Chateaux Bay	N.W. by W. $\frac{1}{4}$ W.	19
18	Castle Island to Point Amours	W. $\frac{1}{2}$ S.	48
14	Point Amours to Wood Island	W. by N.	11
19	Wood Island to Murr Islands, off Great Mecattina	W. $\frac{1}{2}$ S.	74
	Murr Islands to St. Mary's Ledge	W. by S.	44
	St. Mary's Ledge to South Maker's Ledge	West	9
	South Maker's Ledge to Cape Whittle Rocks	W.N.W.	8

VI.—THE GULF OF ST. LAWRENCE.

The variation from St. Paul's Island, through the gulf, on the south side of Anticosti to near Point de Monts, is 2 points westerly, decreasing gradually as you proceed up the river; at Bic about 18° 30'; at Condre Island 16°; and at Quebec 14° westerly.

On the north shores of the gulf, off Cape Whittle, 28° westerly; Mingan Islands 25° 30'; east end of Anticosti 25° 0'; Seven Islands 22° 30'; and Cape de Monts 22° west.

REMARKS.—Mariners sailing from the British Chamel for the Gulf of St. Lawrence, usually endeavour to strike soundings on the *Grand Bank of Newfoundland*, somewhere in or about the latitude of 46° or 45° 30' north, always taking care to go to the southward of the Virgin Rocks, which have already been described, page 3. When having passed the meridian of Cape Race, and reached the longitude of 53° west, a N.W. $\frac{1}{4}$ W. course will carry them clear of St. Peter's Island, and across the centre of St. Peter's Bank, and directly to the N.E. Cape of the island of Breton. This N.E. Cape of Breton and Cape Ray, the S.W. Point of Newfoundland, form the two points of entrance to the Gulf of St. Lawrence; they lie E.N.E. $\frac{1}{2}$ E. and W.S.W. $\frac{1}{2}$ W., distant 18 leagues from each other. Between them, and about 4 leagues E.N.E. from Cape North, is the little island of St. Paul, appearing with three hills upon it, and deep water all round.

Ships bound for the Gulf of St. Lawrence, after passing the island of Miquelon and St. Peter's, will do well by endeavouring to steer a middle course between Newfoundland and Breton Island, passing on either side of St. Paul's Island, as best suits their convenience; but by no means should they run beyond the parallel of 47° 30' north until they are assuredly well past Cape Ray, for the harbours on the South Coast of Newfoundland, to the westward of Fortune Island, are full of dangers, and but imperfectly known; while the whole shore is frequently enveloped in thick fogs, and the rocks cannot then be perceived before your vessel has got irrecoverably entangled among them. In this part also, shifts of winds are common; and it will often happen,

that after blowing a gale from one point of the compass, it will suddenly vary to the opposite point, and continue equally strong; thus it has been known, that while one vessel has been lying-to with a heavy gale, another, not more than 30 leagues distant, has been in another gale equally heavy, but with the wind in a direct contrary direction; this has proved fatal to many ships.

The winds within the Gulf are not so liable to such sudden changes as on the outside, or to the eastward of Breton Island.

THE ISLAND OF ST. PAUL is not dangerous, and may be easily be discovered, even when the weather is foggy, by keeping a good look-out. There are now two excellent lights on this island; that on the northern end is a fixed light, and that on the southern end revolves: both these lights may be seen 6 leagues; there is also a fog bell near to the southern light, which is tolled by machinery in thick weather. (See page 61.) The shores of the island of Breton are high; and although fogs do frequently obscure the land, yet, by proper attention, it will generally be discovered time enough to avoid danger. To persons who may unfortunately be driven too near this coast, it may be serviceable to be apprized, that a settlement is now formed at Ashpée Bay, and good anchorage is to be had behind the island, where boats can land, and water and provisions be obtained; while for the want of knowledge of such an establishment, many have been obliged to endure both hunger and fatigue unrelieved.

Having entered the Gulf, you will seldom fail to see Magdalen and Bird Islands; as you must pass them in your route to the River St. Lawrence, you had better, particularly in thick weather, go either to the eastward and northward of these, between them and Newfoundland, or to the southward and westward, between them and Prince Edward's Island, and not attempt to go between them in such weather. The weather to the southward of the Magdalens, and between them and Prince Edward's Island, is generally much clearer than to the northward; therefore, the passage that way is to be preferred, particularly after the early part of the year, for then south-westerly winds are most prevalent; and also, if necessary, clear and good anchorage is to be had at the south-eastern part of the Magdalens in Pleasant Bay, very near the shore; this is a safe place for vessels to ride in, with westerly winds, and greatly more to be recommended than to hazard the beating about in the gulf with a foul wind; the passage into it is safe.

Bearings and Distances of the principal Points and Places.

- Cape Ray to the north side of the Bird Islands, N.W. by W., 24 leagues.
- Cape Ray to the east point of Anticosti, nearly N.N.W. $\frac{1}{4}$ W., 43 leagues.
- Cape North to the N.E. end of the Magdalen Islands, N.N.W. $\frac{1}{4}$ W., 18 leagues.
- Cape North to the Bird Islands, N. $\frac{3}{4}$ W., 19 leagues.
- N.E. end of the Magdalen Islands to the Bird Islands, N.E. by E. $\frac{1}{2}$ E., 5 $\frac{1}{2}$ leagues.
- East side of St. Paul's Island to the east side of the Bird Islands, N. by W. $\frac{3}{4}$ W., 18 leagues.
- From the North Bird Island to the S.W. point of Anticosti, N.N.W., 134 miles.
- From North Bird Island to the east point of Anticosti, N. $\frac{3}{4}$ E., 80 miles.
- From Cape North to South Cape of Amherst Island, N.W. by W. $\frac{3}{4}$ W., 67 miles.
- From south point of Amherst Island to north point of Prince Edward's Island, W. by N. $\frac{1}{4}$ N., 84 miles.
- Bird Islands to the eastern end of Brian Island, W. $\frac{1}{2}$ N., 11 miles.
- Bird Islands to Cape Rosier, N.W. $\frac{1}{2}$ N., 45 leagues.
- Cape Rosier to the S.W. point of Anticosti, N.E. by E., 12 $\frac{1}{2}$ leagues.
- Cape Rosier to the west end of Anticosti, N. $\frac{3}{4}$ E., 20 leagues.

In crossing the Gulf of St. Lawrence, even during the summer months, islands of ice have frequently been met with. The ice that drifts out of the river all disappears by the latter end of May, but these masses make no part of it. The conjecture is, that they are not formed on any of the neighbouring coasts, but descend from the more northerly regions of Davis's Strait, &c., where, it is presumed, they are severed by the violence of storms, from the vast accumulations of the Arctic winter; and passing near the coast of Labrador, are drawn by the indraught of the current into the Strait of Belle Isle. They often are 100 feet in height, with a circumference of many thousands; the temperature of the atmosphere is very sensibly affected by them, which, even in

foggy weather, when they are not visible, sufficiently indicates their neighbourhood: by day, from the dazzling reflection of the sun's rays; also by moon-light, their appearance is brilliant and agreeable.

Currents at the entrance of the Gulf.—Captain Bayfield, R.N., says "It is a general received opinion, that a current sets constantly to the south-eastward out of the Gulf of St. Lawrence, between Newfoundland and Cape Breton Islands; and also that it frequently deflects to the southward towards the shores of the island last named, by another current from the northward, which is said to enter the gulf by the Straits of Belle Isle.

"I have, myself, observed that a current sets out between Cape Ray and St. Paul's Island, during westerly winds and in calm weather, but it is checked by easterly winds; and I believe it may sometimes run in a contrary direction from the same cause; northerly winds, and, perhaps, also the above-named current from the northward, may cause the stream to set to the southward towards Cape Breton Island: but the truth is, that the winds, both present and at a distance, possess so powerful and irregular an action upon the set and strength of the currents and tides in the entrance of the gulf, that I cannot say any thing certain respecting them.

"The reality of a current inward, through the Straits of Belle Isle, is confirmed by the presence of ice-bergs. After entering the gulf it runs along the Labrador Coast, at the distance of 2 or 3 miles from the outer islands, leaving a narrow space in-shore, in which the streams of the tides, when uninfluenced by the winds, are tolerably regular; passing outside Mistanoque, Grand Mecattina, and the South Maker's Ledge, it pursues a direction given to it by the trending of the coast, till it is turned gradually to the southward by the weak current which is often found coming from the westward between Anticosti and the north coast during westerly winds, and which is set off to the southward by Natashquan Point. The united streams continue their course southward at a rate diminishing as they become more widely spread, and which seldom exceeds $\frac{1}{2}$ a knot; and finally joining the main downward current, out of the St. Lawrence, they all pursue a S.E. direction towards the main entrance of the gulf, between Cape Ray and the island of St. Paul. It is this current, from the northward, which is felt by vessels crossing from off the Bird Islands towards Anticosti, and which, together with the neglecting to allow for the local attraction of the compasses, has been the principal cause of masters of vessels so often finding themselves, unexpectedly, on the south coast. Many shipwrecks have arisen from this cause near Cape Rosier, Gaspé, Mal Bay, &c."

The dense fogs met with in this gulf is one of the greatest sources of danger in its navigation; they sometimes last several days in succession; and to a vessel either running up or beating down during their continuance, there is no safe guide but a constant use of the deep-sea lead, with a chart containing correct soundings. The fogs, during easterly gales, extend high up into the atmosphere; but those dense fogs which occur in calms, or even light winds, may sometimes be seen over from the mast-head when objects from the deck cannot be seen 50 yards distant.

Winds.—The prevailing winds, during the navigable season, are either directly up or down the river; a S.E. wind in the gulf becomes E.S.E. between Anticosti and the south shore; then E.N.E. above Point de Monts; and N.E. at Green Island. A W.S.W. wind, at Bic Island, will frequently become west, W.N.W., and N.W., as you run down along the south coast. South-easterly winds almost always bring rain and fogs; while with westerly winds you generally have fine dry weather. Easterly winds prevail most in the spring; westerly winds, as the summer advances; and S.W. winds are the most prevalent during the summer months, both in the river and gulf. In October and November N.W. winds frequently blow with great violence, with heavy squalls, and with hail or snow. Late in the season the snow storms often continue a considerable time, and have occasioned many losses.

The MAGDALEN ISLANDS are a long range of islands, forming an irregular curve, lying between latitude $47^{\circ} 13'$ and $47^{\circ} 38'$ north; the greatest length, from the east point to the S.W. cape of Amherst Island, is nearly 36 miles. When first made, they appear like several hilly islands, with channels between them; but on a nearer approach, they are seen to be all connected together, with the exception of Entry Island, by a double line of sand-bars and beaches, inclosing extensive lagoons. Entry Island, when first made from the eastward, appears like a double-peaked hill, sloping somewhat abruptly down to perpendicular and high cliffs on either side. The central part

of these islands attain an elevation of 200 to 580 feet. They contain a population of about 11,000 inhabitants, chiefly French; there are a few English and Irish families amongst them. The principal dependence of the inhabitants is upon the cod fishery. Wood, for fuel, is scarce near the settlements, and large spars are not to be had. Ships may obtain small supplies of fresh provisions, especially from Entry Island; and water may be had from Amherst Harbour. The inhabitants are said to be remarkably healthy and cheerful. These islands possess no harbours for ships; but there are three fit for small vessels, named Amherst, House, and Grand Entry Harbours.

Shoals eastward of the Magdalens.—The principal dangers in approaching the Magdalens, from the eastward, are the *Doyle Reef*, *Columbine Shoals*, *Alright Reef*, and *Pearl Reef*.

The *Doyle Reef* lies S.E. $\frac{1}{2}$ E., $6\frac{1}{2}$ miles from East Point, and has only 3 fathoms on it, with 12 or 13 fathoms round it; it consists of *sharp rocks*, and, as it seldom shows, it may be considered the *worst danger* on the east side of the Magdalens. The only mark for this reef is, the north cape of the Magdalens open $\frac{3}{4}$ of its breadth to the N.E. of the north-east cape.

Columbine Rocks are a *patch of rocks*, with only 3 fathoms on them; they lie S.S.W. $\frac{1}{2}$ W., $2\frac{1}{2}$ miles from Old Harry Head. Within them, towards Coffin Island, are numerous *small shoals and patches*, on some of which are only 3 feet. This part is *dangerous* to approach at night, in foggy weather.

Alright Reef lies S. 80° E., $3\frac{1}{2}$ miles from Cape Alright, to the outer edge of the reef, which is 400 fathoms long by 300 wide; it is of white pointed rocks, having only 6 feet over them. To clear it on the S.W. side, keep the well-marked summit of Grindstone Island open to the south-westward of Cape Alright; and to clear the S.E. side of the reef, keep the east side of the woods of Wolf Island (seen over the bars,) open to the eastward of Shag Island.

Pearl Reef is a *small dangerous reef* of white-pointed rocks, having only 8 feet water over it. It bears E. by N., $4\frac{1}{2}$ miles from the N.E. part of Entry Island, and S.E. $\frac{1}{2}$ S., $8\frac{1}{2}$ miles from Cape Alright; even with a moderate swell the sea breaks heavily upon it. *Demoiselle Hill* kept more than $\frac{1}{2}$ a point open to the northward of Entry Island, will clear it to the northward.

East Point.—The East Point of the Magdalen is of low sand, with several sand-hills, which extend westerly to near the N.E. cape. A *long spit of sand*, with from 2 to 3 fathoms upon it, runs off S.E. $\frac{1}{2}$ S., $1\frac{1}{2}$ mile from the point; and the depth is only 4 to 6 fathoms, for $1\frac{1}{2}$ mile farther, in the same direction. To clear this spit, in 5 or 6 fathoms, care must be taken not to bring Old Harry to bear to the southward of west. The tides set rapidly over this spit, causing a heavy breaking sea.

Old Harry, the N.E. point of Coffin Island, lies W.S.W., $4\frac{1}{2}$ miles from East Point. Coffin Island extends 4 miles westward from Old Harry. At the S.W. end of this island, between it and the sand-bars, is the entrance to Grand Entry Harbour; it is only 50 fathoms in breadth, and should not be attempted without a pilot. The depth at low water in the entrance is 10 feet, with 13 feet at high water, springs; it is a well-sheltered and extensive harbour.

Shag Island lies W.S.W., 6 miles from the Grand Entry; and 6 miles farther is the south point of Alright Island, a very remarkable headland, a mile inward; it is 420 feet above the level of the sea. To the N.W. of Cape Alright, about $2\frac{3}{4}$ miles, is the entrance to House Harbour; it is narrow and crooked, with only 6 fathoms water in it.

Entry Island bears S. $\frac{1}{2}$ E., 7 miles from Cape Alright, and the channel into Pleasant Bay leads between them, having passed between Alright Reef and Pearl Reef. Entry Island is 480 feet above the level of the sea, and may be seen 8 or 9 leagues off, in clear weather; its red cliffs are magnificent and beautiful, rising at the N.E. point to 350 feet, and at the south point to 400 feet. The S.W. cliffs of Amherst are also steep, but of less height; and as there is no land to the southward and westward, it cannot be mistaken.

Pleasant Bay lies to the N.E. of Amherst Island; it is the best roadstead in the Magdalens, and the only one vessels can venture to lie in, with all winds, during the summer months. The best anchorage is in 4 fathoms, the rocky point off the entrance of Amherst Harbour bearing S.W. $\frac{1}{2}$ W., $\frac{3}{4}$ of a mile. Amherst Harbour is in the S.W. corner of Pleasant Bay; this harbour is the easiest of access and egress of any of the

Magdalens, with the advantage of a good roadstead before it; nevertheless, the entrance is narrow and rather crooked, with only 7 feet on the bar at low water.

Shoals and dangers on the west side of the Magdalens.—These are the *Deadman's Islet*, *White Horse*, *Pierre de Gros Cap*, and *Wolf Rocks*.

Deadman's Islet lies $7\frac{1}{2}$ miles N.W. $\frac{1}{2}$ W. from the western part of Amherst Island; it is very remarkable, standing alone, and is about 3 cables' in length, and $1\frac{1}{2}$ in breadth; about 170 feet above the sea, and has a *reef* extending from it, nearly $\frac{1}{2}$ of a mile towards Amherst Island.

The *White Horse* is a *very dangerous reef*; it lies N. 60° E., 7 miles from Deadman's Islet, and 5 miles W.N.W. from Gull Islet; it is small, only about a cable's length in diameter; it has 10 feet water in it, on which the sea often breaks.

The *Pierre de Gros Cap* is another *dangerous reef of rocks*, and has 18 feet water on it, so that the sea only breaks upon it in heavy weather; it lies N.E. by E. $\frac{1}{2}$ E., 6 miles from the nearest part of Grindstone Island. A vessel will pass clear outside of it, and also the *White Horse*, if *Deadman's Islet* be not brought to the westward of S.W. $\frac{1}{2}$ W.

The *Wolf Rocks* is a *rocky shoal*, of 3 fathoms, lying about $\frac{1}{2}$ a mile from the shore off *Wolf Island*, and 10 miles north-eastward of *Hospital Cape*.

Amherst Island, the largest and south-westernmost of the Magdalens, is 550 feet above the sea. About a mile N.W. of Amherst Harbour is a remarkable conical hill, named *Demoiselle*, which is 280 feet high, and serves as a mark for clearing *Pearl Reef* to the northward.

Grindstone Island lies to the northward of Amherst Island, and is the second in size, and elevated 550 feet above the sea; these islands are connected together by a double line of sand-bars; the northern shore of Grindstone Island is of red sand-stone cliffs, but not so high as those of Amherst Island.

Wolf Island.—From *Hospital Cape* the sand-beaches continue in a north-easterly direction, for 10 miles, to *Wolf Island*, which is about $\frac{2}{3}$ of a mile long, with low sand-stone cliffs; from *Wolf Island* the sand-beaches recommence and continue, with occasional sand-hills, 9 or 10 miles farther, to the *North Cape* in *Grosse Island*, a precipice of considerable height. The *North Cape Rocks* lie about 600 fathoms from the shore off the cape. The sandy beaches and hills continue curving to the eastward, 6 miles farther up to the *East Point*.

THE BIRD ISLANDS are small, and not far apart; they are of coarse red sand-stone, are moderately high, flat at the top, and have a white appearance; the southern one is the largest; from the east end a *small ridge of rocks* runs out; in the passage between them there is also a *rocky ledge*. The edge of the bank of soundings, on which are 55 fathoms, lies 4 leagues to the eastward of these islands. In thick weather come no nearer the east side than 40 fathoms.

BYRON ISLAND is about 4 miles long, in an E. by S. and W. by N. direction; it is only a mile broad, and uninhabited; the north side is the highest, about 200 feet above the sea; on the south side are some coves, where boats may easily land with off-shore winds. The S.W. end of the island lies N.N.E., $8\frac{1}{2}$ miles from the *North Cape*, in the Magdalens; a *reef* runs off from this end $1\frac{1}{2}$ mile. The east end bears from the *Bird Islands* W. $\frac{1}{2}$ N., 10 miles; and a *reef* runs off it $\frac{2}{3}$ of a mile to the N.E.; there is also a *reef* runs off to the southward, from the S.W. point of the island, $1\frac{1}{2}$ mile. Close to the eastward of this latter reef there is good anchorage, in 4 or 5 fathoms, or in 6 fathoms a mile from the shore. Small vessels often ride out heavy N.W. gales under this island, close to the reef.

About midway between the *Byron* and *Bird Island* there is a *rocky shoal*, said to have only 4 fathoms on it in one part, but no less than 7 have been found on it; there is also a *patch*, of 5 fathoms, lying $3\frac{1}{2}$ miles W.S.W. from *Byron Island*. In blowing weather both these patches should be avoided in large ships.

THE ISLAND of ANTICOSTI lies nearly N.W. and S.E., being 41 leagues long, and of irregular breadth; about the middle it is 9 leagues wide, but its N.W. part is not above 9 or 10 miles broad. This island has been reported to be entirely destitute of either bays or harbours calculated to afford shelter for large shipping; its soil is unpropitious, and its aspect forbidding. Anticosti divides the approach to the *River St. Lawrence* into two passages; these are called the *North* and *South Channels*: the

former is, at its narrowest part, 5 leagues broad, and the latter $12\frac{1}{2}$ leagues. The elevation is no where higher than 700 feet above the sea; the south coast is low and shelving, with reefs of flat limestone, which dry at low water; the north coast, for 70 or 80 miles to the westward of the East Point, is bold, precipitous, and of considerable elevation, some of the cliffs 400 feet high; but the remainder of the north coast is low. The only inhabitants on the island are the people in charge of the lighthouses and provision posts, and at Fox Bay.

Provision posts have been established by the Government of Lower Canada, for the relief of the crews of vessels unfortunately wrecked upon the island; for if wrecked at the close of the navigable season, their crews would perish from want, and the severity of the climate. One of these provision posts is at Ellis Bay, 2 leagues S.E. from the west end of the island; the second at the lighthouse on the S.W. Point; a third at Jupiter River or Shallop Creek; and a fourth at Heath Point.

Direction boards have been placed at different parts of the island, near the beach, in order to assist persons who may have the misfortune to be wrecked, in finding the provision posts above named. These boards are nailed to trees with their branches cut off, to render the writing visible. They were placed as follows:—1st, On the west point of the island; 2nd, 4 leagues south-eastward of Ellis Bay; 3rd, 10 leagues westward of Jupiter River; 4th, 7 leagues eastward of Jupiter River. They were formerly erected where the lighthouses now are placed.

LIGHTHOUSES.—There are now two excellent lights established on the island of Anticosti.

The S.W. Point lighthouse is built on the extremity of the point. The tower is of the usual conical form, 75 feet high. The light, which is bright, revolves every minute, and can be seen from N.N.W. round by west to S.S.E. $\frac{1}{2}$ E. The lantern is elevated 100 feet above the sea at high water, and can be seen 15 miles from the deck, and $19\frac{1}{2}$ miles at an elevation of 50 feet. To the lighthouse is attached a provision post, which forms a conspicuous land-mark.

Heath Point lighthouse is of the same form, dimensions, and colour as that on the S.W. point of the island. It shows a bright fixed light from W.N.W. to N.E. by N. The lantern is elevated 100 feet above the sea. This light is visible 5 or 6 leagues in clear weather, and was first lighted in October 1848.

EAST CAPE is in latitude $49^{\circ} 8'$ north, and longitude $61^{\circ} 32'$ west. It is a perpendicular cliff, 100 feet high. South-westward of this, distant $3\frac{1}{4}$ miles, is Heath Point, the low point on which the lighthouse stands. Between the two points is Wreck Bay, affording no anchorage.

Heath Point Reef.—This is a dangerous reef, running out 2 miles in an E.S.E. direction to 5 fathoms, all large stones; 3 miles from the point are 7 fathoms. To avoid the foul ground, come not nearer to the east side of the point than 20 fathoms; to the south-westward of the point the shoal water only extends off $\frac{3}{4}$ of a mile. A little farther to the westward is one of the best open anchorages on this side of the island. Anchor in 10 fathoms, with the lighthouse E. by N., and the Cormorant Point W.N.W., bottom sand and mud, and you will be nearly 2 miles from the shore.

During westerly winds it would be dangerous to stand in too near the east side of Heath Point, for the winds coming along the land on each side of the island, sometimes do not meet until several miles to the eastward of the point; between them you will be becalmed, and a strong current round the point might set you upon the reef.

Cormorant Point lies W. by N., 6 miles from Heath Point; and W.N.W., $16\frac{1}{2}$ miles farther, is the South Point: the coast between is low. *South Point Reef* runs off to the southward, $1\frac{1}{2}$ mile, on which the sea generally breaks. Heath Point lighthouse and Cormorant Point in one, E. by S., clears this reef full 2 miles. South Point is about 60 feet high—a sandy clay cliff.

From South Point to the lighthouse on the S.W. Point, the distance is 56 miles, and the land has much the same appearance all the way. In this space are the Jupiter River or Shallop Creek, Pavilion River, and Salt-Lake River and Bay.

Jupiter River lies 13 miles N.W. of South Point. The houses of the provision post are here. Pavilion River lies 10 miles from Jupiter River; the coast is all low, but may be approached safely by the deep-sea lead, the reefs extending no where more

than a mile off. Salt-Lake River and Bay lie 21 miles north-westward of Pavilion River; between which the coast is higher and bolder all the way to the S.W. Point than on any other part, and should, in dark, foggy weather, be approached with caution. When far enough to the westward, tack, at night, with the light bearing N.N.W. Salt-Lake Bay has fine sandy beaches, enclosing lagoons, into which the tide flows.

The S.W. POINT, on which the lighthouse stands (before described), lies 11 miles north-westward of Salt-Lake Bay. It is a low projecting point of limestone, and has a cove on its north side, forming it into a small peninsula. A reef extends from the point $\frac{3}{4}$ of a mile in a west and S.W. direction; boats can land on the south side on the beaches, as well as in the cove on the north side; a vessel may anchor, in case of necessity, to the northward of the lighthouse, in 12 or 13 fathoms, sand and gravel, the extremity of the point S.S.W. $\frac{1}{2}$ W., $\frac{3}{4}$ of a mile; but this cannot be recommended as a roadstead, only with off-shore winds. Between the S.W. Point and Ellis Bay there is no safe anchorage; and the reefs of flat limestone run off in most places a full mile, and have often 10 or 12 fathoms water close to them.

Observation River is the largest stream on the island; its entrance is $5\frac{1}{2}$ miles northward of S.W. Point, but it is mostly barred up with sand. There are some high sandy cliffs, very conspicuous, on the north side of this river. St. Mary's Cliffs lie 16 miles north-westward of Observation River; they are of sand, and not so high as the former. When in sight of the light, a vessel should tack, at night, when it bears S.S.E. $\frac{1}{2}$ E.

Beesie River is a small stream at the head of a cove, affording shelter for boats. Its entrance is 7 miles north-westward of St. Mary's Cliffs.

ELLIS BAY is the only good anchorage in the island; it runs in between Cape Eagle and Cape Henry. A reef of flat limestone runs off a mile south-westward from Cape Henry; and another reef runs off $\frac{3}{4}$ of a mile to the westward from Cape Eagle: the entrance between them is 600 fathoms, from 3 fathoms on each side. Both the reefs show themselves by a line of breakers.

In approaching this bay from the westward, run down along the reefs of Cape Henry in 10 fathoms, until the west side of the White Cliff, which is on the east side of the bay, comes on with the east side of the westernmost of two remarkable hills, back in the country, bearing N.E. $\frac{3}{4}$ N., then haul up with these marks on, which will lead you into smooth water, close under Cape Henry Reef, in $3\frac{1}{2}$ fathoms. Continue running on until Gamache House bears N. by E., then haul up for it, and anchor in 3 fathoms, muddy bottom, about $\frac{1}{2}$ a mile from the flats at the head of the bay, and 300 fathoms from those on either side.

In approaching the bay from the eastward, with an easterly wind, keep along Cape Eagle Reef, in no less than 7 fathoms, till the east side of the White Cliff comes on with the east side of the same hill, as before; then haul up till the houses bear N. by E., and proceed as before. It is high water at Cape Henry, full and change, at 1h. 43m.; spring-tides rise about 7 feet, neaps 4 feet.

Ellis Bay may be readily known by Cape Henry, which is a bluff point, and the opening to the southward shows distinctly.

WEST POINT is low and wooded, in latitude $49^{\circ} 52'$ north, and longitude $64^{\circ} 35'$ west; the reefs off the west point do not extend above a mile from shore. Between West Point and Cape Henry the reefs run off $1\frac{1}{4}$ mile; this part should be approached with caution, by keeping the lead going.

North Coast of Anticosti.—From the West Point to North Point the coast is low, with reefs running off about a mile; come no nearer this part than 25 fathoms. From North Point to High Cliff, the distance is 13 miles; it is low and wooded. High Cliff may be easily known by being the only one on the island that has not its base washed by the sea.

White North Cliff lies 26 miles south-eastward of High Cliff; this part of the coast is dangerous, for at about $\frac{1}{3}$ of the distance from High Cliff the reefs extend full 2 miles from the land, and continue so for some distance. On approaching White North Cliff they only reach about $\frac{1}{4}$ a mile from the shore. White North Cliff may be seen 6 or 7 leagues.

Charlton Point lies 10 miles south-eastward of White North Cliff; under this point vessels may anchor in fine weather, and procure wood and water.

Cape Observation lies 10 miles south-eastward of Charlton Point; this cape is a high, bold, remarkable headland. Bear Head lies 12½ miles south-eastward of Cape Observation, between which are high greyish cliffs. Bear Head is similar to Cape Observation, being 400 feet high; they may easily be distinguished by the latter being the westernmost high land; this part is bold, having 100 fathoms within 3 miles of the land. Bear Bay is the best anchorage on the north side of Anticosti; it has a moderate depth of water, and good holding ground; it is situated between Bear Head and Cape Robert, which lies 6 miles S.S.E. ½ E. from it. The best anchorage is in 13 fathoms, with Bear Head N. by W. ½ W. and Cape Robert S.E. ½ S.; both the capes are high cliffs.

Table Head lies 19 miles south-eastward of Cape Robert; the coast is broken into small bays, which afford no anchorage. Table Head is remarkable by the hill, from which it derives its name, that rises immediately from the summit of the cliffs. Fox Point lies 4 miles farther to the S.E., and is much lower than Table Head. Fox Bay is less than 2 miles southward of the point, and a mile wide, and deep; there is a stream and lake at its head. There is a house and store at the N.W. part of the head of the bay: here the *Granicus* was wrecked in November 1828, when the crew and passengers all perished for want of food before the following spring. Reef Point is the southern point of Fox Bay, from which a reef runs out 1½ mile, having only a few feet over it, with 10 fathoms close to it.

Between Fox Bay and East Cape the limestone cliffs are 100 feet high, bold, and free from danger. You may anchor at the distance of a mile from the shore, between Cape Sandtop and the East Cape, in 16 to 20 fathoms, fine sand.

This island has hitherto been considered dangerous to vessels bound to Quebec; but, with care, it will not be found so, for so soon as you can see the land, you may advance towards, and sail freely along it; by which you will always get faster to the westward with foul winds, than you can do in the offing. There can be no danger of getting embayed, and the floods are regular near the island. Mr. Lambley, in a fast-sailing schooner, frequently laid-to during the night with westerly winds, and always found himself to windward of the place in the morning; of course, ships beating in will always gain ground.

THE NORTH, OR CANADIAN CHANNEL, is bounded on the southward by the island of Anticosti, and on the northward by the main land; here, in about the longitude of 64° 23' west, is the River St. John; the land to the eastward of which, together with the adjacent islands, including Anticosti, is under the Government of Newfoundland; that to the westward of that river is under the Government of Quebec. To the eastward of St. John's River are the Mingan Islands; these are a numerous cluster of islands lying off the main, with passages between, and places of good anchorage; the westernmost is named Mingan Island, and bears from the western point of Anticosti N.E. by E. ½ E., distant 8 leagues; the Mingan settlements lie to the E.N.-Eastward of the island, distant about 7 or 8 miles. The harbour is formed between Harbour Island and the main; here vessels may ride securely in all weathers: the ground is good, and the anchorage in from 5 to 10 fathoms, with plenty of cod fish, salmon, and seals. The soil surrounding the settlement is fertile, the land level, and a profitable trade is carried on with the Indians.

THE NORTH COAST OF THE GULF OF ST. LAWRENCE.

FROM CAPE WHITTLE TO THE RIVER ST. JOHN, INCLUDING THE MINGAN ISLANDS.

REMARKS.—From Cape Whittle, the west point of Lake Island, the coast runs W.N.W., nearly 63 miles. From the cape to Kegashka River, the coast is of granite, which rises into steep hills and ridges, which are seldom higher than 200 feet; this part of the coast is studded with innumerable rocks, islets, and small islands, some of which are 5 miles from the main land; these islands, as well as the main, are bare of wood. From Kegashka to Natashquan Point, a distance of 4½ leagues, the cliffs are all sandy, covered with spruce trees, and fronted by fine sandy beaches.

This coast, when seen from the distance, is all so much alike, that it is almost impossible to distinguish one part from another; it is only when you approach within 3 or 4 miles of the outer rocks, its broken dangerous nature becomes apparent.

The outer rocks off this part of the coast are so bold, that there is no warning by the hand-lead, but there are soundings with the deep-sea lead in moderate but irregular depths off every part of the coast; these, with the assistance of the chart, and due attention to the lead, are sufficient to warn a vessel of her approach toward danger at night, or in foggy weather.

Whittle Rocks.—These are a number of rocks, above and under water, lying south-westward of the cape, the outermost of which are half-tide rocks, and are $2\frac{1}{2}$ miles from the cape, and called the Whittle Rocks.

Wolf Island lies N.W. by W. $\frac{1}{2}$ W., $6\frac{1}{2}$ miles from Cape Whittle; it may be readily known by being larger and higher than the other islands in its vicinity, being 150 feet high, and making in two hills. Wolf Bay lies between the island and the cape; it runs in 6 or 7 miles, and has sufficient water in it; but a number of rocks and ledges extend across its mouth, rendering the approaches to it very dangerous. The *Outer Islet* is small, and lies a mile S.W. of Wolf Island.

COACOACHO BAY.—Its entrance is to the westward of Wolf Island; it is the only place affording anchorage for large vessels upon this part of the coast. It is not at all difficult of entrance, although the number of islets and rocks, in every direction, make it appear so. There is an excellent harbour at the head of the bay, called the Basin, and another formed by an arm running into the bay E. by N., named Tertiary Shell Bay, which is equally safe; farther out than these harbours the bay is more than $\frac{1}{2}$ a mile wide, and quite sufficiently sheltered from the sea, for the safety of any vessel with good anchors and cables.

The entrance is formed by Outer Islet and Wolf Island to the eastward, and by the Audubon Islands and Rocks to the north-westward. There are *two small dangerous ledges* outside of the entrance, which must be carefully avoided: the first is the *South Breaker*, with only 12 feet water over it, and only shows in heavy weather; it bears W.N.W. $\frac{1}{2}$ W., 2 miles from the Outer Islet, having a clear channel between them; the second is the *S.W. Breaker*, with only 3 feet over it, and bears N.W. by N., 2 miles from the South Breaker; the channel between them is clear and deep.

To enter this bay from the south-eastward, steer so as to leave the Outer Islet and its rocks about 30 fathoms to the eastward of you. When abreast of these rocks you will see, right ahead, a chain of *low rocks* running out S.W. from Emery Island; bring the point of these rocks to bear N.E. $\frac{1}{2}$ N., when it will appear on with: the extreme point of the main land on the N.W. side of the bay; continue running on this mark, leaving several rocks, which lie 600 fathoms from the east side of Audubon, on your port hand, and passing them, haul to the northward a little, so as to leave the Emery Rocks on the starboard; their outer points lie N.N.E. $\frac{1}{2}$ E., 3 miles from the Outer Islet: when up to them, the bay is open before you, and clear of danger; the farther you go in the better the ground, and less sea with S.W. winds.

If you run into Tertiary Shell Bay, there is nothing in the way excepting a *small rock*, above water, $\frac{1}{2}$ of a mile within the entrance, which must be left on your starboard hand; it is quite bold; within you will lie land-locked, in 5 to 11 fathoms, mud. At $\frac{1}{2}$ a mile within the entrance it is only 120 fathoms wide; but it is wider farther in.

When running for the basin, keep the N.W. shore on board, leaving Tertiary Shell Bay, and rocks north of it, to the eastward, until you are within $\frac{1}{2}$ a mile of the island at the head of the bay; you must then steer over to the eastward, towards the island, to avoid a *shoal of boulder stones* extending 200 fathoms from the west side of the bay, leaving a deep channel between it and the island, 100 fathoms wide; leave the island about 50 fathoms to the eastward of you, and, as you pass through, you will deepen your water from 9 to 19 fathoms; as soon as you are past the inner end of the island, you must haul to the N.W., into the mouth of a small bay, and anchor, in 8 fathoms, mud. On the east side of the entrance of the river there is a house occupied by the fur traders.

Olomanoshebo River lies 4 leagues westward of Concoacho; this is a considerable river, falling 20 feet, over granite, into the head of a bay 4 miles deep; it is so shallow
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that boats can hardly enter at low water; the coast is studded with innumerable islands. Near the falls, on the east side, is a trading post.

Treble Islet and Loon Rock.—The latter lies 6 miles to the westward of the above river; it can always be seen, and lies 3 miles from the main land.

Wash-shecootai Bay lies 10 miles to the westward of Olomanosheebo, is 2½ miles wide, and has off its entrance several *small rocky ledges*, which makes its entrance very difficult. Up this river, on the east side, there is one of the Hudson Bay Company's trading posts. About 4½ miles farther westward is the entrance to Musquarro River, where there is another of the Hudson Bay Company's trading and fishing posts; the entrance is intricate and dangerous, and only fit for boats; it may be known by some houses on the east side of the entrance. Curlew Point is about 5 miles westward of the Musquarro River, and is the east point of Regashka Bay.

Regashka Bay lies between Curlew and Regashka Points; it is 3 miles wide, and 1½ mile deep. This is a wild place, the small islets being too far apart to afford any shelter. It is only in the N.W. corner of the bay, behind Regashka Point, that a vessel can be sheltered from southerly winds; there is room there for several small schooners, which may shelter themselves during the summer months. Wood and water may be had on the western part of the bay.

Kegashka Bay has this advantage: there are no ledges or other dangers off its entrance. At 3 miles to the westward of this bay is the Karagashka River, having falls 40 feet high; but they cannot be seen from the sea: here is another fishing station of the Hudson Bay Company; it only affords shelter for boats. At 2½ miles farther westward, fine sandy beaches, in front of sand-hills, covered with spruce trees, commence, and continue to Natashquan Point, a distance of 4½ leagues.

NATASHQUAN POINT.—This remarkable sandy point is the southernmost point on the north side of the gulf, eastward of the Seven Islands, and bears from the east point of Anticosti N.N.E., distant 57 miles; and from Natashquan Point, Collins Shoal, the outer danger off St. Genevieve Island, bears N.W. by W., 52 miles. About 1½ mile from the mouth of Long River, and 11 miles eastward of Natashquan Point, there is a *shoal*, on which the sea breaks, which has not been examined; by not going nearer the shore than 17 fathoms, you will avoid it. At 1½ mile S.W. from Natashquan Point, there is a small cod bank of 4½ fathoms; and between Musquarro and Natashquan, at from 6 to 11 miles from the land, are several *banks of sand, gravel, and shells*, of 24 to 40 fathoms, having upwards of 50 fathoms between them and the land. Abundance of cod fish are caught on these banks by the American fishing schooners.

Natashquan River, the mouth of which is about a mile wide, enters the sea between two sandy points, about 3 miles north-westward from the south extremity of the point; in the middle of the entrance is a low sandy island, having a narrow channel on each side of it; in the southern are from 9 to 11 feet at high water. Small schooners enter and lie where the Hudson Bay Company's houses are, on the south side within the entrance. It discharges a great body of water in the spring of the year, and makes the surface of the sea fresh for several miles around. They catch immense quantities of cod fish here in the early part of the spring.

Little Natashquan Harbour, lying 3½ miles N.N.E. from the river, formed by numerous *rocks* and islets, is only fit for small schooners under 100 tons. It is a convenient place for the fishing vessels,* and is resorted to principally by the Americans; its entrances are between *reefs* only 90 fathoms wide, and a pilot is necessary for those

* "They fish in boats, off the entrance of the River Natashquan, about 5 miles from the harbour. These boats are like the light whale-boats: each have one peculiar sail, something like a shoulder-of-mutton sail in shape, but having a very short gaff and a boom like a schooner's mainsail; it also runs up and down the long slender mast with hoops. There is a small block at the mast-head, which slips on and off with a strap, like that used for the head of a sprit: through this a single rope, as haulyards, leads to the stern; another single rope is attached to the boom, as a sheet. There is no other rigging. The lightness and simplicity of this rig is well suited to the employment.

"After the month of June the bait (capelins) leave this place, and, I suppose, the cod-fish follow their food. The fishermen follow the fish, and proceed more to the north-eastward, their next fishing-place being in small harbours, near Bradore Bay."—(*Bayfield's Labrador.*)—*Naut. Mag.*, vol. xvii., p. 665.

unacquainted. There are thousands of *rocks* and small granite islands along this coast, and many anchorages like this, which no chart could show the way into. With a clear sky and a smooth sea, when the bottom can be seen in 3 fathoms, with a handy, quick-working vessel, and a bright look-out, you may find your way to such places, the existence of which is always shown by crosses, or piles of stones, or drift-wood upon the islets; these are placed as guides for the fishermen. It is high water off this harbour at 11h. Spring-tides rise 5 feet, neaps 3 feet.

The coast between Natashquan Point at St. Genevieve is low near the sea, rising a short distance back into mounds and ridges, no where exceeding 400 feet in height. There is a sandy tract of coast between Agwanus and Nabesippi Rivers; the sandy tracts are always thickly wooded with spruce-trees. There are numerous coves and small bays for boats. The small bare islets are innumerable, but they do not extend above 2 miles from the main land, and should not be approached within 20 fathoms. The current along this shore from the westward seldom exceeds $\frac{1}{2}$ a knot.

Between Natashquan and Genevieve there is no safe harbour for shipping; but there are several rivers and small bays (as shown on the chart), where boats, and even small schooners, might find shelter occasionally. The Hudson's Bay Company have also two or three settlements on this part of the coast.

The MINGAN ISLANDS are a long chain of islands running nearly parallel with the coast, and lying between longitude $63^{\circ} 6'$ and $64^{\circ} 16'$ west. The general character of these islands is low, no where exceeding 300 feet in height. They possess very little soil, yet are thickly wooded on the side towards the main land; but towards the sea, barren tracts often occur. There are 29 islands in all, none of which are inhabited. Wood and water may be obtained at all the principal islands. Clearwater Point, in longitude $63^{\circ} 30'$ west, projects out to the southward so far as to divide these islands into two divisions.

Mount St. John, which is 1416 feet high, is the highest part of the main land in this neighbourhood; it lies northward of the westernmost Mingan Islands. There are other hills farther eastward, about 1000 feet in height; these are opposite Quarry Island: farther eastward the main land is low. The tides among these islands seldom exceed a knot, except in very narrow channels.

St. Genevieve Island is the easternmost of the Mingan Islands, and is about 5 miles in circumference; the N.E. point is bluff, and about 200 feet high. Mount St. Genevieve lies on the main, about $2\frac{1}{2}$ miles northward of the island; it is about 300 feet in height. In approaching this island there are *two patches of rocks* to be avoided, called the *Saints* and *Bowen Rocks*.

The *Saints* are *two low bare rocks*, lying $\frac{1}{2}$ a mile to the southward of the island, having a channel, of 5 fathoms, foul ground, between. The *Bowen Rocks* lie $\frac{1}{2}$ of a mile apart: the *N.W. Bowen* has only 3 feet on it, and lies E.S.E. $\frac{1}{2}$ E., distant $1\frac{1}{2}$ mile from the eastern Saint; the *S.E. Bowen* has 6 feet water over it, and lies $\frac{1}{2}$ of a mile S.E. $\frac{1}{2}$ S. from the N.W. Bowen. The soundings near these rocks are very irregular—from 6 fathoms, rock, to 43 fathoms, sand, sometimes in a single cast of the lead. These danbout 2 mgers lie ailes from the islands, and should be carefully avoided.

Collins Shoal is a small *patch of rocks*, having 15 feet water over them; they lie $2\frac{1}{2}$ miles south from the S.E. point of Hunting Island. The marks on this dangerous shoal are, the east point of Genevieve just open to the eastward of the western Saints N. 38° E., and the north point of Wood Island on with the south side of the Garde Rock, bearing N.W.

Hunting Island lies next westward of Genevieve; it is bordered with *rocks* on all sides, low, and thickly wooded, about 4 miles in length, and 2 miles in breadth. The *Garde Rock* lies about a mile to the southward of the centre of the island, having no safe passage between; the S.E. point of the island is likewise beset with *reefs*, lying nearly $\frac{1}{2}$ of a mile off. Off the S.W. point lie Wood Island and Gun Island; they are both low, and have *reefs* running off $\frac{1}{2}$ of a mile to the southward of them; these reefs are nearly 2 miles from the island, having no safe passages between them.

ST. GENEVIEVE HARBOUR is to the northward of the island, between it and the main. It may be safely entered either by the eastern, or Saints Channel, and is fit for the largest ships.

To enter by the Eastern Channel.—In order to clear the Bower Rocks, you should, when at least 3 miles from the island, bring the N.E. bluff point of Genevieve in one with Indian Point, which is a woody low point on the main, forming the east point of Pillage Bay, bearing N.W. by N.; continue on with these marks, leaving the Bower Rocks $\frac{1}{2}$ a mile to the westward; and when the S.E. part of Genevieve comes on with the West Saint, change your course a little to the northward, to clear a *flat shoal* which extends about 600 yards from the east side of the island. Give the N.E. point of the island a berth of a cable's length, passing close to the shingly north point of the island, and bring up, in 10 fathoms, muddy bottom, half-way between the point and Anchor Island.

To enter by the Saints Channel, you must, when at least 5 miles from Genevieve Island, bring the west points of Genevieve and Anchor Islands in one, bearing north; with this leading-mark run in, until the north side of the two Saints come in one, bearing E.S.E. $\frac{1}{2}$ E.; at the same time you will see the east sides of Mount Partridge and Hunting Island come in one, bearing N.W. by N.; steer in upon this last leading-mark, to avoid the *reef*, which runs 280 fathoms from the S.W. point of St. Genevieve, until the east side of Mount Genevieve, seen over the sandy S.E. point of Anchor Island, comes in one with the N.W. point of St. Genevieve, bearing N.N.E. $\frac{1}{2}$ E.; now alter your course to north, which will take you through the centre of the channel between the Hunting and St. Genevieve Islands; then proceed round Anchor Island (giving its west end a berth of 2 cables' length,) to the anchorage at St. Genevieve.

BETCHEWUN HARBOUR lies to the westward of St. Genevieve, and between Hunting Island and Partridge Point. If bound through the Saints Channel, the former directions given for it will lead you in between St. Genevieve and Hunting Islands, in not less than 20 fathoms; and you may proceed along the N.E. of Hunting Island, which is quite bold up to the anchorage. In entering this harbour from the eastward, instead of anchoring at St. Genevieve, pass on to the northward of Anchor Island, which is quite bold on that side; you will then see the entrance of Betchewun, bearing W. by N. between the north point of Hunting Island and Partridge Point; Mount Partridge, to the N.E. of the island, will be easily recognized, being a wooded steep-sided hill. You must pass close to Hunting Island, to avoid a *shoal* that runs $\frac{1}{2}$ of a mile from Partridge Point to the southward, diminishing the entrance to 250 fathoms; when within it, you must steer for a low islet in the middle of the harbour, bearing W. by N., and anchor $\frac{1}{2}$ of a mile from it.

Within Genevieve and Hunting Islands there is scarcely any sea, and the whole may be considered a harbour capable of affording shelter for a great number of large ships. Water may be obtained either from the main or the islands; and wood may be had on the main. The tides here are very weak, spring-tides, and seldom amount to one knot.

CHARLES ISLAND lies next to the westward of Hunting Island; its S.E. point bears N.W. by W., about $2\frac{1}{2}$ miles from Gun Island; it is about 3 miles long, and $1\frac{1}{2}$ mile wide, bold, and free from shoals; its elevation is about 200 feet. Puffins Bay is the space between Hunting and Charles Islands.

CHARLES HARBOUR lies between the main land and the island, and though narrow, it is very secure; the entrances are only 80 fathoms wide; within the harbour is anchorage, in from 4 to $6\frac{1}{2}$ fathoms, mud.

To enter the harbour from the eastward, bring the N.E. end of Charles Island, which is high and clifty, to bear N.W.; then steer for it, giving it a berth of 100 to 180 fathoms, as you round it to the westward into the harbour. To enter the harbour from the westward, by Trilobite Bay, give the N.W. point of Charles Island a berth of 60 to 240 fathoms, as you haul round it to the S.E. by E. into the harbour. The tides, with strong winds, will sometimes run 2 knots in the entrances to the harbour, but in the streams they are only weak.

Whale Island lies on the west side of Trilobite Bay; it is bold-to, and has excellent anchorage to the eastward of it, sheltered from all but southerly winds; the only danger to be avoided in working into Trilobite Bay, is a *reef* off Ammonite Point, which includes a small islet, and extends $\frac{1}{2}$ a mile off shore.

CLEARWATER POINT lies $2\frac{1}{2}$ miles to the westward of Whale Island, and about 2 miles from Ammonite Point; it is low, but the shoal water off it only extends

about $\frac{1}{4}$ of a mile to the southward. This point, projecting so far to the southward, divides the range of the Mingan Islands into two parts.

A *rocky shoal*, of 3 fathoms, lies west, $1\frac{1}{2}$ mile from the point; and there are *three other shoals*, of 2 to 3 fathoms, lying to the northward of the former, nearly midway between Sea Cow Island south end and Clearwater Point, the westernmost rock being 2 miles from the point. To pass outside, or to the southward of these shoals, keep the south point of Gull and Freight Islands in one, bearing N.W. by W.; this clears them full $\frac{1}{2}$ a mile.

Sea Cow Island lies $3\frac{1}{2}$ miles W.N.W. of Clearwater Point, having a good channel between it and the Clearwater Rocks; to the westward of Sea Cow Island lies Walrus and Green Islands; these latter islands are small; but there is a clear passage between them, called Walrus Channel. Gull Island lies a mile W. $\frac{1}{2}$ S. from Green Island; both the latter are covered with grass; but it is only $\frac{1}{2}$ a mile S.W. from the S.E. point of Esquimaux Island, having no passage between. The south end of Gull Island is bold-to within 2 cables' length.

ESQUIMAUX ISLAND is $2\frac{1}{2}$ miles long, and $1\frac{1}{2}$ mile wide, about 200 or 250 feet in height on the north side. From its S.W. point a *shoal* runs out towards Freight Island, which also has a *shoal* off it, stretching towards the latter, narrowing the channel leading to Esquimaux Harbour to about $3\frac{1}{2}$ cables' length. Freight Island lies about a mile westward of Esquimaux, and is about $\frac{3}{4}$ of a mile long; it has *reefs* running off from both the N.W. and N.E. points 3 cables' length; you may pass within 100 fathoms of its S.W. point. Quin Island lies $\frac{1}{2}$ a mile N.E. by N. from Freight Island; it is larger than the latter island, is bold all round, except its N.W. point, off which a *reef* runs off to the westward $\frac{1}{2}$ a mile. Quin Channel lies between the north end of the island and Point aux Morts on the main, in which are 5 to $7\frac{1}{2}$ fathoms; this is the best channel from the westward towards the Esquimaux Harbour; the *reefs* do not extend more than 2 cables' length from the main, and about a cable's length from the north end of the island.

ESQUIMAUX HARBOUR.—This excellent harbour is situated between the north side of the Esquimaux Island and the main; the island is about 4 cables' length from Esquimaux Point, which forms the N.E. point of the harbour.

To enter the harbour with easterly winds, the best passage is through the Walrus Channel, keeping midway between Walrus and Green Islands. When you are a few miles to the southward of Walrus Island, endeavour to bring the N.E. point of Esquimaux Island to appear midway between the two islands, bearing about north; then steer for it, giving it a berth of about a cable's length; haul round it to the north-westward into the harbour, and anchor in 5 to 10 fathoms, sandy bottom.

To enter the harbour from the westward, the best passage is through the Niapisca Channel, leaving the island of that name to the westward, and Freight and Quin Islands to the eastward. To clear the south reef of Niapisca 2 cables' length, the mark is, the N.W. point of Freight Island in one with the south end of Quin Island; you must not, therefore, open these islands clear of each other, until Moniac Island, lying near the main, $2\frac{1}{2}$ miles N. $\frac{1}{2}$ E. of Niapisca, is in sight to the eastward of the latter island; then haul through the channel, steering N.N.E. $\frac{1}{2}$ E., until Montange Island, which is next west of Moniac, is open to the northward of Niapisca; you will then be clear of the *reefs* on the east side of the island; you must now haul a little more to the north-westward, if necessary, to clear the *reef* running off W.N.W. from the north point of Quin Island, until you open Sea Cow Island to the northward of Esquimaux Island, then run in between the Quin and Point aux Morts, with the last-named marks just open, bearing S.E. $\frac{3}{4}$ E., passing about 2 cables' length north of Quin Island; continue your course towards the north point of Esquimaux Island, and haul round it to the southward into the harbour.

Observe, that the marks to clear the shoals and islets westward of Point aux Morts, are the north and N.E. points of Esquimaux Island in one, bearing S.E. $\frac{1}{2}$ E.; if you open these marks before you are abreast of Quin, you will be ashore.

Good water may be had from the river near the Esquimaux Point, as well as from the streams on the island. The tides running through Esquimaux Harbour seldom exceed a knot; the flood setting in from the eastward, and the ebb the contrary.

Quarry Island lies about $3\frac{1}{2}$ cables' length to the westward of Niapisca Island, having no safe passage between; it is about $2\frac{1}{2}$ miles in length, and 200 feet in height. Some reefs run off from the south side of the island nearly $\frac{1}{2}$ a mile. Quarry Cove lies on the north side of the island, about $\frac{1}{2}$ from the east end. This is a snug little land-locked harbour; when entering, keep nearest the west side, and anchor near the middle, in 9 or 10 fathoms. This cove runs in about 4 cables' length; and you may obtain good water from a small stream in the S.W. corner.

Large Island lies 400 fathoms to the westward of Quarry Island, having a clear navigable channel, of about $3\frac{1}{2}$ cables' length between them. This island is 11 miles in circumference, thickly wooded, and the highest part about 200 feet above the sea. Reefs run off from the south and S.W. points nearly $\frac{3}{4}$ of a mile. The *Middle Reef*, a part of which is always above water; this part is surrounded by a shoal $\frac{1}{2}$ a mile long, in a N.E. by N. direction, and $\frac{1}{2}$ of a mile wide, and lies a mile south-eastward of Outer Birch Island.

Large Channel, lying between Middle Reef and Large Island, is $1\frac{1}{2}$ mile wide, having 40 to 50 fathoms in the middle. This is the best channel when bound to Mingan Harbour with an easterly wind; the only thing to be guarded against is the reefs that extend 2 or 3 cables' length off the western shore of Large Island, as far in as the flower-pot columns; the island then becomes bold. The Middle Reef may be approached to 13 fathoms; when farther in the Birch Island forms the west side of the channel. Middle Reef Channel, between the Outer Birch Island and Middle Reef, is a mile wide, with deep-water in it; the shoals, off the south point of the Outer Birch, only reach off about $1\frac{1}{2}$ cable's length.

The *Birch Islands* lie 2 miles to the westward of the north end of Large Island, and named the Outer and Inner Birch Islands; the latter is the largest of the two. The channel between the islands is about 3 cables' length in width, all foul ground, and not recommended; these islands are 300 feet high. The Outer Birch Island has a reef running off its western side full $\frac{1}{2}$ a mile. Off the N.W. point of the Inner Birch Island, which is low, an extensive reef runs off nearly a mile; about $\frac{1}{2}$ a mile S.W. of this point lies a remarkable rock, called the *Hulk Rock*, resembling the hull of a wrecked vessel; the reef runs south-westward, about 3 cables' length from the rock.

MINGAN ISLAND, which lies $3\frac{1}{2}$ miles westward of Inner Birch Island, is 2 miles long, in a N.N.E. direction, and nearly a mile broad; bare of trees, and about 100 feet in height; the east side is bold; but the reefs run off from the S.W. point 600 fathoms, and from the south point 300 fathoms.

Mingan Patch.—This is a rocky patch, of 9 fathoms, on which there is a heavy swell at times; it lies $3\frac{1}{2}$ miles S.W. $\frac{1}{2}$ S. from the south point of Mingan Island, and with the south point of the Outer Birch on with the north point of Large Island.

The *Paroquet Islets* are four small islets, low, and bare of trees; these are the westernmost of the Mingan Group. The easternmost of these islets lies 2 miles N.W. by W. from the centre of Mingan Island; a reef runs out S.S.W. from them $\frac{1}{2}$ of a mile; and another reef, from their northern end, runs off $\frac{1}{2}$ of a mile. The north-westernmost islet is the highest, and has shoal water off it, both to the eastward and westward, full $\frac{1}{2}$ of a mile; you may go to the northward of it within 2 cables' length, in 14 or 15 fathoms. The Paroquet Channel is $1\frac{1}{2}$ mile wide, with deep water in the middle. Both flood and ebb set out through it; the flood sets to the S.W., and the ebb to the southward.

The *Mingan Channel* is safe throughout; all the islands are bold, and free from danger on their north sides.

MINGAN HARBOUR lies between Harbour Island (which is N.N.E. of Birch Islands), and the main land, which latter is low, and has a fine sandy beach; but the island is about 100 feet in height, and bold towards the harbour; on the south side it is shelving and shoal $\frac{1}{2}$ of a mile from shore. The length of the island is about 2 miles, its breadth about $\frac{1}{2}$ a mile; it is thickly wooded, and has a reef off both the east and west ends, to the distance of 240 fathoms. The harbour is narrow, and well sheltered; the anchorage within it is about a mile long, and 270 fathoms wide, with plenty of water for the largest ships; bottom fine sand. Northward of the east end of the island lies the mouth of Mingan River, off which there is a shoal extending 700 fathoms out from the entrance; this shoal dries at low water, and shelters the harbour from easterly winds.

This harbour, like the Esquimaux Harbour, has this advantage, that vessels can enter or leave it with either easterly or westerly winds. The western entrance is 170 fathoms wide, and the eastern entrance, between the above sandy shoal and the island, 200 fathoms.

To enter the harbour from the eastward, bring the north or inner side of the harbour to bear N.W.; the houses of the Hudson Bay Company ought to appear then full their own breadth open to the northward of the island; keep the houses thus open, and steer for them, leaving the east end of the island 150 fathoms on your port hand, or southward of you, taking care to keep the south side of the sandy point of the main, which forms the western entrance of the harbour, shut in behind the north side of the island; for when they are in one you will be aground on the sandy shoal off Mingan River; when past the east end of the island, run along its north side, at the distance of a cable's length, and anchor, near the centre of the harbour, in 9 to 13 fathoms.

When coming in by the western entrance, run in towards the sandy beach of the main land, at the distance of $\frac{2}{3}$ of a mile to the westward of the island, until the sandy point of the main, which forms the west end of the harbour, comes in one with the face of the clay cliffs to the eastward of the Company's houses, bearing E. by S., or in 11 fathoms water; with this mark on, run in along the beach, giving the above sandy point a berth of $\frac{1}{2}$ a cable in passing; then choose your anchoring berth, as before. High water at Mingan Harbour at 1h. 7m.

Montage Island lies on the north side of the Mingan Island, opposite to Quarry Island; and $1\frac{1}{2}$ mile farther eastward is Moniac Island. These islands lie $\frac{2}{3}$ of a mile from the shore, having numerous islets between them; the shoals between the islands, all the way to the main, dry at low water; but they only extend about 3 cables' length to the southward of the islands, with irregular soundings of 4 to 8 fathoms a mile off; therefore, when beating through, keep within $1\frac{1}{2}$ mile of the north side of the outer isle, standing no farther northward than 10 fathoms.

Long Point lies 5 miles to the westward of Harbour Island, between which there are no dangers. From Long Point a broad beach, of fine sand, reaches to the River St. John, a distance of 7 miles; without this beach, shoal water extends off all the way for full $\frac{2}{3}$ of a mile.

VII.—THE EASTERN COAST OF CAPE BRETON ISLAND,
FROM CAPE NORTH, SOUTHWARD, TO THE GUT OF CANSO;

ALSO,

THE SOUTH COAST OF THE GULF OF ST. LAWRENCE,
FROM CAPE NORTH TO POINT ESCUMENAC.

Variation 22° to 20° west.

REMARKS ON THE EASTERN COAST OF CAPE BRETON ISLAND.—This part of the coast is commonly made by vessels from Europe, when bound through the Gut of Canso, or to ports in Nova Scotia. It appears on the shore, and to some distance up the country, barren and rocky; and the tops of the hills being much alike, having nothing remarkable to distinguish them. The lighthouse and town of Louisbourg serve, however, to point out that part of the island on which they stand. There is now a lighthouse on the east point of Scatari Island, painted white; this exhibits a revolving light, visible 1 minute and invisible $\frac{1}{2}$ a minute. There is also a lighthouse on Flat Island, upon the eastern side of the entrance to Sydney; this shows a fixed light, 160 feet above the sea. This latter lighthouse will easily be distinguished from the one on Scatari Island, by its being painted vertically red-and-white. Louisbourg lighthouse stands on the eastern side of the entrance of the harbour; and in order to distinguish it from the other lighthouses, and to render it conspicuous when the back

land is covered with snow, it is built square, painted white, with vertical black stripes on either side. The coast continues rocky on the shore, with a few banks of red earth, which appear less barren.

Along the N.E. coast of Breton Island, from Cape North to Cape Ensumé, the water is deep, except near the shore. From Cape Ensumé to Port Dauphin is high land; but from Port Dauphin to Scatari Island it becomes rather low, and a vessel may stand in shore, in clear weather, to 15 or 10 fathoms.

BLANCHEROTTE, or WHITE CLIFF.—On the south-eastern coast of Breton is a remarkable cliff of whitish earth, in latitude $45^{\circ} 39'$ north, and longitude $60^{\circ} 25'$ west. At 4 miles to the westward is a small woody island, lying upwards of a mile from shore, and off the little harbour of Esprit. The land from hence to Madame Island is generally low; it presents several banks of bright-red earth, with beaches between them. Albion Cliff, on the south side of Madame, is rocky, remarkably high and precipitous. The interior of the island is but little known.

Great caution ought to be exercised at all times when approaching this island in any direction, as the currents set in various directions near the North Cape, according to the winds at sea.

BRETON ISLAND.—From the North Cape the land runs in a S.W. $\frac{1}{2}$ S. direction, 6 miles, to Ashpee Harbour, where vessels can find shelter, and a settlement is now formed. There is good anchorage behind the island, where boats can land, and water and provisions be obtained. For the want of a knowledge of such an establishment, many have been obliged to endure both hunger and fatigue unrelieved.

Aralsoo Cove lies 2 miles to the southward of Ashpee; the coast then turns to the eastward, 2 miles, to Cape Egmont, and from thence S.S.W., 11 miles, to Naganish Island, between which and Cape Ensumé a good bay is formed, full $2\frac{1}{2}$ miles deep, with 4 to 9 fathoms in it; and on the south side of Cape Ensumé is another deep bay, nearly as large as the former, with 7 to 10 fathoms in it: but they are both open to easterly winds. From Cape Ensumé to Black Point the course is S.W. by S., 20 miles. Black Point forms the western, and Siboux Islands the eastern side of St. Ann's Harbour.

ST. ANNE'S HARBOUR, situate on the N.E. side of the island, was called by the French, when in their possession, Port Dauphin, and is a very safe and spacious harbour. It has but a narrow entrance, and carries $4\frac{1}{2}$ fathoms at low water, until you join the beach. When in mid-channel you will have 9 to 10 fathoms, and in the harbour from 5 to 10 fathoms, muddy bottom. On the north side the land is very high, and ships-of-war may lie so near to the shore that a water-hose may reach the fresh water, and a ship may be loaded in one day, from a cascade which runs from the top of the rock. The Guernsey and Jersey men dry their fish on this beach; and it is a safe retreat from the sea.

For more particular directions for St. Anne's Harbour, you will observe as follows:—After you have passed the Siboux or Hertford Isles, on the east side of the entrance, keep the south shore on board, if the wind be to the S.E.; and as you approach Passage Point, bring Cape Ensumé, or Cape Smoke, which lies to the northward, nearly on with Black Point; steer with these marks in one, until you are nearly abreast of Passage Point, off which lies a *sunken rock*, of 6 feet water, and opposite to which begins the *spit of St. Anne's Flat* and the narrowest part of the channel. Now keep a small hummock up in the country, nearest to the shelving high land to the westward of it, which hummock is on the middle land from the water-side, in a line over the fishing-hut, or stage erected on the beach: this will lead in the best water, until you enter the elbow part of the beach. When advanced thus far, keep the opening open (about the size of two gun-ports) which makes its appearance up the S.W. arm. This opening looks like two steep cliffs, with the sky appearing between them, and will lead you between the beach and the south shore, in mid-channel, through 9 and 10 fathoms, and past the beach-point, off which a *spit* stretches to the S.W. about 2 cables' length. Having passed this spit, come to anchor on either side of the harbour, in from 5 to 10 fathoms, muddy bottom, and sheltered from all winds.

LA BRAS D'OR.—This place having recently been visited by many vessels in the timber trade, some description may be acceptable. It appears, from the charts, there

are two entrances to this lake or inlet,—the Northern, or Great Entrance, and the Southern, or Little Entrance; they are thus described, by Mr. Thomas Kelly, pilot of the place; but the names of the places he refers to are generally unknown, thereby rendering the directions not so explicit as could be desired.

Sailing Directions for the Grand Bras d'Or Entrance.—"Ships from the southward must give Point le Cunnet a berth of about 2 miles, and steer from thence for the eastern end of the inside Bird Island, until you bring M'Kenzie Point and Carey's Beach in one. Make for the Black Rock Point until you have Messrs. Duffus's Store just open of Point Noir; then steer for Gooseberry Beach until you bring a clearing on Duncan's Head over M'Kenzie's Point. It is to be observed that, ships coming in with the tide of flood must keep Point Noir well aboard, to avoid the eddy and whirlpools on the north side of the gut, which has various settings. You must then steer for Point Jane, to keep the fair stream of tide as far as the Round Cove, where there is fair anchorage in 7 or 8 fathoms, good holding ground. When abreast of the Round Cove, steer over for Duncan's Head; and when abreast of this head, steer for Long Beach, until you bring a tall pine-tree on the Upper Seal Island, in one with a notch or valley in the mountain. You will then make for the point of the Upper Seal Island, which will carry you clear of the shoals on the islands, as also the South Shoal, or Middle Ground. The marks for this shoal are, a white rock in the bank for the eastern end, and a white birch-tree for the western end. When abreast of the western end of this shoal, you may keep the middle, there being no difficulty until you come to Red Head. If bound to Kent Harbour, after doubling the Red Head, steer for a remarkable red bank, covered with small bushes, until you bring Mr. Duffus's house entirely open of the beach which is on the island. There is a depth of from 4 to 5 fathoms in this harbour, and good holding-ground."

Directions for that arm of the Lake called St. Patrick's Channel, and up to Whookamagh.—"From Red Head you will steer well over for the Duke of Kent's Island, to avoid a *mud-shoal* which runs off from M'Kay's Point. When abreast of the western end of the Duke of Kent's Island, sail for Wassaback Head, until abreast of Stony Island. Then steer for Cranberry Head, so as to clear a *shoal* lying off Wassaback Head; when abreast of Cranberry Point, sheer well over for the Bell Rock, to avoid a *shoal* lying on the south side of the channel; when abreast of the Bell Rock, steer for Green Beach, observing to keep Baddock River shut in until you are well up with Green Beach. You will then steer for a beach on the south shore, until you cross the opening of the Narrows: you may then sail through the Narrows, keeping the middle until you come to the western end, when you must haul round the southern shore (beach), keeping the south shore until abreast of the Plaster Cliffs; you are then clear of all, and in the Whookamagh Lake."

Of the anchorage through the Bras d'Or.—"The first anchorage is the Round Cove, where you may ride in 7 or 8 fathoms. You may anchor, in 5 or 6 fathoms, in the centre of the harbour, on a *middle ground*; the marks for which are, to bring the Table Island a handspike's length open of Black Rock Point, and Point Jane bearing N.W. On the north side of the harbour is good anchorage as far up as the Lower Seal Islands, and to the eastward of the Upper Seal Islands, in 5 fathoms, and to the westward of the same islands in 7 fathoms. There is no other place of anchorage from this to the Big Harbour, where you may ride in 7 or 8 fathoms; from thence you may anchor at any time."

Setting of the tide in Grand Bras d'Or.—"The first quarter-flood sets from the northward, directly over the shoal, last quarter W.S.W., being directly through the channel, and meeting with the tide coming over the shoal, sets towards the Black Point, which occasions it to shoot across the gut, making a number of whirlpools and strong eddies on each side of the channel, which slacks two or three times during the tide. The first quarter-ebb sets over the shoal to the northward; last quarter directly through the channel. The tide of ebb is the fairest setting tide. The tide runs in until half-ebb, and out until half-flood, in regular tides; but the winds make a great alteration, N.E. winds making high tides, and S.W. neaping them; also tides running out with S.W. winds until high water, and in, until low water with N.E. winds. Tides rise 4 feet, unless affected by winds. High water at 10 min. past 8, full and change."

Observations.—Messrs. Duffus's store is a fishing establishment. Mr. Duffus's house is on Kent Island, formerly called Mutton Island. The aforesaid Thomas Kelly piloted the ship *Pitt*, of St. Kitt's, burthen nearly 400 tons, laden with timber, and drawing about 18 feet of water, safely through the foregoing described channel, from Kent Harbour.

SYDNEY HARBOUR, formerly called Spanish River, the entrance to which lies 4 leagues S.E. of that of St. Anne, is another excellent harbour, having a safe and secure entrance, with soundings, regular from sea, into 5 fathoms. This place abounds with excellent coal.

Sydney is the capital of Breton Island; it is a free port, and the residence of the principal officers of the island. Here are the courts of justice, and other public offices; barracks, &c. It is a thriving place, and an extensive coal trade is carried on; and the land in the vicinity well cultivated.

In going in, give the two points of the entrance a berth of 2 or 3 cables' lengths, approaching no nearer than 6 or 5 fathoms. The soundings are regular to each shore to 5 and 4 fathoms.

In the inner part of the entrance, Beach Point and Ledge, on the south side, are steep-to; but Sydney Flats, on the opposite side, are regular to 4 fathoms. When past the Beach Point, you may run up the river Dartmouth to the S.W., and come to anchor in any depth you please, to 5 and 10 fathoms, a fine muddy bottom. Here you may wood and water, at the creek or spring, close to the Governor's house. The water is remarkably pure.

This harbour is capable of containing the whole navy of Great Britain. On Flat Point, without the east side of the entrance, a lighthouse is erected in latitude $46^{\circ} 16' 21''$ north, and longitude $60^{\circ} 8' 0''$ west; it is an octagonal tower of wood, 90 feet high, painted vertically red-and-white; and exhibits a brilliant fixed light, at 160 feet above the level of the sea, visible 5 leagues off, in clear weather. Fish of various kinds, cod, haddock, &c., are caught on the coast in great abundance. The tide in the harbour flows at 9h., and rises 6 feet.

West of Sydney Harbour are Indian Bay and Windham River, both places of anchorage, and fit for vessels to run into, although little frequented at present; beyond these is Morien, or Cow Bay, at the northern point of which is Flint Island; there is a passage between this island and the main, with 14 fathoms water, but this should be adopted with the greatest caution, on account of the numerous *rocks* under water that are scattered about. This bay is open to the north-eastward, and its farther end is encumbered with an *extensive shallow flat*, which dries at low water.

Mire Bay is to the southward, and its entrance is bounded by Cape Morien and the island of Scatary, or Scatari; the bay is wide, and runs in 3 leagues, branching off at its upper part into two rivers; there is deep water within it, from 20 to 6 fathoms, and clear from dangers, but it affords no shelter for shipping.

SCATARI ISLAND lies in about the latitude of 46° north; its length E. and W. is nearly 2 leagues, and its breadth about a league; it is separated from Cape Breton by a channel into Mire Bay; but this is too hazardous for strangers, and frequented only by those coasters who are well acquainted with its dangers.

The lighthouse on Scatari Island is placed on its east point, in latitude $46^{\circ} 2' 17''$ north, and longitude $59^{\circ} 41' 10''$ west. The tower is painted white, and exhibits a revolving light, at 90 feet above the level of the sea, visible 1 minute and invisible $\frac{1}{2}$ a minute alternately. A boat is kept to render assistance to vessels in distress, and a gun to answer signals when required.

As vessels from Europe frequently first make the land about Scatari Island, the revolving light on the eastern point will be found of great service; and it appears, by the late survey of the St. Peter's Bank, that in latitude 46° north, the western edge of the bank, in 40 fathoms, pebbles and broken shells, lies E.S.E., or (east, true,) 111 miles from the lighthouse on Scatari Island.

LOUISBOURG HARBOUR is situated on the S.E. side of Cape Breton, to the westward of Scatari Island, and is very easy of access; you may be soon in, and you may likewise be soon out, if you please. In doing so be careful to avoid the *Nag's Head*, a *sunken rock*, on the starboard hand going in. The east part of the harbour is the safest. The inhabitants consist of a few fishermen only. Water is plentiful here,

but wood is scarce. The Nag's Head Rock lies nearly $\frac{1}{2}$ from the lighthouse point, and has no more than 3 feet on it at low water. The port side going in is the boldest.

Louisbourg lighthouse stands on the east side of the entrance to the harbour, 60 fathoms from shore; it is built on the site of the old French lighthouse, in latitude $45^{\circ} 54'$ north, and longitude $59^{\circ} 58'$ west; it shows a fixed light, visible from Cape Breton to off Cape Portland. This lighthouse is a square building, painted white with vertical black stripes on either side, in order to distinguish it from other lighthouses, and to render it conspicuous when the back land is covered with snow.

The following remarks may be of service to vessels bound to Louisbourg.—When coming from the eastward, they should bring the light to bear W. by N., or more northerly, before you run for it; and from the westward N. by E., or more northerly, in order to clear Green Island and the ledges which lie $\frac{1}{2}$ of a mile S. by W. $\frac{1}{2}$ W. from the light. When in the entrance of the harbour, which is $\frac{1}{2}$ a mile wide, with the light bearing N.N.E., 2 or 3 cables' lengths distance, steer W.N.W. for $\frac{1}{2}$ a mile, to avoid the Nag's Head, a sunken rock, on the starboard hand, bearing W. by N. from the light. The N.E. arm of the harbour affords the safest anchorage. The light at Louisbourg bears about S.S.W. $\frac{1}{2}$ W. from the revolving light on Scatari Island.

GABARUS BAY.—From the entrance of Louisbourg to Guyon Isle, called also Portland Isle, the course is S.W. by W., and the distance more than 3 leagues. Between lies the bay called Gabarus Bay, which is spacious, and has a depth of from 20 to 7 fathoms. Off the south point of this bay, called Cape Portland, lie the *Cormorants*, a number of *islets* and *rocks*, which are dangerous. About 4 leagues to the westward of Gabarus Bay is the Forked Harbour, a narrow winding inlet, where small vessels may run into, and lie land-locked; and 5 miles south-westward of this is the remarkable white cliff, already noticed, and called Cape Blancherrotte. The shore now winds to the westward, to Cape Hinchinbroke and the isle of Madame.

CHEDABUCTO BAY is wide and spacious; it is bold to on both shores, and free from danger; on its southern side, which is high and nearly straight, are Fox's Island and Crow Harbour. Fox's Island is small, and lies near the shore.

Cranberry Island, eastward of Cape Canso, and at the southern entrance of the Gut of Canso, is now distinguished by a lighthouse, which is of great importance to the trade in this part. It is an octagonal tower, 88 feet high, and stands in latitude $45^{\circ} 19' 58\frac{1}{2}''$ north, and longitude $60^{\circ} 55' 40\frac{3}{4}''$ west; it is painted red-and-white horizontally, and forms a conspicuous and useful object. It exhibits two fixed lights, one above the other.

MILFORD HAVEN, or the Harbour of Guisborough, at the head of the bay, is impeded by a *bar*, but a sloop-of-war may pass over it. Within the bar vessels lie in perfect security; the tide, however, sets in and out with great rapidity. The town is, at present, a place of little trade; but it is protected by a battery. From Manchester, round the north shore of Chedabucto Bay, the shores are full of settlements, and wear a pleasing aspect; and on the northern side of Chedabucto Bay you will see several red cliffs; this shore is sandy, with regular soundings in the middle of the bay: the water is deep, from 25 to 35 fathoms.

The GUT of CANSO.—When off Cape Canso and bound for the Gulf of St. Lawrence, the best passage is through the Gut of Canso, being shorter, and having the advantage of several anchoring places, out of the strength of the tide, in case of contrary winds or bad weather. Having passed the dangers of Cape Canso, be careful to avoid the *Cerberus Rock*, on which the sea breaks when there is any wind, and round Eddy Point, at the distance of at least $\frac{1}{2}$ a mile, in order to clear the *shoal* stretching off, which shoal will readily be perceived by the race of the tide it forms. You may stop a tide, in moderate weather, abreast of Eddy Cove, within a mile of the point, in from 7 to 12 fathoms; and thence, by keeping about mid-channel, you may run through the gut free from danger. Holland Cove affords good anchorage out of the strength of the tide, in 6 or 7 fathoms, muddy bottom. At Ship Harbour there is excellent anchorage, in 4 and 5 fathoms, soft bottom. In entering, give the starboard side, which is flat, a berth of a cable's length, and run on, until you shut in the north entrance of the gut. You may wood here, and water at Venus's Cove, on the opposite shore. Plaster Cove is plainly distinguished by its white appearance, when opposite to Holland Harbour: the anchorage, at its entrance, is on soft mud, in from 4 to 10 fathoms.

Inhabitant Harbour is well sheltered, and has good anchorage throughout; when you are sailing in, keep near Evans Island, to avoid *Long Ledge*, stretching off the northern shore, then run mid-channel. Tarbalton Bay and Sea Coal Harbour have each good anchorage, in 4, 5, and 6 fathoms, muddy bottom, and well sheltered. These latter are convenient anchorages when taken short by a N.W. wind at the south entrance of the gut. When bound downwards, if caught with a southerly wind, you will find good shelter under Tarbalton Head, where you may ride safely in the bay, in 5 or 6 fathoms.

Arichat Harbour has two entrances: the north-western one, being very narrow, ought never to be attempted without a leading wind, as there is not room for a large ship to swing to her anchors, should she be taken aback. When going in, give the *ledge*, to the westward of Seymour Island, a good berth, not approaching it nearer than 8 fathoms, and keep as near as possible in mid-channel. To enter by the south-eastern passage, steer for Point Narache, rounding it in 8 fathoms, at about 2 cables' length off; and keep that shore on board, at nearly the same distance and depth of water, until the church bears north; you will then see a small house (the Dead House) on the top of the hill behind the church: bring that on with the east end of the church, and then steer in that direction; you will thus pass midway to the eastward of the *Eleven and Five-feet Shoals*, and also to the westward of the *Fiddle-Head Shoal*. Proceed with this mark on, until a red house on Fiddle-Head Point comes on with the dark rocky extreme of the point, bearing E. $\frac{1}{2}$ S.; you will then be to the northward of the *Twelve-feet shoal*, and may haul up to the westward, where you will find excellent anchorage, on fine soft mud, opposite to the low sandy beach on the middle of Seymour Island, in 10 fathoms.

Crow Harbour, on the south side of Chedabucto Bay, is capable of containing ships of war of the fifth rate, merchant-vessels, &c. The bottom is good; and the mark for entering is, to keep the beacon, on the south side of the harbour, in line with a remarkable fine tree, upon the high land, which will lead you clear of the *Corbyn Rocks*, and also of *Rook Island Rock*, which lies 25 fathoms from the N.W. point of Rook Island.

Fox Island anchorage is one of the greatest mackarel fisheries in North America during the months of September and October. When sailing in you must pass to the westward of Fox Island, giving it a berth of $\frac{1}{4}$ of a mile, as there are *rocks* both above and below water, with 3 and 4 fathoms close to them. You may anchor in 4 to 10 fathoms, with the west end of the island bearing from E.N.E. to N.N.E., keeping about midway between the island and the main. The water shoals gradually to the bar, which extends from the island to the opposite shore; it has not more than 6 or 7 feet on its deepest part, and dries in one place about $\frac{1}{4}$ of the distance from the island to the main. With northerly and with westerly winds the fishing-vessels ride to the eastward of it, in from 2 to 4 fathoms water, and shift to the westward with easterly winds.

At Milford Haven it is high water, full and change, at 8h. 30m.; spring-tides rise 8 feet. At the Bay of Rocks at 8h. 15m.; spring-tides rise 7 or 8 feet. In the Gut of Canso at 8h. 30m.; common springs rise 5 $\frac{1}{2}$ feet.

To clear the *Cerberus Rock* to the westward, bring Arichat Church open of the west end of Seymour Island; to clear it to the southward, bring Bear Island just to touch Eddy Point. Green Island in a line with Point Hogan, will lead directly upon it.

SOUTH COAST OF THE GULF OF ST. LAWRENCE.
FROM CAPE NORTH TO POINT ESCUMENAC INCLUDING
PRINCE EDWARD'S ISLAND, AND THE
NORTHUMBERLAND STRAIT.

REMARKS.—The N.W. coast of Cape Breton Island, all along from Cape North to Cape Linzee, is in the inland part of the country, very high, but in some places it falls down gradually towards the shore. Sailing along on this side of the island, which is all bold, you may safely run along it at the distance of 2 leagues, until you arrive at Just au Corps Island, when you may haul in within a mile of the shore, to avoid the Houdic Bank.

In the winter season the shores of Breton Island, when the weather is mild, abound with all sorts of fish; plenty of lobsters and oysters are to be found towards Prince Edward's Island, especially at Hillsborough Bay.

CAPE NORTH, which forms the western point of the entrance of the Gulf of St. Lawrence, lies in latitude $47^{\circ} 2' 40''$ north, and longitude $60^{\circ} 25' 23''$ west; Cape St. Lawrence lies W.N.W., 8 miles from Cape North, between which the land curves in to the southward; near the head of this bight are 12 fathoms water. From Cape St. Lawrence the land runs in a S.W. by W. direction, 31 miles, to Cape Beaque; 3 miles to the north-eastward of the cape, is the entrance to an inlet, which runs in south-westward, 4 miles, near the head of which is a settlement; its entrance is about $\frac{1}{2}$ a mile wide, on the eastern side of which is Chetican Harbour, fit for small vessels. Salmon River lies S.W., 9 miles from Cape Beaque.

Sea Wolves Island lies 7 miles W.S.W. from the western point of Salmon River, and 2 miles from the shore, having 16 fathoms water between; this island is about $1\frac{1}{2}$ mile in length, and bold-to. Cape Mabou lies 4 leagues S.W. by W. from the Sea Wolves Islands, and 6 miles S.W. of the cape is the village of Mabou, which stands on the eastern side of Hunting River; this river is wide at the entrance, and continues so for full 4 miles, where two streams fall into it. Cape Linzee lies 4 miles W. by S. of Hunting River: this cape, with the Just au Corps Islands and Rocks, which run $3\frac{1}{2}$ miles in a S.W. direction from it, forms the N.E. point of St. George's Bay, and Cape St. George the S.W. point. From Just au Corps Island to the entrance of the Gut of Canso, the coast runs nearly south, $5\frac{1}{2}$ leagues; and from Cape St. George, the entrance of the gut bears S.E. $\frac{1}{2}$ S., 6 leagues.

JESTICO, OR PORT HOOD, on the western side of Breton Island, is a safe harbour for frigates with any wind; the anchorage is in from 4 to 5 fathoms, mud and sandy bottom; here you may get both wood and water. The leading-mark going in, is Cape Linzee on with the highest sand-hills that are on the N.N.E. side of the beach, bearing N. by E. or N.N.E.; these, kept in a line, will lead you clear of Spit Head in 4 to 6 fathoms. On the opposite shore is a long and broad flat, stretching $\frac{1}{2}$ of a mile from the shore, called the *Dean*, to which, come no nearer than 4 fathoms. Cod and herring fisheries are carried on here.

Houlic Bank, a shoal, with only 2 fathoms on it, lies on the east side of St. George's Bay; its inner edge lies 2 miles from the eastern shore, with a clear channel of 11 to 7 fathoms between them; its northern edge lies S. by W. $\frac{1}{2}$ W., 5 miles from Just au Corps Island; and its centre lies E. by S. $\frac{1}{2}$ S., 11 miles from Cape St. George; this shoal is nearly 3 miles in length, and $1\frac{1}{2}$ mile in breadth.

The Gut of Canso may be considered the best and most frequented passage for ships bound to or from Prince Edward's Island and other places in the Northumberland Straits, because it is shorter, and has the advantage of anchorage in case of contrary winds or bad weather. Its length is about 5 leagues, and its breadth about $\frac{1}{2}$ of a mile. The east side is low, with beaches, but the west shore is for the most part high and rocky; Cape Porcupine is remarkably so. The deepest water is on the western shore; but both shores are bold-to and sound, except *three sunken rocks*, which lie near to the eastern shore; one of these rocks lies about midway between the southern entrance of the gut and Ship Harbour, and nearly a cable's length from the eastern shore; the second lies near the western side of Gypsum or Plaster Cove, about $\frac{1}{2}$ a cable's length from shore; and the third about 100 fathoms without Bear's Island, the S.E. part of the gut: these rocks have 6 or 8 feet water on them. Mill Creek, Gypsum or Plaster Cove, Venus Creek, Ship Harbour, Holland Cove, and Eddy Cove, afford excellent anchorages, with a moderate depth, and out of the stream of the tide, which generally sets in from the southward, but very irregularly, being much influenced by the winds. After strong N.W. winds, which happen daily during the fall of the year, the water in the Gulf of St. Lawrence is rendered low, which causes the current to run northward through the gut, at the rate of 4 or 5 knots, and the contrary happens after southerly winds.

A lighthouse, exhibiting a fixed light, has been established on the western side of the entrance to the gut, in latitude $45^{\circ} 41' 49''$ north, and longitude $61^{\circ} 29' 21''$ west. The tower is white, and stands 120 yards from the shore. The light is 115 feet above

the level of the sea, and may be seen 6 leagues distant, or between Cape St. George and Jestico. There is good anchorage under the lighthouse with off-shore winds.

It is high water, full and change, in the gut at 8h. 30m., but the tide in mid-channel runs an hour after high and low water. Sometimes, in or after strong winds, the currents appear as if not influenced by the tide, but run at the rate of 3 or 4 knots.

From Cape St. George to the entrance of the gut the course is S.E. $\frac{1}{2}$ S., 6 leagues; but it is to be observed, that there is a *ledge of rocks* in the *strait*, near Aibushee, some of which are nearly dry at low water, and nearly in the direct course towards the gut; these must, of course, be avoided.

Upon entering the gut from the northward there will be seen, on your port hand, a red house on a point, called Belle Ashe's Point, off which, nearly a cable's length from the shore, is a *sunken rock*, which may readily be distinguished by the eddy of the tide; within this point, to the S.E., is Gypsum or Plaster Cove. To sail into the cove, keep nearly in the middle, and when in 10 fathoms, let go your anchor. You will find sufficient room for swinging round in 7 fathoms.

Ship Harbour is about half-way down the gut on the east side; here there is excellent anchorage, in 4 or 5 fathoms, soft bottom. In entering, give the starboard side a berth of a cable's length (it being flat), and run on until you shut in the north entrance of the gut.

Holland Harbour is nearly opposite to Ship Harbour; it also affords good anchorage, out of the strength of the tide, in 6 or 7 fathoms, muddy bottom.

Ships from the northward may proceed through the gut with safety, by keeping nearly in mid-channel, there being no danger until they arrive at the south point, called Eddy Point, but from which extends a *long spit of sand*, with large round stones, which must be left on the starboard side, at the distance of $\frac{1}{2}$ a mile. The race of the tide will serve to guide you from it. Having passed the spit of Eddy Point, you may steer to the S.S.E. until abreast of an island which appears covered with green spruce-trees, having red bark. Hence you can proceed to sea by the chart.

Ships coming down the Gut of Canso, and having reached Eddy Point, or as far as Cape Argos, and having met with a S.E. or S.S.W. wind, cannot hold their own by beating, may bear up, and come to an anchor in Tarbalton Bay, under Tarbalton Head, where they may ride safely, in from 5 to 7 fathoms water, muddy bottom. The marks for anchoring in Tarbalton Bay are, to bring the peninsula point in a line with Tarbalton Head, bearing south or S. $\frac{1}{2}$ W.; or a point of land inland, a little up in the country from Cape Argos shore, with pine-trees on it, open to the eastward of the Red Head; or the said point of land with pine-trees on it, over the pitch or point of Tarbalton Head; you are then sheltered by the *rocks* or *spit* that runs from Tarbalton Head, in 4 to 5 and 6 fathoms, and will ride very safely on good holding-ground. But should the wind shift to the S.W. or N.W., you must take up your anchor, and beat out of the bay into Chedabucto Bay, and proceed on your passage to the southward. Should the wind overblow at S.W., so as to prevent your beating to windward into Chedabucto Bay, you must come to an anchor in Eddy Cove, bringing the low point of Eddy Cove to bear S.S.E. or S. by E., in 5, 6, or 7 fathoms water, taking care to give the ship sufficient cable, lest you drive off the bank into deep water, from 15 to 20 fathoms.

Be cautious, when coming downwards, after passing Eddy Point, of running in the direction of the *Cerberus Rock*; it is dangerous and steep, having only 10 feet water over it; the sea breaks on it with any wind.

AUBUSKEE HARBOUR is an inlet which lies between Cape Jack and the Gut of Canso, forming a small harbour, occupied by an industrious and thriving people. Here a number of small vessels have been built. A *rocky ledge* extends to the north-westward, without the harbour, to some distance off, as shown by the chart.

POMQUET HARBOUR lies 6 miles to the westward of Cape Jack; ships of any size may load in safety. In sailing in from the northward you will leave the island on the starboard side, keeping close to a *rock*, which appears 5 or 6 feet above water. This rock is steep-to, and lies off the east end of the island. Outside of it, at the distance of $\frac{1}{2}$ of a mile, lie *several sunken rocks*, which are dangerous. After passing the rock, a bay will open on the starboard side, which you must stand into, till you are

shut in with the island, where there is anchorage in $3\frac{1}{2}$ fathoms, at about $\frac{1}{2}$ a mile from the island.

ANTIGONIASH HARBOUR.—The entrance to this harbour lies 10 miles S. by W. from Cape St. George. Here small vessels load with timber and gypsum, or plaster, of which there are an abundance in the neighbourhood; but the harbour is so shoal, that even these complete their cargoes outside the bay, although the anchorage is not safe. The rivers which fall into this harbour run through many miles of fine land, and the population is considerable.

Malignant Cove lies 10 miles W.S.W. of Cape St. George; it has a small stream at its head, and affords good landing for boats. It may be known by the sugar-loaf hill, 680 feet above the level of the sea, which stands about a mile in the rear of it.

Arisaig.—The wooden pier at the village of Arisaig is 4 miles W.S.W. of Malignant Cove; it only affords shelter for boats and shallops during easterly winds, there being no shelter with the wind between west and north. Nearly a mile to the eastward of this pier, and about $\frac{1}{2}$ a mile N.E. of Arisaig church, there is a remarkable rock, called a *barn*.

MERIGUMISH HARBOUR.—The entrance to this harbour lies 14 miles to the westward of the Arisaig, and 27 miles W. by S. of Cape St. George. The coast between is bold, and free from danger; is well settled and cultivated, the land rising a few miles from the shore to the height of 1100 feet in some parts.

There are 14 feet at low water over the bar, with sufficient water for large ships within; but its entrance is so intricate, that a pilot is necessary; and as the northerly winds send in a heavy sea, that were a ship to take the ground going in, she would probably be lost. The bar is formed by *rocky shoals* running out from the points of the entrance. At present this harbour is seldom frequented by any thing larger than coasting schooners. It was formerly visited by larger vessels for timber; but that article is now exhausted. From the entrance, the east end of Pictou Island bears N. $\frac{1}{2}$ E., distant 10 miles; here you may anchor, in moderate weather, in 4 to 6 fathoms, till you obtain a pilot.

PICTOU ISLAND is about $4\frac{1}{2}$ miles long from east to west, and $1\frac{1}{2}$ mile wide. Its centre is 150 feet above the sea, is wooded on the northern side; but there are farms and settlements along its southern shore; low cliffs form its outline. The best landing for boats is on the south side, at Roger's Point.

Pictou Island Reefs extend from each end of the island a considerable distance. The *East Reef* runs off from the east point of the island, and is dangerous, being partly dry at low water; it runs out $\frac{1}{2}$ a mile to 3 fathoms, and nearly a mile to 5 fathoms. This reef should be approached with caution at all times, particularly at night, and on a flood-tide, as there are 9 fathoms not far from its N.E. point.

The west end of the island may be passed within $\frac{1}{2}$ a mile in 3 fathoms; but there are *rocks* on either side of the west end of the island, nearly dry at low water, just within the 3 fathom line, extending 3 cables' length from the shore; and it shallows the same distance along the north shore; at night, come no nearer the north shore than 8 or 9 fathoms, nor to the south shore than 5 fathoms.

The *Middle Shoals* are a chain of rocky patches, of 10 feet, running $1\frac{1}{2}$ mile in a W. by S. direction; they reach from within $\frac{1}{2}$ a mile of the Caribou Channel to within $1\frac{1}{2}$ mile of the west end of Pictou Island, between which there is about 3 fathoms; to clear these shoals to the northward, in 4 fathoms, keep Roger's Point and west point of Pictou Island bearing E.S.E. $\frac{1}{4}$ E.; large ships should come no nearer than 7 fathoms on that side.

The *Roaring Bull* is a cliffy point, lying 4 miles eastward of Pictou lighthouse, from which a reef of sandstone runs out to the N.E., full 3 cables' length, to 3 fathoms.

Mackenzie Head is recognized by a sharp-pointed cliff of clay and sandstone, 40 feet high, and by its bearing south from Logan Point, distant $1\frac{1}{2}$ mile; these points form the entrance to Pictou Bay, which is $1\frac{1}{2}$ mile deep. *Mackenzie Shoal* lies N.E. by E. from the head, $\frac{2}{3}$ of a mile, and is a rocky bank of 16 feet. Caribou and Doctor's Points in one, bearing N. by W. $\frac{1}{2}$ W., clears it to the eastward, a cable's length; and the lighthouse and town point of Pictou in one, bearing west, clears it to the northward,

2 cables' length. The shallow water extends a full $\frac{1}{2}$ mile from Mackenzie Head to the northward to 3 fathoms, and trends to the westward towards the lighthouse; all that side of the bay being shallow, with *ridges of sand* drying at low water.

Ede Point is a cliff, 30 feet high, of clay and sandstone, lying nearly a mile within, or S.W. of Logan Point; it has also a *shoal* running off to the S.E., $\frac{1}{2}$ of a mile, and shallow water continues on to the westward as far as London Beach. Logan Point, likewise, has *reefs* running off to the E.S.E.-ward, $\frac{1}{2}$ a mile, to the 3 fathoms line. The lighthouse and Cole Point in one, S.W. by W. $\frac{3}{4}$ W., leads across their S.E. part in 14 feet: but 4 fathoms is near enough to approach them.

Pictou light can be seen on a clear night, 12 or 14 miles, and when in one with Cole Point, bearing S.W. by W. $\frac{3}{4}$ W., clears the reef off the east end of Pictou Island, $\frac{1}{2}$ a mile: and also the southern extremity of Pictou Island Bank, in $5\frac{1}{2}$ fathoms. If beating in, tack, when standing to the northward, the moment the light begins to disappear behind Cole Point. If running in, keep the light W.S.W., till you get soundings in 5 fathoms, at low water, off Logan Point, and follow that depth $1\frac{1}{2}$ mile to the S.W., taking care not to bring the light to the northward of west. Here you may anchor in the roads till day-light.

Pictou lighthouse is an octagonal wooden structure, on the eastern side of the entrance, painted vertically with red-and-white stripes, exhibiting a fixed light 65 feet above the sea. This light, kept W.S.W., leads clear of the East Reefs of Pictou Island; and, as before observed, the light is visible 12 or 14 miles.

PICTOU.—Pictou Harbour is in every respect the finest on the southern shores of the gulf, capable of containing ships of any burthen; here are coal-mines, valuable quarries of building stone, and a finely settled country in its neighbourhood. Pictou has been declared a free warehousing port; and its trade is very considerable in lumber, coal, and the fishery. The trade of this port appears to be rapidly increasing, and the town of New Glasgow, in the neighbourhood of the coal-mines, promises to be of considerable importance. Coasters, from all parts of the gulf, resort to Pictou; and its exports have amounted to £100,000 in one season. A steamer runs regularly between Pictou and Quebec; and there is a regular communication by land with Halifax.

The branch-pilots of Pictou (which are generally active experienced men,) are always on the look-out for vessels; should you not meet with one, there is good anchorage in Pictou Roads in 5 to 6 fathoms, with the lighthouse bearing west. Here you might wait for day-light to obtain a pilot; a stranger, particularly in a large ship, should not attempt to cross the bars without one, although there is good water on both bars. The outer bar has 21 feet at low water, bottom of sand; crossing this bar you fall into 4, 5, or 6 fathoms for about a mile, when you suddenly shoal again to 18 or 19 feet on the inner bar; this bar is also sand, and distant 4 cables' length from the lighthouse, and is a cable's length wide; when across this inner bar, the water continues deep to the entrance of the harbour. There is very good anchorage between the bars, but it is open to the N.E. winds. From the lighthouse to the anchorage off the easternmost wharfs at Pictou, the channel of the harbour is direct nearly $\frac{1}{2}$ of a mile wide, deep enough for the largest ships, and clear of danger.

The Town of Pictou stands on the north shore of the harbour, 2 miles within the lighthouse; the houses are crowded together along the shores of a small bay, but they are hidden from vessels entering the harbour by Battery Point, which shelters them from easterly winds, except the steeples of three churches; many of the dwelling-houses are of stone, and the population upwards of 2000. Opposite the town the harbour expands into three arms, at the heads of which are the east, west, and middle rivers. The Albion coal-mines and New Glasgow are up the east river; the other two branches are only used by boats.

To enter Pictou Harbour with a fair wind, when without Mackenzie Shoal, bring the lighthouse and town point of Pictou in one, bearing 1 or 2 degrees to the southward of west; or, which is the same thing, with Smith Point, the extreme of the land, on the same side beyond the town. Run with these marks on, until Logan and Cole Points come in one, bearing N.E., when instantly sheer a little to the northward, sufficient to bring the town point in one with the north extreme of the sandy spit. Keep the last-named marks exactly in one, until the Roaring Bull comes in one with Mackenzie Head,

bearing S.E. by E. $\frac{1}{2}$ E., when change the course smartly, and run from those marks, keeping the Roaring Bull just in sight, until the north extreme of Moodil Point (the first point on the south side within the lighthouse) opens to the northward of the sandy spit; then haul to the westward, at first towards the S.W. extreme of London Beach, and afterwards, so as to pass midway between it and the sandy spit into the harbour. With a beating wind a pilot is indispensable. It is high water, full and change, at the lighthouse, at 10h.; spring-tides rise 6 feet, neaps 4 feet. With good tides you will carry 4 fathoms over the bar.

Caribou Reef is very dangerous, and dries out to the distance of 3 cables' length from shore; it consists of large stones, with deep water very near its east side and north point. It stretches out from Caribou Point to the N.N.E. $\frac{1}{2}$ a mile, to 3 fathoms.

Doctor's Island lies to the southward of Caribou Point, forming two entrances into Caribou Harbour; the northern one, between two sandy points, is 4 cables' length wide, with only 4 feet in it at low water.

Doctor Reef is very dangerous, stretching out from the point $1\frac{1}{2}$ mile to the eastward, to 3 fathoms, with rocks dry at low water full $\frac{1}{2}$ a mile out. To the southward of this reef, and $\frac{3}{4}$ of a mile S.E. of Doctor Point, lie the *Seal Rocks*, dry at low water, and from which the shallow water, forming the bar of Caribou Harbour, extends to Logan Point, the north point of Pictou Bay.

CARIBOU HARBOUR is an extensive place, being 6 miles long and a mile wide, but the whole is occupied by shallow water; and its bar and entrances being too difficult and dangerous to be attempted without a pilot, it is not likely it will ever be much used by shipping. It is high water here at 10h.; springs rise 6 feet, neaps 4 feet.

Caribou Channel lies between Pictou Island Bank and the shoals off Caribou. It has a sufficient depth of water for the largest ships; its breadth in the narrowest part exceeds $\frac{1}{2}$ a mile, to the 3-fathom line, or $\frac{1}{2}$ of a mile to the 5-fathom line; but being crooked, no marks can lead through its whole length.

Going to the westward, the safest way is so strike soundings in 6 or 7 fathoms water, on the edge of the shoal off Doctor Island, and follow it to the N.W., until Mackenzie Head is just shut in by Logan Point, bearing S. $\frac{1}{2}$ W.; then steer from these marks, keeping the head just in, and they will lead across the deep water, and afterwards along the western edge of the Pictou Island Bank out to sea.

If with an ebb-tide and strong S.W. wind, you must keep on the weather side of the channel, by following the edge of the shoal water off Doctor's Island farther to the N.W., until Logan Point is only a little open to the eastward of Doctor Point, bearing S. $\frac{1}{2}$ E. These points in one, lead along the east side of Caribou Reef, at the distance of a cable, in 4 fathoms. Keep Logan Point a little open, and it will lead clear out to sea in not less than $4\frac{1}{2}$ fathoms. The same marks and directions, taken in a reverse order, will enable a ship to take the channel from the northward or westward.

Observe, that she should not haul to the eastward until the Hawksbill is well shut in behind Caribou Point; nor open the former again after having shut it in, until the lighthouse at Pictou is open to the southward of Cole Point.

From Caribou Point to Point St. John the course is N.W. by W. $\frac{1}{2}$ W., 15 miles; the coast is straight and free from danger every where to within $\frac{1}{2}$ of a mile. This coast is chiefly cliffs of clay and sandstone, seldom above 50 feet in height, but often much lower; and in fine weather, boats may land all along it.

CAPE ST. JOHN, the northern point of the bay, is composed of sharp-pointed cliffs of sandstone, 40 to 50 feet high. A reef extends from it 4 cables' length, on the inner part of which are two rocks, always above water. This reef is steep at its western point, where there are 7 fathoms close to it, being deeper here than any where else. On the north side of the cape shallow water runs off $\frac{1}{2}$ a mile to 3 fathoms; large ships should keep in $3\frac{1}{2}$ to 4 fathoms at low water.

John Bay runs in 4 miles to the S.E.; from the cape to Murphy Point it is free from danger, but the shoal water extending from the shore is often very steep, therefore come no nearer than $3\frac{1}{2}$ fathoms at low water. *Sandy shoals* occupy the head of the bay, drying out $\frac{1}{2}$ a mile. On the bar of the River John there is only a foot at low water. Several ships are built here; and they load their cargoes of lumber outside, moored on $2\frac{1}{2}$ to 3 fathoms, mud, and lie safely during the summer-months.

On either side of the River John there are extensive and flourishing settlements. The English church will be known by its spire, and the Presbyterian chapel by its cupola.

Amet Sound is very extensive, affording excellent anchorage for any number and class of vessels, Tatamagouche Bay being its S.W., and John Bay its eastern arm; Mullegash Point and Cape John its western and eastern points of entrance.

Amet Island is very small, and divided into two parts; the western is the largest, presenting clay cliffs on every side. It is flat at the top, and bare of trees; is covered with coarse grass, and about 20 feet above the sea at high water. It was formerly much larger than at present. Shallow water extends off this island 300 fathoms to the westward, and will be cleared in not less than $3\frac{1}{2}$ fathoms, if the English steeple at River John be not shut in behind the western side of Cape John; but large ships should stand in only to 6 fathoms, and take notice that in every other direction shallow water extends from the island to far greater distance.

The *Amet Shoals* are much more extensive and dangerous than have been hitherto represented. They extend nearly 4 miles to the eastward of the island, and 2 miles to the south-eastward towards Cape St. John; in both directions are *rocky patches* of 5 or 6 feet, a long mile from the island; but there is not less than 16 feet at a greater distance than 2 miles: there is *one patch* of that depth full 3 miles to the eastward of the island. The marks for this latter patch are, the north extreme of *Amet Island* and *Treen Bluff* in one, bearing W. $\frac{1}{4}$ N., and Cape John S.W. $\frac{1}{4}$ S.

TATAMAGOUCHE.—The bay is $2\frac{1}{2}$ miles wide at the entrance between *Mullegash Point* to the northward and *Brule peninsula* to the southward; it runs in 7 miles to the westward, affording good anchorage every where, bottom soft mud, but large ships cannot go far up. From 5 fathoms at the entrance the depth decreases to 3 fathoms $1\frac{1}{2}$ mile up the bay, and to 2 fathoms at 4 miles, the remainder being all shallow, part drying at low water. A *rock*, with only 7 feet on it, lies $3\frac{1}{2}$ cables' length off the northern shore, 2 miles within *Mullegash Point*; *Amet Island* and *Mullegash Point* touching, bearing E.N.E., clear it to the southward, distant 120 fathoms. A stranger may safely approach to 3 fathoms at low water; but in entering, keep well over to the northward, to avoid the *Brule Shoals*, which extend from *Brule Point* $1\frac{1}{2}$ mile to the northward, having only 9 feet near their outer edge. On the N.E. side, the English Church steeple at River John just open to the northward of *Long Point*, bearing S.E. $\frac{1}{2}$ E., clears them in 3 fathoms. The north and N.W. sides are very steep, but the east and S.E. sides may be approached by the lead.

Tatamagouche River is in the S.W. corner of the bay, 5 miles within the entrance. Several vessels visit this river for lumber every year; they anchor off it in 11 or 12 feet at low water, and ground on soft mud, as the tide falls, without injury. High water, full and change, at 10h.; spring-tides rise 8 feet, neaps 5 feet.

When approaching *Tatamagouche Bay* from the eastward, between *Cape St. John* and *Amet Island*, keep nearest the cape, to avoid the *Amet Shoals*, that narrow this channel to about $\frac{1}{2}$ of a mile. When coming in to the westward of *Amet Island*, the passage between *Amet Island* and the *Waugh Shoal* to the westward, is a full mile wide, and from 6 to 10 fathoms deep; the leading-mark for running through this passage is *Brule Point* and *Conns House** in one, bearing S. by W. The western passage into *Amet Sound*, between *Waugh Shoal* and *Saddle Reef*, is a mile wide, with 5 to 8 fathoms in it. When bound to *John River*, or *Tatamagouche*, pilots may be obtained by making the usual signal.

Oak Island, formerly *Fox Island*, lies N.W. $\frac{1}{2}$ W., $10\frac{1}{2}$ miles from *Cape St. John*, and E.S.E., 12 miles from *Pugwash Point*; it is low and partly wooded. *Oak Island* is separated from *Point Mackenzie* by *sand bars*, and a gully for boats, which is nearly dry at low water. Within, or to the southward of *Oak Island*, a bay runs in to the westward to *Mullin Point*, which separates *Shoal Bay* from *Ramsheg*, (now *Wallace Harbour*.) *Shoal Bay* runs in 3 or 4 miles to the N.W.; it is shallow, and not frequented by shipping.

WALLACE HARBOUR, formerly **RAMSHEG**, lies to the southward of *Shoal Bay*, and is the best harbour on the coast, excepting *Pictou*; there is 16 feet water on

* *Conn's white house* stands on the southern shore, is 50 feet above the sea, and the only one that is two stories high; it has a large barn close to it on the east side. It bears S. by W., $1\frac{1}{2}$ mile from *Brule Point*.

the bar at low water, spring-tides, and 24 feet at high water; it is capable of admitting large ships. The entrance is W.S.W. $\frac{1}{4}$ W., $2\frac{1}{2}$ miles from Oak Island, and between two sandy points, named Palmer and Caulfield Points, is 2 cables' length wide, and 6 $\frac{1}{2}$ fathoms deep; above this the channel is crooked and difficult, although it is 160 fathoms wide. A pilot is always necessary, and may be obtained by making the usual signal. It is high water at Wallace at 10h. 30m., on full and change days of the moon; spring-tides rise 8 feet, neaps 6 feet, and their velocity does not exceed $1\frac{1}{2}$ knot.

The supply of lumber was formerly much greater than at present; a few cargoes are shipped here, and a few ships are built annually; but as the timber trade decreases, more attention is paid to agriculture, and the settlements are increasing in the neighbourhood.

When approaching Wallace Harbour from the northward, Oak Island should have a berth given it of nearly a mile; or keep in 5 fathoms, to avoid the reefs off its east side.

Cape Cliff lies 3 miles N.W. off Oak Island; and W.N.W., 3 leagues farther, is Pugwash Point. All along this part of the coast there are numerous and flourishing farms.

PUGWASH HARBOUR lies to the southward of the point, and at the head of the bay of that name; there are 14 feet at low water on the bar, and sufficient water inside for larger vessels than cross the bar. This is a snug little harbour, and the vessels lie in a little land-locked basin to load, where there is plenty of water for large ships; the town and the church are on the east side of the river. The timber trade of this place has much decreased of late years, the stock of timber in the neighbourhood being nearly exhausted, and there are no fisheries here of any consequence; but the settlements in this neighbourhood are increasing. The bar is about $\frac{1}{2}$ a mile within the entrance of the bay; and thence, to the harbour, the channel is crooked, and from 50 to 100 fathoms wide. A pilot is always necessary; they are able, experienced men, and may be obtained by making the usual signal.

It is high water at Pugwash, on full and change days, at 10h. 30m.; spring-tides rise 7 feet, neaps 4 feet. In the roads it seldom runs a knot, but sometimes in the entrance of the harbour the tides run nearly 2 knots.

PUGWASH REEFS surround the point of that name to the distance of $\frac{3}{4}$ of a mile, and dry $\frac{1}{2}$ a mile out. A stranger, when approaching, should not come within the 5 fathom line, as shown by the chart. In Pugwash Road there is excellent anchorage, in 3 fathoms, at low water, sand and clay, well sheltered by Phillip's Reef to the N.W., and Pugwash Reef to the N.E. There is seldom any sea here in the summer, even with northerly winds.

To take *Pugwash Roads*, if without a pilot, being to the northward, in 5 fathoms, you must bring the English Church steeple, at Pugwash, so as to be seen over, and only just within, the west extreme of the low cliff of Fishing Point, the east point of the bay, bearing S. by E. $\frac{1}{4}$ E.; running with these marks you must not open the church in the least to the westward of the point, until the south point of Philip River (Bergamen Point) bears S.W. by W., or until the water decreases to 3 $\frac{1}{2}$ fathoms: you will then be close to the N.W. end of the Pugwash Reef; now change your course to S.S.W., $\frac{1}{4}$ of a mile, when you may anchor, in 16 or 18 feet at low water, with Fishing Point E. by S. $\frac{1}{4}$ S., distant about $\frac{1}{2}$ a mile, or you may lie in 14 feet, $\frac{1}{2}$ a mile farther to the southward.

LEWIS HEAD lies 2 miles to the westward of Pugwash Head, and is the north point of the entrance to Philip River, Point Bergamen being the south point. *Lewis Reefs* run off to the N.E., $2\frac{1}{2}$ miles from the head, as shown by the chart, and are extremely dangerous for strangers to approach. The inner part of this reef is shallow, having only 6 feet on it at the distance of $1\frac{1}{2}$ mile from the shore; but on the outer part there are 15 to 18 feet, on rocky patches, with deeper water between.

Philip River has a dangerous bar of stones and sand, having only a narrow crooked channel of 8 feet at low water. This river is not used as a loading port; but boats can go up 9 miles. The new vessels built here are brought down to Pugwash to load; and the lumber is likewise taken to Pugwash to be shipped. There are increasing settlements along the borders of this river.

Cold Spring Head lies N.N.W. $\frac{1}{4}$ W., 8 miles from Lewis Head; vessels bound up the Bay of Verte, may run along between the latter heads, in 6 $\frac{1}{2}$ to 7 fathoms. The Bay of Verte is 9 miles wide across the entrance from Cold Spring Head to Indian Head,

in New Brunswick; it is about 11 miles deep, and $2\frac{1}{2}$ miles in breadth near its head, where the two provinces of Nova Scotia and New Brunswick separate. The head of the bay is very shallow some distance from the shore. In the entrance to this bay are some *shoals*, which should be carefully avoided when navigating this part of the straits; these are the *Aggermore Rock*, *Laurent Shoal*, *Heart Shoal*, and *Spear Shoal*.

The *Aggermore Rock*, with only 18 feet on it, lies N.E. $\frac{1}{2}$ E., $2\frac{1}{2}$ miles from Cold Spring Head, having a deep-water channel between; but in a N.W. by N. direction towards Cape St. Laurent, not more than $3\frac{1}{2}$ fathoms will be found at low water, and in some places less.

Laurent Shoal, with 16 feet least water on it, is of sand and rock, about $\frac{3}{4}$ of a mile long, and $\frac{1}{2}$ a mile broad from the shoalest part. Cape St. Laurent bears N.W. by N., $2\frac{1}{2}$ miles; Cold Spring Head, S.S.W. $\frac{1}{2}$ W.; and Indian Point, N.E. by E. $\frac{1}{2}$ E. There are $4\frac{1}{2}$ fathoms close to the east side of this shoal.

Heart Shoal lies S.W. by S., $1\frac{1}{4}$ mile from Cape Spear; the least water on it is 6 feet, with $2\frac{1}{2}$ fathoms between it and the shore, as will be seen by the chart.

Spear Shoal lies about a mile E.S.E. from Heart Shoal; it has a *patch of rock*, of only 10 feet water, near its east end, with 15 to 18 feet on other parts; it is a bank of stones and sand, about a mile long from east to west, and $\frac{1}{2}$ of a mile broad. In approaching this shoal from the eastward, the lead gives little warning, there being 4 to $4\frac{1}{2}$ fathoms very near it. From the shoal part of the bank, Indian Point bears N.N.E., $2\frac{1}{2}$ miles, and Cape Spear N.W. by N., $1\frac{1}{2}$ mile.

Boss Spit lies $3\frac{1}{4}$ miles N.W. of Cold Spring Point; it dries full $\frac{2}{3}$ of a mile from the shore, and is *dangerous*, as its outer edge is steep-to, there being 17 feet close to its point; you should keep in $3\frac{1}{2}$ fathoms when passing this spit.

Tignish Head lies $4\frac{1}{4}$ miles north-westward of Boss Spit; there are no dangers between, the water shoaling gradually, until you arrive off the head, where there are *two shallow patches*, of 5 to 6 feet, all stones, lying N.N.E. $\frac{1}{2}$ E. from the head, $\frac{2}{3}$ of a mile.

Tignish River is the principal stream in the Bay of Verte, and it has only 3 feet in it at low water, both narrow and crooked, and unfit for shipping; but it is frequented by schooners. About 5 miles up the river there are saw mills, where large quantities of deals are cut, which are sent down by small craft to Pugwash to be shipped for the British market; in the summer they are sometimes sent along shore in rafts. Spring-tides rise 9 feet, neaps 5 feet. From here, it was proposed to cut a canal to Cumberland Fort, Bay of Fundy.

Gaspereau River is on the northern side, near the head of the bay, on the southern shore of which stands Fort Monckton, on Old Fort Point, now washed by the sea. The Bay of Verte is rising considerably in importance, in consequence of its proximity to the Bay of Fundy; and the interior in a highly improving state and increasing population. There are thriving settlements on both sides of the bay, particularly near its head, where large tracts of meadow land have been formed, by embanking out the tide.

CAPE TORMENTINE is the great headland which forms the eastern extremity of New Brunswick within the gulf. Indian Point may be said to form the southern, and Cape Jourmain the northern points of this headland; they lie nearly north and south of each other, distant $4\frac{1}{2}$ miles. This promontory is surrounded by *dangerous and extensive shoals*.

The *Tormentine Reefs* are rendered *very dangerous*, by the strong tides in their vicinity. From Indian Point they run off E.S.E., full 3 miles, and *foul ground* runs off a mile farther to 4 fathoms; a small part of this reef dries at low water: this bears E.S.E. $\frac{1}{2}$ E., $2\frac{1}{2}$ miles from Indian Point. These reefs should, at all times, be approached with caution by the lead, and should not, particularly with light winds, be approached nearer than 9 fathoms, when to the north-eastward of them, as the flood-tide sets over them to the southward, into Bay Verte, at the rate of 3 knots, which causes a great rippling over the part that dries. There is another *patch*, of 6 feet at low water, lying a mile within this, in the direction of the point; small vessels pass between the latter patch and Indian Point, in $2\frac{1}{2}$ fathoms at low water, and often anchor under the point with northerly winds.

CAPE JOURIMAIN is the northern point of the Jourmain Islands; and to vessels running through this strait, it forms the extreme point of land either from the westward or eastward. The *Jourmain Shoals* are very dangerous to vessels in the night,

and the lead should always be kept going when approaching them in dark weather; and when to the eastward of them, come no nearer than 9 fathoms, but to the westward they may be approached within 7 or 6 fathoms. From the cape, shoal water extends N.N.W., $1\frac{1}{2}$ mile, and from thence it extends $4\frac{1}{2}$ miles to the S.E.: near this point of the shoal is a *patch* of only 6 feet at low water, as shown by the chart; this lies $1\frac{1}{2}$ mile from the shore, and is *very dangerous*, being bold to on the east side. To the westward of the cape the shoal water extends full 4 miles, and runs off full 2 miles from the shore; but you may approach this part to 6 or 5 fathoms.

Cape Bruin lies N.W. by W. $\frac{1}{2}$ W., $6\frac{1}{2}$ miles from Cape Jourmain; there is good anchorage, in 5 fathoms, in the bay between them, sheltered from S.E. by E. round southerly to W. by N., bottom sand. *Cape Bald* is of sandstone cliff, 40 feet high, and lies 12 miles N.W. by W. of Cape Bruin; between there is good anchorage in 5 fathoms, muddy bottom, off the mouths of the Great and Little Shemogue Rivers; these rivers are only fit for boats. You may safely approach this part of the coast at night within to 6 fathoms. *Beauteux Point* lies W.N.W., 7 miles from Cape Bald; off the former point shoal water runs off a full mile.

SHEDIAC POINT lies N.N.W., $6\frac{1}{2}$ miles from *Beauteux Point*, between which is *Shediac Bay*, 5 miles deep; on the west side of the bay is *Shediac Island*, about 2 miles in length. *Shediac village* lies within the north end of the island, and there is a narrow channel within the island, where vessels, of 7 or 8 feet, may be taken to the village. The harbour lies between the S.W. point of *Shediac Island* and *Point Chene*, the latter bearing from the former S.S.E., $\frac{3}{4}$ of a mile. From *Point Chene* a *bar* runs out to the northward, $\frac{3}{4}$ of a mile, and nearly all dries, which makes the harbour more secure. Near the middle of the bay, which is all shallow, there are *two rocks*, of 7 and 8 feet, lying E.S.E. from the centre of *Shediac Island*. The easternmost called *Medea Rock*, lies 2 miles from the island; the western rock is called *Zephyr Rock*; it lies nearly midway between *Medea Rock* and the island; and a full mile to the eastward of the latter, between the *Zephyr Rock* and the shallows running off a short distance from the island, is the passage into the harbour.

SHEDIAC is not a place of much trade; a few cargoes of deals are shipped here. Strangers bound to this place should take a pilot. By making the usual signal, the harbour-master, or a pilot, will attend. The depth that can be carried in by a good pilot is 14 feet at low water, and 18 feet on spring-tides. In the space where the shipping is moored, are 12 to 17 feet at low water, mud; it is about $\frac{3}{4}$ of a mile long, and from $1\frac{1}{2}$ to 3 cables' length wide. The *Shediac* and *Schoudouc* are very small rivers, only navigable for boats a few miles to the saw-mills. Spring-tides rise 4 feet, neaps about 2 feet.

Shediac Bay ought not to be entered by large vessels, as there are little more than 3 fathoms in it, and is rendered dangerous by the *Medea* and *Zephyr Rocks*; the shoal water extends full 2 miles from *Shediac Point*. Between *Cape Bald* and *Cocagne Head*, 5 fathoms is near enough for a large ship to approach this part of the coast.

COCAGNE HARBOUR.—*Renonard Point* lies $1\frac{1}{2}$ mile N.W. of *Cocagne Head*, and forms the southern point of the entrance to this harbour, as the south point of *Cocagne Island* does the northern point. It is a very small harbour; the channel over the bar of sand and gravel is narrow and crooked, with 10 feet at low water, and 14 feet at high water, spring-tides; within the bar, the water deepens for a short distance, where a few vessels load lumber. To enter this harbour, a good pilot and fine weather are absolutely necessary. The shores of this bay and river are all well settled.

From the entrance of *Cocagne River* to the south point of *Buctouche Sand-bar*, the course is N. $\frac{1}{4}$ W., $5\frac{1}{2}$ miles. The *North Patch*, of only 12 feet, must be carefully avoided when approaching *Buctouche Roads* from the northward; it has 5 fathoms just outside of it. It lies on the N.E. part of the outer bar of *Buctouche*, and 2 miles off the shore, with *Cocagne steeple* and the N.W. extreme of *Cocagne Island* in one, bearing S.S.W. $\frac{1}{2}$ W., and the south end of *Buctouche Sand-bar* S.W. by W.; by keeping in 5 fathoms you will pass outside of it. The *Outer Bar* is a long ridge of sandy and rocky ground, with $3\frac{1}{2}$ to $2\frac{1}{2}$ fathoms on it; it extends from the *North Patch*, nearly parallel with the shore, almost to *Cocagne*, a distance of 7 miles. There is a narrow channel of deeper water within it, having 4 to 5 fathoms, good ground.

BUCTOUCHE ROADS.—Vessels of too large a draught of water to enter the river, lie moored in the roads to take in their cargoes; this is just within the *Outer*

Bar, and is perfectly safe for a vessel with good ground tackle, the ground being stiff clay, and you are sheltered by the Outer Bar from any heavy sea. When approaching this anchorage there is nothing in the way of vessels that do not draw too much water to cross the outer bar, except the North Patch, before mentioned. The marks for anchoring in the roads are, the two white beacons (placed on the south side of the entrance of the river) in one, bearing N.W. by W. $\frac{1}{2}$ W.; Buctouche steeple just open to the westward of the small sandy islet that forms the S.W. point of Buctouche Sand-bar; Cocagne steeple will then be open its own breadth to the eastward of Dickson Point, (a small peninsula point about $2\frac{1}{2}$ miles to the southward of the sand-bar;) here you will have 4 fathoms, good ground. To enter the river, the assistance of a pilot is absolutely necessary, as the channel is narrow and intricate. Several vessels visit this port for lumber, and the banks of the river are well settled.

A large ship will, when bound to Buctouche Roads, find the most water not less than $3\frac{1}{2}$ fathoms, by coming in to the northward of the North Patch, and running to the southward in the channel within the outer bar. To clear the North Patch, run in with Buctouche steeple to the southward of west, and you will, if the weather be clear, see Cocagne steeple open to the westward of Cocagne Island, and seen between the latter and the main land; you must continue this course until the steeple comes on with Dickson Point; then immediately change your course, running with Dickson Point and Cocagne steeple in one, bearing S.S.W. $\frac{1}{2}$ W., and they will lead you close inside the outer bar, and clear of a *small shoal* that lies between it and the shore, with not less than $2\frac{1}{2}$ fathoms on it. Take care not to shut the steeple in behind Dickson Point as you run along the sand-bar, and as soon as Buctouche steeple opens to the southward of the sand-bar, anchor, as before, with the beacons in one.

From the S.E. point of Buctouche Sand-bar to Richibucto Point, the course is north, $14\frac{1}{2}$ miles; and this part of the coast is clean, and may be approached by the lead; but between Richibucto Point and Richibucto Head a *reef of sandstone* runs off nearly a mile from a high water mark.

RICHIBUCTO.—The Richibucto River is next in importance to Miramachi on this part of the coast, both to its depth on the bar, and to the distance which it is navigable. It is visited by a considerable number of vessels for cargoes of timber. On its banks there are flourishing and rapidly increasing settlements. The town of Liverpool stands about 3 miles within the entrance, on the north side of the river.

The entrance of the Richibucto is nearly 360 fathoms wide; it lies between two sand-bars, several miles in length, called the North and South Beaches, on which there are sand-hills 30 feet high. Any vessel that can pass the bar may be taken 13 miles up the river; small vessels can go up nearly 20 miles. The pilots of Richibucto keep a good look-out for vessels from the beacons at the mouth of the river, and are intelligent attentive men; their assistance is absolutely necessary, as the bar of Richibucto is extremely dangerous, being subject to changes from the effects of heavy gales. The situation of the narrow channel over the bar, $1\frac{1}{2}$ mile E.S.E. from the river's mouth, is indicated by two white beacons on the south beach, and a large black buoy moored off it, in 4 fathoms at low water, with the two beacons in one, distant about a mile. The north beacon, which stands on a sand-hill 30 feet high, at the south extremity of the north beach, is white, and large; it is intended to point out the situation of the river to vessels out at sea.

The bar must always be crossed with the two beacons in one; the depth on the bar is $13\frac{1}{2}$ feet at low water, and $17\frac{1}{2}$ feet at high water; ordinary spring-tides rise 4 feet, neaps $2\frac{1}{2}$ feet. When running in with the beacons in one, as soon as you bring the S.W. point of the North Beach to bear N.W., steer for it: the channel, which is only 50 fathoms wide, passes close to the North Beach at the north beacon; when opposite this beacon, keep away W.S.W. for $\frac{1}{2}$ a mile, when you may anchor in a secure harbour.

From Richibucto Head to Sapin Point, the course is N. $\frac{3}{4}$ E., distant 20 miles across Kouchibouguac Bay, the shores of which are very low, with sand-bars and beaches, inclosing lagoons, through which rivers flow into the sea.

KOUCHIBOUGUAC RIVER enters the sea about 9 miles N.N.W. of Richibucto Bar; this river has a *bar of sand*, which frequently shifts; there is 9 feet on the bar at spring-tides; the tides rise from $2\frac{1}{2}$ to 4 feet, and flow 8 miles up the river. Large ships are sometimes built here, and towed by a steamer to Miramachi, or Richibucto, to be fitted and loaded. The banks of this river are well settled. In all the northern part of

Kouchibouguac Bay the shoal water (that is to 3 fathoms,) extends to some distance off shore, till it joins the Sapin Ledge.

The *Sapin Ledge*, lying directly off the point of that name, is *very dangerous*, having only 12 feet on it, and lying right in the track of ships running along the shore; at night you should not come nearer to it than 9 fathoms, as there are 5 fathoms within 2 cables' lengths of its eastern side. This ledge is $1\frac{1}{4}$ mile long from east to west, and $\frac{1}{2}$ a mile broad; from its outer edge Escumencac lighthouse bears north, distant 6 miles, and E.S.E. $\frac{1}{2}$ E., $2\frac{1}{2}$ miles from Sapin Point, having $3\frac{1}{2}$ fathoms in the channel between them.

Point Escumencac lies N.N.E., $5\frac{1}{2}$ miles from Sapin Point; between is a very low and shallow shore. Escumencac Point is low, and wooded with spruce-trees; but is now rendered remarkable by the conspicuous white lighthouse on the point, which serves to warn vessels of their approach to the reef which runs off 2 miles N.E. from the point.

PRINCE EDWARD'S ISLAND.

This island is a distinct government, though subordinate to the British Commander-in-Chief in North America. It is 102 miles long and 30 miles broad towards its east end; but, near the west end, it is almost divided into two parts. It is well settled, and possesses a good soil, fit for all general purposes. The climate is commonly healthy and temperate, and not subject to such frequent and heavy fogs as Newfoundland and the adjacent coasts of Breton and New Brunswick generally are, nor yet to the sudden changes of weather experienced in England. The winter here sets in about the middle of December, and continues until April; during which period it is colder than in England; usually a steady frost, with frequent snow falls, but not so severe as to prevent the exertions of the inhabitants in their various employments. The weather is commonly serene, and the sky clear. In April, the ice breaks up, and the spring opens. In May, the face of the country presents a delightful aspect, and affords a striking contrast to the surrounding shores. The first appearance of the island is like that of a forest emerging from the sea; the red cliffs, which are not very high, then appear; the lands are covered with lofty trees, and the sand hills on the northern side of the island are covered with verdure. Vegetation is so exceedingly quick, that in July, peas are gathered which were sown in the preceding month. The country is generally level, the highest ridges not exceeding 400 to 500 feet, but generally much lower, especially near the coast, and abounds with springs of fine water, and groves of trees, which produce great quantities of excellent timber. The greater part of the inhabitants are employed in farming and fishing. What is most important to seamen, is the rare occurrence of fogs in the Northumberland Strait, which are so embarrassing in other parts of the gulf. The prevailing S.W. wind in summer, accompanied by thick fogs in the Bay of Fundy, parts with its moisture in passing over the heated land of Nova Scotia, and becomes a hot dry wind off its northern coast. Charlotte Town, situate between York and Hillsborough Rivers, on the southern side of the island, is the seat of government. The island, in 1841, contained a population of not less than 50,000 people.

The coast forms numerous harbours, many of which are, however, fit for small vessels only. The principal loading ports at present are on the eastern side, Cardigan Bay, or the Three Rivers, and Murray Harbour; on the S.E., Hillsborough Bay and River; Bedeque Bay on the southern side; and Richmond Bay and Holland Harbour on the north.

CAPE EAST is a cliff 50 to 60 feet high, composed of red sandstone. A reef runs off from the point nearly a mile, to 5 fathoms, and $\frac{2}{3}$ of that distance to 3 fathoms. This reef should be approached with great caution, as the flood-tide sets strongly over it from the northward, and from thence to the south-westward, at the rate of $2\frac{1}{2}$ knots. This tide frequently causes great rippings off the point; and a large ship at night, or in dark weather, should not approach the point nearer than 20 fathoms. The sea is very heavy off this point in N.E. gales. To the southward of the point, between it and East Lake Outlet, there is good riding with northerly winds.

CARDIGAN BAY, or the THREE RIVERS, lies between Boughton Island and Panmure Island; it is the common entrance to three rivers, viz., Cardigan River, Brudeuil River, and Montague River. In the former there are from 7 to 3 fathoms water, and in the others from 4 to 2 fathoms. George Town stands on a peninsula

between the rivers Brudenell and Cardigan. In these places many large ships have loaded with timber. There is anchorage without, in Cardigan Bay, in from 10 to 6 fathoms, where a pilot must be obtained.

Fisherman's Bank is 3 miles long, east and west, and $1\frac{1}{2}$ mile broad; in the centre part are only 4 to 5 fathoms; this bears from Murray Head, the nearest land, E.S.E., $7\frac{1}{2}$ miles. It has deep water all round it. In a gale, this bank should be avoided by large ships.

MURRAY HARBOUR lies close to the north-westward of Bear Cape; and the entrance is narrow and shoal, and difficult of access, not having more than 10 feet water: but small ships have frequently loaded here. Vessels coming from the eastward, and bound to Murray Harbour, must avoid approaching too near to Bear Cape, as a *ridge of rocks* stretches out a full mile from it.

The *bar* of Murray Harbour is exceedingly dangerous, having only 10 feet at low water; and easterly winds send in such a heavy sea, that breakers extend all across the bay, upwards of 2 miles. The channel is buoyed and beacons, but a pilot is at all times necessary to ensure safety. From Bear Cape to Wood Island the coast is all clear; and near the shore is anchorage in 3 to 4 fathoms.

Wood Islands lie 13 miles to the westward of Bear Cape; they are inhabited, and only in parts covered with wood; they are about 50 feet high. With N.W. winds you may anchor to the eastward of these islands, in from 3 to 9 fathoms.

Indian Rocks lie about a mile S.W. by W. from Wood Island, running thence to the westward about $1\frac{1}{2}$ mile, and $\frac{1}{2}$ a mile in breadth; their southern side is about $1\frac{1}{2}$ mile off shore. There is almost always a rippling on those parts which dry, or they would be very dangerous by day as well as by night. Spring-tides run 3 knots near these rocks, and rise 6 feet; and it is high water, full and change, at 9h. 45m. At night come no nearer their S.E. part than 13 fathoms, as there are 10 fathoms within $\frac{1}{2}$ of a mile of their southern edge. There is a narrow channel between these rocks and the shore, but of no use to shipping.

Riflemen Rocks lie $4\frac{1}{2}$ miles to the westward of Indian Rocks, and are one of the greatest dangers in the strait. There are only 5 feet water on the shoalest part, and from its outer point, in 3 fathoms, Prim Point light bears N.N.W. $\frac{1}{2}$ W., 8 miles. This shoal should always be approached with great care, particularly in foggy weather, as the soundings are very irregular; there are 16 fathoms within $\frac{1}{2}$ mile of it, and a less depth farther out. At night, the Prim light should not be brought to the westward of N.N.W.

Pinnet River lies 4 miles eastward of Prim Point; it has a *rocky dangerous bar*, and is only fit for small schooners; the *bar* is nearly a mile without the entrance, and the *shoals* run off a mile farther. These shoals are dangerous, and should not be approached nearer than 6 fathoms at low water. At Pinnet it is high-water, full and change, at 10h.; springs rise 8 feet, neaps 5 feet. There are only 2 feet water on the bar at low water.

PRIM POINT is low, with cliffs, 10 to 15 feet high. The lighthouse shows a fixed light, 68 feet above the level of the sea at high water, and may be seen 4 or 5 leagues from the deck; and is of great service to vessels coming from the eastward, in guiding them clear of the Pinnet and Riflemen Shoals, and enabling them to enter Hillsborough Bay in the night. The lighthouse stands 100 yards within the point. The west extreme of St. Peter's Island bears from it N.W. $\frac{1}{2}$ W., $7\frac{1}{2}$ miles; and the west end of Governor's Island N. $\frac{3}{4}$ E., 5 miles.

Prim Point Reef runs out to the westward from the point, with uneven soundings, and is of a forked shape. Its north point, in 3 fathoms, bears N.W. by W. $\frac{1}{2}$ W., 2 miles from the lighthouse, and its western point W. by S. $1\frac{1}{2}$ mile; but to the depth of 5 fathoms it extends out nearly 3 miles. The marks to clear the extreme end in the latter depth, are the Blockhouse Point and the square tower of the Presbyterian Church at Charlotte Town in one, bearing N.E. $\frac{1}{2}$ E. As these objects cannot always be seen, you must attend to the lead, and you may safely round the reef by it, and the bearing of the lighthouse, in 3, 4 or 5 fathoms, according to your vessel's draught of water.

St. Peter's Island, on the N.W. side of Hillsborough Bay, is about 3 miles in circumference; it is of moderate height, and its centre thickly wooded; but there are settlers on each side. You may approach the south side of the island within a mile; but there

are extensive shoals running off to the eastward from the island, in an E. by N. direction, 3 miles; this spit dries 2 miles from the island. Off the end of the spit lies the *Spit Head*, a rocky shoal of 8 feet. Close to the eastward of the spit, the Spit Head buoy, surmounted by a beacon, is moored; it lies in the channel in 5 fathoms, with the west end of the Government-house in one with Battery Point, N. $\frac{1}{2}$ E.; and the north side of St. Peter's Island W. $\frac{3}{4}$ S. The western side of the channel trends north, 2 $\frac{1}{2}$ miles, from the Spit Head buoy to the Block-house Point at the entrance of Charlotte Town Harbour. About $\frac{1}{2}$ a mile S. by W. $\frac{1}{2}$ W. of Block-house Point lies the *Trout Rock*, of 7 feet, having 14 to 16 feet around it. Government-house and Block-house Point in one, N. by E. $\frac{1}{2}$ E., just clears its east side.

Governor Island lies E. by N., 4 $\frac{1}{2}$ miles from St. Peter's Island, and S. by E. $\frac{1}{2}$ E., 4 miles from Block-house Point. It is low, partly wooded, and surrounded by shoals to some distance off. This island, lying near the centre of the bay, forms, with its shoals, the eastern side of the entrance of the channel to Charlotte Town Harbour, as well as the western side of the channel leading to Orwell and Pownell Bays. The *Governor Shoals* extend to the S.W. from the island, and have some shallow patches a considerable distance from the island; to the westward these shoals run only off nearly 2 miles, to 5 fathoms. The Fitzroy buoy lies in 4 fathoms, a cable's length within the end of the shoal; it lies with Battery Point and the square tower of the Presbyterian Church in one, N. by E. $\frac{1}{2}$ E. You may pass on either side of this buoy; but very large ships should pass to the westward of it. The *Squaw Shoal*, of 12 feet, lies 2 miles N. by W. from the N.W. part of Governor Island, and must also be passed to the westward. *Huntly Rock*, of 12 feet, lies S. by W. $\frac{1}{2}$ W., 1 $\frac{3}{4}$ mile from the west end of the island, and must be passed to the westward when going to Charlotte Town.

HILLSBOROUGH BAY is the finest bay in the island; within it is the principal harbour and capital town of Charlotte Town, which is advantageously situated on the northern bank of the Hillsborough, where the deep water approaches nearest to the shore. The town is well laid out with squares, and its streets at right angles; the houses are generally of wood, and the population about 5,000. All kind of supplies may be obtained here, and there is sufficient water in the harbour for the largest ships; and the Hillsborough River is navigable for large ships 7 or 8 miles above Charlotte Town; smaller vessels may go farther up: the shores are all well settled. It is high-water, full and change, at 10h. 45m.; spring-tides rise 9 $\frac{1}{2}$ feet, neaps 7 feet. Ships generally lie off the wharfs of the town, where the channel is nearly 10 fathoms deep, and 280 fathoms wide.

Strangers, or those unacquainted, when bound to Charlotte Town, should take a pilot; but in the event of not meeting one outside, the bay may be safely entered, and good anchorage will be found N.W. of Governor Island, until a pilot can be obtained. When entering the bay from the westward, the leading mark is, Pownell's Point, just touching the north point of Governor Island, bearing E. by N.; run in with this mark, until you see the Presbyterian Church, and as soon as it is in one with Block-house Point N. by E. $\frac{1}{2}$ E., then steer N.E. by E. or N.E. $\frac{1}{2}$ E., according to the tide, until the west side of Government-house and Battery Point come in one, bearing N. $\frac{1}{2}$ E.; these latter marks lead up the deep-water channel to Trout Point, at the entrance of the harbour. If you cannot see the leading marks, keep along the southern and eastern edge of the St. Peter's Shoals, in 5 fathoms, up to near the Spit Head buoy, then anchor.

When coming from the eastward at night, Prim Point light must not be brought to the westward of N.N.W., to avoid the *Riflesman Shoal*; and Prim Reef should be rounded in 10 fathoms, in a large ship; smaller vessels may cross it in 4 or 5 fathoms. As soon as the light bears to the southward of E. by S. $\frac{1}{2}$ S., and in not less than 10 fathoms at low water, or, with Point Prim E. by S., you will be to the northward of the reef. The course across the bay must be north, or N. $\frac{1}{2}$ E., in thick weather, or at night; the object being to strike soundings on the southern edge of the bank off St. Peter's Island, and following it to the north-eastward, in 5 fathoms, till about 1 $\frac{1}{2}$ mile within the Fitzroy Rock, where you may anchor off Governor Island, in good holding ground, and wait for day-light, or a pilot. In clear weather, your course from the outer end of Prim Reef, in 10 fathoms, will be N. by E. $\frac{1}{2}$ E., about 5 miles.

From St. Peter's Island to Cape Traverse the bearing is N.W. $\frac{1}{2}$ W., 20 miles. All along this part of the coast the shoal water extends off from the land a considerable distance; but there is sufficient warning by the lead, and in 5 fathoms you will be full

$\frac{1}{2}$ a mile off the outer edge. Tyron River is about $5\frac{1}{2}$ miles to the eastward of Cape Traverse, and small schooners enter the river at high water. The Tyron Shoals dry $1\frac{1}{2}$ mile off shore; and the S.W. extreme in 3 fathoms bears S. by W. $\frac{1}{2}$ W., distant full 2 miles from Tyron Head, the nearest land. An excellent leading-mark to clear the S.W. point of the shoals in 5 fathoms, at the distance of $\frac{1}{2}$ a mile, is Carlton Head and Cape Traverse in one, bearing N.N.W. $\frac{1}{2}$ W. It is in this part of the strait that the tides meet, and the ebb from Bay Verte sets towards them; therefore the lead should be kept going when in their vicinity, especially with a southerly wind.

From Cape Traverse to Carlton Head is N.N.W. $\frac{1}{2}$ W., 3 miles, and from thence to Sea Cow Head is N.N.W. $\frac{1}{2}$ W., distant 6 miles; between the two latter points is Seven Miles Bay. At night come no nearer the shore than 7 fathoms.

BEDEQUE HARBOUR is situated in the bay to the northward of Sea Cow Head; it runs in to the eastward between Indian Head and Phelan Point. Indian Head, on the south side, is faced by cliffs 25 feet high. Although there is sufficient water in this harbour for the largest ships, the entrance to it being narrow and intricate, a pilot becomes indispensable; and a vessel should anchor in the roadstead outside, until a pilot can be obtained; there is about 22 feet water in the roads, good ground, and seldom any sea, although open to S.W. winds. Sea Cow Head may be safely approached within 2 or 3 cables' length, and Graham Head at twice that distance. It is high water in Bedeque Harbour, full and change, at 10h.; spring-tides rise 7 feet, and neaps 5 feet.

CAPE EGMONT bears from Sea Cow Head N.W. $\frac{1}{2}$ W., $14\frac{1}{2}$ miles; between them is a bank of soundings, with $3\frac{1}{2}$ to $4\frac{1}{2}$ fathoms, which extends full 3 miles from the shore; when about midway between the points, you may safely keep along its southern edge in 5 or 6 fathoms. Cape Egmont is remarkable by its cliffs, 50 feet high; it is bold to on the south side, but to the westward it is shallow $\frac{1}{2}$ a mile off; come no nearer to it than 6 fathoms.

Fifteen Points Church and village stand $4\frac{1}{2}$ miles to the eastward of Cape Egmont, and may be seen at a great distance: about a mile farther eastward is the *Dutchman's Rock*, above water, with shoal water some distance off. About 3 miles farther eastward is Sandbury Cove, an extensive bight, nearly all dry at low water.

Egmont Bank, with 4 fathoms on its shoalest part, is narrow; but it is $2\frac{1}{2}$ miles long in a N.N.W. and S.S.E. direction. Its south end bears W. $\frac{1}{2}$ S., 4 miles from Cape Egmont, and its north end W.N.W. $\frac{1}{2}$ W., 5 miles from the same point; between this bank and the cape are 7 and 8 fathoms, and a clear channel.

WEST POINT bears from Cape Egmont N. by W. $\frac{1}{2}$ W., 17 miles; between these points is Egmont Bay, 8 miles deep. This bay affords excellent anchorage with off-shore winds in from 4 to 7 fathoms, sand and clay; but you should not anchor in less than 5 fathoms, only on the north side of the bay, to avoid the rocky ground off the rivers at its head.

The Percival and Enmore Rivers are only fit for boats and small craft; and the approach to them is very difficult. On the east side of this bay, from the entrance of these rivers to within 3 miles north of Cape Egmont, the shallows run off a full mile to 3 fathoms; $5\frac{1}{2}$ fathoms is near enough for a ship to approach this side of Egmont Bay. St. Jaques Church, 5 miles north of Cape Egmont, is conspicuously situated.

The West Point consists of sand-hills 12 feet high, and there is good anchorage under it with winds between north and east, in 4 fathoms, bottom of sand. The West Spit runs off in a N.N.W. direction, 3 miles from West Point; on some parts of it there is only a few feet water, on a bottom of sand; the northern part of this trends N. by E., parallel with the shore, with $2\frac{1}{2}$ to $3\frac{1}{2}$ fathoms on it. Between the spit and the land there are from 6 to 4 fathoms, open to the northward, but no outlet to the southward. To avoid this opening when coming from the northward, and to keep without the West Reef, come no nearer the shore than 12 fathoms.

The *West Reef* is a narrow rocky reef, 4 miles long, in a north and south direction; its soundings are irregular, being from 5 to $2\frac{1}{2}$ fathoms: the least water near the middle is 16 feet, with 18 feet near the south end; this part bears N.W. $\frac{1}{2}$ W., $3\frac{1}{2}$ miles from the West Point, and is $2\frac{1}{2}$ miles from the nearest land; its north end in $4\frac{1}{2}$ fathoms is $3\frac{1}{2}$ miles from the land. This reef is very dangerous to ships rounding the West Point at night, or in foggy weather, as the deepest water is near its outer edge, having 13 fathoms close to it in one part. At night, to avoid it with certainty, the soundings

should be taken from the main land; and by keeping off the edge of the bank in 9 or 10 fathoms, you will pass 3 miles to the westward of it; near the outer edge of the bank, the tides run sometimes $2\frac{1}{2}$ knots, causing a heavy sea, on a weather tide.

THE NORTH POINT is low, with red cliffs. Vessels should always give this point a wide berth at night, or in foggy weather, on account of the reef which runs off from it to the north-eastward full 2 miles to 5 fathoms, and $1\frac{1}{2}$ mile to 3 fathoms; without the 5-fathoms line, rocky uneven soundings run out to 10 fathoms, sometimes causing a dangerous breaking sea.

From the West Point to the North Point the land trends about N.N.E., 6 miles, to Cape Wolf, then N.E. by E., 27 miles. This coast is unbroken, and chiefly composed of red clay and sandstone cliffs. The shallow water runs off some of the points a considerable distance, so that large ships at night should keep off in 11 or 12 fathoms, when running along this part of the coast.

THE TIDES.—Captain Bayfield, R.N., in his valuable book of directions for the Northumberland Straits, says "The principal tide-wave, after entering the gulf between Cape Breton Island and Newfoundland, sends off, laterally, waves to the S.W., on either side of the Magdalen Islands. The first of these, which I shall call the eastern wave, coming from between those islands and the western shore of Cape Breton Island, arrives at the eastern entrance of the strait soon after 8 o'clock, and proceeds to the westward, making high water later, in succession, from east to west as far as Pictou, which it reaches at 10 hours. At the same nominal hour, but 12 hours later, the other, or western wave, arrives at Cape Tormentine, having been retarded by the long detour which it has taken to the northward and westward of the Magdalens, and by the great extent of comparatively shallow water which it has passed over in its subsequent progress to the S.W. This wave makes high water later, in succession, at places along the eastern coast of New Brunswick, as we proceed to the southward; and, after entering the strait from the N.W. to S.E., contrary to the other eastern wave.

"Thus it is high water, on the full and change days, at Miscou, at about $2\frac{1}{2}$ hours; at Point Escumecac and the north point of Prince Edward's Island, forming the western entrance of the straits, soon after 4 hours; at the west point of Prince Edward's Island, at 6 hours; at Shediac, 8 hours; and at Cape Tormentine, 10 hours. When, therefore, the eastern wave arrives between Pictou and the Wood Islands, the western part of the preceding tide-wave arrives between Cape Tormentine and Cape Traverse. They then meet, and combine to make high water at the same hour, namely, 10 hours, or a little later in the harbours, all over the central portion of the strait, from Pictou to Cape Tormentine; causing also an amount of rise of the tides every where more than double, and, in some of the harbours, nearly three times as great as that which occurs at either entrance of the strait.

"The eastern stream of flood enters the strait from the N.E., running at the rate of $2\frac{1}{2}$ knots round the east point of Prince Edward's Island, but is much weaker in the offing and over towards the southern shore. It runs round Cape Bear, and with an increasing rate along the land to the westward; is strongest in the deep water near the land, and runs at its extreme rate of 3 knots close past the Indian Rocks and Rifleman Reef. Loosing strength as it proceeds farther to the N.W., it is quite a weak stream when it meets the other flood-stream off the Tyron Shoals. This eastern flood-stream is not so strong along the southern or Nova Scotia shore, unless it be in Caribou Channel, for a short space, near Caribou Reef; and it is weak, not generally exceeding $\frac{1}{2}$ a knot in the middle of the strait.

"The other or western flood-stream comes from the northward, along the west coast of Prince Edward's Island, sweeping round the West Point, and running strongest in the deep water near the West Reef, where its rate is $2\frac{1}{2}$ knots. Over towards the New Brunswick shore its rate seldom exceeds $1\frac{1}{2}$ knot, and this is its average rate as it pursues its course to the S.E., until we arrive at Cape Tormentine, where the strongest part of the stream runs near the Jourmain Shoals, and thence to the southward, round and over the dangerous Tormentine Reefs, with a great ripple, at the rate of 3 knots."

From this account of the tidal-stream it appears that a fast-sailing vessel, under favourable circumstances, might enter the strait with the flood, and arriving at Cape Tormentine soon after high water, might there take the ebb, and thus have the stream

with her, with but slight interruption, from one end of the strait to the other. Or a vessel with a beating wind might so time her arrival at the same point as to be able to continue her voyage in the same direction with the ebb.

THE NORTH COAST OF PRINCE EDWARD'S ISLAND, FROM CAPE EAST TO NORTH POINT.

The north coast of Prince Edward's Island is of moderate height, and clear of detached shoals, with regular soundings near the shore, and 15 fathoms is generally about 4 miles off. The whole coast is bordered by a *sandy shallow*, running off about $\frac{1}{2}$ a mile; and there are a few *spits* which run off nearly a mile.

From Cape East, off which a *dangerous reef* runs nearly a mile, to St. Peter's Bay, the coast runs W.N.W., 33 miles; the coast is unbroken, formed of red sandstone cliffs. You will find 10 fathoms within a mile of this part, but the anchorage is not good.

ST. PETER'S HARBOUR is of considerable extent, running nearly 7 miles to the eastward, but the entrance is shallow, and it has a *shifting bar*. There are sometimes 5 feet on the bar at low water, the outer edge of which, in 3 fathoms, is $\frac{3}{4}$ off the shores; within the harbour are 3 fathoms. High water, full and change, at 8h. 30m.; springs rise 4 feet, neaps 2 feet.

SAVAGE HARBOUR lies 3 miles farther westward; it has only 2 feet on the bar, but it runs inland to within a mile of the head of Hillsborough River, and is only fit for boats. The tides are the same as at St. Peter's Bay. There is a road across from the head of this river to Hillsborough River.

TRACADIE HARBOUR is 9 miles to the westward of Savage Harbour; it is only fit for small craft. Its entrance is remarkable, by having sand-hills 50 to 60 feet high at the east side of the entrance. The bar shifts, and is $\frac{3}{4}$ of a mile from shore, with 5 to 9 feet on it. Within the entrance the harbour is 3 miles wide, and $2\frac{1}{2}$ miles deep. It is high water, full and change, at 7h.; springs rise 4 feet, neaps 2 feet.

Little Rustico Harbour lies 4 miles westward of Tracadie Harbour, and $\frac{1}{2}$ a mile westward of Stanhope Point, on which there is a sand-hill 30 feet high; it has a *dangerous reef* running out from it $\frac{3}{4}$ of a mile, to 3 fathoms; and at $\frac{1}{2}$ a mile from the shore, only a foot in some places. *Little Rustico* is only fit for boats.

GREAT RUSTICO lies farther westward, and has two narrow sandy entrances, distant 3 and 5 miles from Cape Turner. This place is only fit for schooners, as it has a *shifting bar*, of 4 to 6 feet, which is exceedingly dangerous, extending $\frac{3}{4}$ of a mile from shore. There are two buoys pointing out the deepest water over each of the bars. It is high water, full and change at 6h. 40m.; springs rise $3\frac{1}{2}$ feet, neaps 2 feet. There are extensive settlements here, and an English and Roman Catholic Church.

CAPE TURNER is the highest cliff on the island, being of red sandstone, 120 feet high; it is 3 miles N.W. of the western entrance to Great Rustico.

GRENVILLE HARBOUR, or *New London*, lies 8 miles N.W. by W. of Cape Turner. The entrance to this harbour is $\frac{1}{2}$ of a mile wide, and 3 fathoms deep; but it is only fit for small vessels, on account of its *shifting bar of sand*, where there is only 5 feet water sometimes between the two buoys, and the channel in is narrow. The bar runs out to the distance of $\frac{3}{4}$ of a mile, and the shallow water a mile to 5 fathoms. It is high water, full and change, at 6h. 10m.; springs rise $3\frac{1}{2}$ feet, neaps 2 feet. There are increasing settlements and a fertile country around this harbour, New London being the principal place, where there is an English and Scotch Church.

CAPE AYLESBURY lies 9 miles N.W. $\frac{1}{2}$ W. from Grenville Harbour entrance, and $7\frac{1}{2}$ miles N.W. $\frac{1}{2}$ W. of Cape Tyron, which is a remarkable red cliff, 110 feet high; this part of the coast should not be approached nearer than 6 or 7 fathoms in a large ship, as the shallow water runs off some distance.

RICHMOND BAY is of great extent, running in 10 miles to the S.W.; it contains seven islands and a number of creeks and rivers, some of which are navigable for vessels of considerable burthen. Grand River can be ascended 7 or 8 miles, where there are very fine settlements; and also at Port Hill on the N.W. side of the bay.

MALPEQUE HARBOUR is on the eastern side of this bay, and is very superior to any other on the north coast of the island; it has 16 feet water on the bar at low water, and 18 or 19 at high water, ordinary springs, with space and depth enough for any

description and number of vessels. The principal entrance is between Fishery, or Billhook Island to the northward, and the Royalty Sand, which dries out full $\frac{1}{2}$ a mile from Royalty Point. Just within this entrance the anchorage is good and well sheltered.

The *West Gully* is the other entrance; it lies on the N.W. side of Fishery, or Billhook Island, and is so narrow and intricate as to be only fit for boats, or very small craft, although it has 9 feet on its *dangerous bar* $1\frac{1}{2}$ mile out from the shore.

The *Bar of Malpeque* runs off from Fishery, or Billhook Island, E. by S., $2\frac{1}{2}$ miles; it then runs to the southward, so as to join the shore to the eastward of Cape Aylesbury. This bar is exceedingly dangerous in bad weather, the bottom being sandstone; then all signs of a channel are obliterated by heavy breakers. The northern part of this bar, to the distance of $1\frac{1}{2}$ mile to the eastward of Billhook Island, is very shallow, in some places only 4 feet at low water.

There are two white beacons on the S.E. end of Billhook Island, which, kept in one, bearing W.N.W. $\frac{1}{2}$ W., will lead through the narrows of the Ship Channel, and over the inner bar; but not over the outer bar in more than 13 feet at low water. To enable ships to cross the outer bar in the deepest water; namely, 16 feet at low water, ordinary spring-tides, the outer buoy is moored in $3\frac{1}{2}$ fathoms, at the distance of a cable's length to the northward of the line beacons; the intention being, that a vessel, by running from the outer to the inner buoy (which is placed on the inner bar of 19 feet,) should carry the deepest water. The narrow part of the Ship Channel is a cable's length wide, and 4 fathoms deep.

Vessels may anchor outside the bar, in 7 to 5 fathoms, to wait for a pilot, and all strangers should endeavour to obtain one, and not attempt to take the bar in blowing weather. When the marks can be seen, and a smooth bar, a vessel might proceed as follows:—

When off the bar, in 5 fathoms, bring the beacons in one, bearing W.N.W. $\frac{1}{2}$ W.; then sheer to the northward of their line, to the distance of 1 or 2 cables', and the western beacon will appear a little to the northward of the other. Steer now so as to make a direct course towards the beacons, keeping the westernmost beacon open a little to the northward, and the vessel will pass the bar in 15 or 16 feet at low water, spring-tides.

The water will deepen immediately within the bar to 18 feet or more; and as soon as it does so, sheer at once to the southward, and bring the beacons exactly in one, taking care that this be done before the Scotch Church, Malpeque, opens to the westward of Darnley Point; for if not, the vessel will be on shore on the shallow part of the bar, on the north side of the channel. Keep now the beacons in one, running towards them, and they will lead through the Narrows, and over the inner bar in 19 feet at low water; after which they may be either still kept in one, or the westernmost one a little open to the southward of the other, until the vessel is $\frac{1}{2}$ a mile within the inner bar, or within $\frac{2}{3}$ of a mile of the beacons; then change the course to west, and the sandy south point of Billhook Island must be passed at the distance of a cable's length, steering that course into the harbour. You should anchor with the beacons bearing between E. by N. and E.N.E., distant from $\frac{1}{4}$ to $\frac{1}{2}$ of a mile, but not farther off, in order to avoid the *Horse-Shoe Sands*.

The tides run the strongest in the entrance, where springs run $2\frac{1}{2}$ knots; within the bay they are much weaker. It is high-water, full and change, at 6h.; springs rise about 3 feet, neaps 2 feet. N.E. winds rise the tides, and westerly winds the contrary. The morning tides are the highest in summer months.

CASCUMPEQUE HARBOUR.—The entrance to this harbour lies N.N.W. $\frac{1}{2}$ W., 20 miles from the principal entrance to Malpeque, and S.W. $\frac{1}{2}$ W., 5 miles from Cape Kildare. It may also be known by some very remarkable high sand-hills $3\frac{1}{2}$ miles to the southward of its entrance, as there are no high sand-hills to the northward of the harbour. It has two *sand-bars*, with 10 feet on them at low water. The entrance is 180 fathoms wide. The outer bar of sand lies $1\frac{1}{2}$ mile out from the entrance; the channel across it is narrow, and is indicated by a white beacon (on the south extreme of the northern sand-bar,) in one with a white mark on a log hut bearing W. by N.

This harbour was formerly the most convenient port in the island for loading timber, and there was a very large quantity shipped; there being at that time 18 feet water.

At present not more than 12 feet can be calculated on at high water, spring-tides; but strong N.E. winds will sometimes raise the water a foot higher. The tides are very irregular at certain seasons. The morning tides in summer are much higher than the evening tides, which sometimes disappear, leaving only one day tide during the 24 hours. High water, full and change, at 5h. 40m.; springs rise about 3 feet, neaps 2 feet.

A stranger bound to this port must always take a pilot; in fine weather you may anchor outside, in 5 or 6 fathoms, bottom sand. In easterly gales the bar is covered by a line of breakers. In crossing the bar, observe, that the white mark on the log house must not be opened in the least to the northward of the beacon, as these objects in one, lead in close along the southern edge of the northern sand. The channel, from one bar to the other, and between sands only covered by a few feet water, is 100 fathoms wide, with anchorage in $2\frac{1}{2}$ to $3\frac{1}{2}$ fathoms; the best berth is just outside the entrance, where the sands dry on each side. When inside the harbour, the vessels generally load at a wharf.

From Cape Kildare to North Point the distance is 11 miles N. by E. $\frac{1}{2}$ E. About midway between is the little River Tignish, with only 2 feet in its entrance at low water; but it affords shelter for fishing-boats. Along this part of the coast, from Kildare to North Point, there are rocky irregular soundings, of 3 to 5 fathoms, extending off 2 miles in some places.

Ships when crossing from the Magdalens to North Point, should be particularly on their guard against getting embayed in the great bight formed by the N.W. part of Prince Edward's Island. In N.E. gales great difficulty would be found in beating a ship out; as both the tide and the current appear to set from the northward into this bight. The north point of Prince Edward's Island should at all times have a wide berth given it.

Ships that are bound to Maramichi and the ports in Northumberland Straits to the westward of Cape Tormentine, after passing St. Paul's Island generally go to the southward of the Magdalens, round the north point of Prince Edward's Island, which is very dangerous at night and in thick weather; and the lead should be kept going in rounding it, more especially if you have had a northerly wind in crossing from the Magdalens. After passing the North Point, shape a course well to the westward, so as to avoid the *West Reef*: passing which, you should keep the lead going, and taking your soundings from the edge of the *bank* running off from the main, or New Brunswick shore. After you are past the West Reef, in proceeding south-eastward you may take your soundings from either shore till you arrive near the Strait of Cape Tormentine. If bound farther eastward, keep on the island side: the soundings will guide you past Cape Traverse. On this side the tides are strong, but the anchorage is good, in case of it falling little wind. At night, when the land cannot be seen, and the wind contrary, a ship had better anchor to the westward of Cape Tormentine until daylight.

Vessels bound to Pictou and ports eastward of Cape Tormentine, generally pass through the Gut of Canso. But if entering by St. Paul's Island, care should be taken to come no nearer to Cape East (Prince Edward's Island,) than 20 fathoms in thick weather or at night, nor to Bear Cape than 15 fathoms; then keep more to the southward, to give the *Indian* and *Riflesman Rocks* a berth. The light on Point Prim will be of great service in this part of the passage; and the lead will be a sufficient guide along the north side from St. Peter's Island to Cape Traverse.

THE WESTERN COAST OF THE GULF OF ST. LAWRENCE, FROM POINT ESCUMENAC TO CAPE GASPÉ, INCLUDING THE BAYS OF MIRAMICHI, CHALEUR, AND GASPÉ.

POINT ESCUMENAC is low, and covered with spruce-trees, and may be known by its lighthouse, painted white; which exhibits a fixed light, 70 feet above the level of the sea. *Escumenac Reef* is very dangerous, as it runs off full 2 miles to the N.E. to the 3-fathoms mark, and nearly $2\frac{1}{2}$ miles to 5-fathoms. At night come no nearer than 10 fathoms.

MIRAMICHI BAY is 14 miles wide from Point Escuménac to the sands off Blackland Point, and about 6 miles deep to the entrance Fox's and Portage Islands. The western part of the bay is formed by a range of low narrow islands; the southernmost is named Huckleberry Island, next Fox Island, then Portage Island; between the latter two islands is the main channel, or entrance to the Miramichi; the northernmost is called Negowac Sand Bar; except the main passage, the other channels between these islands are only fit for boats. The shallow water runs off to the eastward of these islands to a great distance; from the north end of Negowac Sand Bar, in a S.W. direction, to the middle of Portage Island, a distance of 6 miles, the shallows run off about $1\frac{1}{2}$ mile; from thence they run, in a S.E. by S. direction, 6 miles, to the entrance of the Ship Channel; in the latter distance the shoals run off full 3 miles from Fox's Island and the south part of Portage Island. The south side of the bay, from Huckleberry Island to the pitch of Escuménac Reef, is likewise bordered by an extensive flat, the eastern part of which, for full 3 miles, reaches 2 miles from the shore; but when you draw near the pilots' houses and the south beacon, you may approach within a mile of the shore: but you cannot approach the land so near in any other part of the bay as off the south beacon.

The *Bar of Miramichi* should never be attempted, in a large vessel, without a pilot. The Miramichi pilots are generally found cruising about off Point Escuménac, in small schooners; but should you not meet with a pilot off Point Escuménac, and too late in the day to cross the bar before dark, you should stand off and on till day-light, and not shoal your water to less than 12 fathoms, particularly with the wind from the eastward. The *bar* commences from the S.E. end of Portage Island, and extends across the main entrance nearly 6 miles, in a S.E. by S. direction; it is of sand, with only a foot or two of water on it in some places; but near to Portage Island there is a narrow channel for small vessels. The mark to clear the S.E. extreme of the bar is, the French village kept in the centre of the Fox Gully, bearing W. $\frac{1}{2}$ S. A black buoy is moored at the S.W. extreme of the bar, in 3 fathoms,* to be left on your starboard hand going in; and a mile N.N.W. from this is a red buoy, in 3 fathoms, on the *Lump*, which must be left on your port hand going in. From this red buoy you have a clear, straight channel, nearly $\frac{1}{2}$ a mile wide, running in a N.W. $\frac{3}{4}$ N. direction for 3 miles, and 4 to 7 fathoms deep, until you arrive at the Spit buoy, which is also a red buoy, and must likewise be left on your port hand going in.

There are two beacons on the north point of Fox's Island, on the sand-hills, one red, the other white. On the eastern side of the Horse-Shoe are four buoys, three red, and the westernmost black. The shoal of the Spit trends west, nearly a mile, from the buoy. Leave the red buoy on the Spit close on your port hand, and steer W. by N. from it towards the eastern red buoy of the Horse-Shoe, a little more than $\frac{1}{2}$ a mile, or till Fox Island and the west end of Egg Island come in one, S.W. $\frac{1}{2}$ S.; then steer W.S.W. towards the N.W. point of Vin Island, passing, at 2 or 3 cables' lengths, the north point of Fox Island, until the two beacons on it come in one, bearing S.E. $\frac{3}{4}$ E.; then haul up immediately N.W., keeping the beacons exactly in one, till within $\frac{1}{2}$ a cable's length from the easternmost buoy of the Horse-Shoe; then instantly bear up, keeping without the line of the buoys. The course past the three red buoys is W. by S., and the depth 15 to 21 feet at low water, spring-tides. From the western red buoy to the black buoy, the course is S.W. by W. $\frac{1}{2}$ W.

The ship may be safely anchored, in 3 or 4 fathoms, near this buoy, bottom mud. From the inner black buoy of the Horse-Shoe, the course across the inner bay is W.N.W., 5 miles, to the entrance of the river off Oak Point beacon, depth 3 to 2 $\frac{3}{4}$ fathoms.

MIRAMICHI is a place of great trade, and a free warehousing port; and the different towns on its banks are rising in importance, notwithstanding the severe blow it received by the destructive fire in 1825. Large quantities of timber are annually shipped here; and the salmon and Gaspereaux fisheries are also carried on in their season. The four principal towns are Chatham, Douglastown, Newcastle, and Nelsontown.

CHATHAM is the principal town on the Miramichi; it lies about 17 miles to the westward of the Horse-Shoe Bar; its population is about 1,500; it extends along the south

* From this buoy the south white beacon bears S. by E. $\frac{3}{4}$ E., 2 miles.

shore about $1\frac{1}{2}$ mile. Here vessels lie in 6 to 8 fathoms, close to the wharfs. It has some good houses, and an English Presbyterian and Roman Catholic Church, besides Wesleyan and other chapels. Here are likewise saw and grist mills, which form the most remarkable objects.

DOUGLASTOWN is on the north shore, about $1\frac{1}{2}$ mile above Chatham; it contains about 400 inhabitants; it has water at its wharfs for the largest ships. It is finely situated, on a rising ground. The principal building is the Marine Hospital, built of stone. On the opposite side, on the south shore, is the English Episcopalian Church of St. Paul.

NEWCASTLE is nearly 2 miles farther up the river, on the same side. This is the county town, containing the jail and court-house; also some good houses, and a Presbyterian Church and Wesleyan Chapel. It stands in a very pleasant situation, and contains about 1,000 inhabitants. Here are 6 or 7 fathoms water close to the wharfs of the town.

NELSONTOWN is the last village; it is a straggling place, with 200 or 300 inhabitants, chiefly Irish. Here is a large wooden Roman Catholic Church; it stands on the south shore, opposite the east end of Beaubera Island. The river is navigable as far as Beaubera Island for any vessel that can cross the Horse-Shoe Bar.

TIDES.—It is high water at Maramichi Bar at about 4h.; spring-tides rise 5 feet, neaps 3 feet. At Sheldrake Island, at 6h.; spring-tides rise 5 feet, and neaps 3 feet; the ebb-tide runs at the rate of 3 miles an hour in the Sheldrake Channel. It is high water at Beaubera Island, on the full and change days of the moon, at 6h. 30m.; spring-tides rise 6 feet, neap-tides 4 feet; the ebb runs at the rate of 2 knots, and the flood about a knot. At the rapids, in both the S.W. and N.W. arms, the tides flow until 8h., and they rise here about 2 feet.

VIN HARBOUR lies on the south side of Vin Island, which is covered with wood. The west end of Vin Island lies nearly $4\frac{1}{2}$ miles W.S.W. $\frac{1}{2}$ W. from the north point of Fox Island; and round it and the sandy S.W. point is Vin Harbour, perfectly sheltered from all winds, and with water sufficient for the largest ships. A pilot will readily be procured to take the ship into the harbour. There is good anchorage in the eastern part of Vin Bay, about $\frac{1}{2}$ of a mile to the westward of the island, in 3 fathoms, muddy bottom, and $3\frac{1}{2}$ miles W.S.W. from the inner black buoy of the Horse-Shoe.

From Point Escumencac to Miscou Island N.E. point, the course is N.E. by N., distant 58 miles. The coast between is low, and wooded, with sand-bars and beaches, enclosing several lagoons, the entrances to which are called gullies, nearly all of which have *shifting bars* before them, but they all admit shelter for boats. In the whole distance there is not any harbour for shipping, until you arrive at Miscou Harbour, which is on the S.W. side of the island of Miscou. Fine-timber and deals are cut, and brought down the Rivers Tracadie and Pocomouche; the former 15 and the latter 6 miles S.W. of the Shippigan Gully, which separates that island from the main. The timber, &c. from the two rivers above mentioned is rafted along shore, to be shipped at Miramachi or at Shippigan.

The *Shippigan Gully* lies 22 miles from the north point of Miscou; it has a *sand bar* and a rapid tide, and a dangerous heavy surf, occasioned by easterly winds. The passage over the bar and into this gully is difficult and dangerous to strangers, but is often used by the fishermen in their small schooners. The whole of this coast may be safely approached to 5 or 6 fathoms, or to 10 fathoms at night, as will be seen by the chart.

CHALEUR BAY.—Miscou Island on the south, and Point Macquereau on the north, form the entrance to Chaleur Bay, and bear from each other N.N.W. and S.S.E., distant $14\frac{1}{2}$ miles. From the entrance of Chaleur Bay to that of Ristigouche Harbour, which is at its head, the distance on a west and N.W. by W. course is 25 leagues. The bay is of moderate depth, as will be seen by the chart; its navigation is by no means difficult. There are some dangerous *shoals*, but every where good warning by the lead. The climate within the bay is warmer, and the weather finer than it is outside; there are seldom fogs with southerly winds, but easterly winds bring rain and mist. The southern coast of New Brunswick is much lower generally than the opposite coast of Canada, except between Bathurst and Carraquette, where the cliffs of red sandstone are 200 feet in height. The tides are easy and regular within the bay, seldom amounting to a knot an hour.

Vessels bound into Chaleur Bay should endeavour to make the island of Miscou, as the bank extending about 22 miles to the eastward will give sufficient warning to a vessel approaching this part of the coast. The northern edge of the bank, in 30 fathoms, is 7 or 8 miles to the northward of Birch Point, and passes the north point of Miscou at the distance of 4 miles, and forms a sure guide up the bay at night or in hazy weather. The shoalest part of the bank will be found on an east line from Point Birch, where, for the first 6 miles off shore, there are $5\frac{1}{2}$ to 7 fathoms, rocky bottom; it then deepens to 12 and 17 fathoms, red sand, rock, and shells, for the next 9 miles; it then soon deepens to 20 fathoms 7 miles farther, with 20 to 30 fathoms, red sand, gravel, and shells.

Vessels should not attempt to make Point Maquereau in foggy weather, which to the eastward is so bold, that there is very little warning by the lead; but when within the bay, from Port Daniel westward, the 30-fathom line extends some distance off from the north shore, which line should be kept while you are to the eastward of Carlisle. The soundings are generally sand and shells on the banks; but in the centre parts of the bay it is black and brown mud. A good look-out should always be kept for the numerous fishing schooners* generally riding on these banks during the summer-months, as easterly winds almost always bring on fogs.

The north point of Miscou will be distinguished by a green mound, or grassy sand-hill, and the shallow water does not extend more than $\frac{1}{2}$ of a mile off shore; but to the eastward, opposite a small lagoon, where there are several huts and fishing-stores, shallow water, to 3 fathoms, stretches off a mile north-eastward, and there are 5 fathoms $2\frac{1}{2}$ miles off. From the S.W. part of Miscou Island an extensive flat runs off in a N.W. direction full $4\frac{1}{2}$ miles to 5 fathoms, and $2\frac{1}{2}$ miles off to 3 fathoms; and they continue to run 4 or 5 miles N.N. Eastward from the harbour.

Shippigan Flat lies to the westward of Miscou Flats, leaving a narrow, intricate channel of 8 or 7 fathoms, which leads into Miscou Harbour, between them. This is the northernmost of the Shippigan Shoals, and has only 6 feet water on some parts of it; its north side is $2\frac{1}{2}$ miles from Shippigan Island, and may be approached within 6 fathoms by a large vessel, and to 3 or 4 fathoms by smaller vessels. The western part of this flat forms the eastern boundary of Shippigan Sound.

MISCOU HARBOUR lies between Miscou and Shippigan Island, and just within the sandy spit at the S.W. point of Miscou, where there is 4 to 6 fathoms, for upwards of a mile in length, and 2 cables' length wide; this part forms the harbour for large vessels; but the harbour is extensive for small vessels, in 10 to 15 feet, bottom soft mud. There is a gully on the eastern side of the harbour, where boats can enter from the sea at high water. This place is much frequented by the American fishermen, who are good pilots for it. The channel leading into the harbour between the Miscou and Shippigan Flats, is only 170 fathoms wide in one part, and both the flats are steep-to, giving no warning by the lead. Only small vessels ought to attempt this harbour without the assistance of a good pilot, or having first buoyed the channel. It is high water at 3h. 30m; spring-tides rise 5 feet, neaps 3 feet.

FISHERMAN'S LEDGE.—This is a dangerous bed of rocks, with only 10 feet water on some parts; it lies to the northward of Carraquette Bank, and is separated from it by Fisherman's Channel, which is 7 to 4 fathoms deep, and a mile wide. This dangerous ledge is $1\frac{1}{2}$ mile long in an E. $\frac{1}{2}$ S. direction, and $\frac{1}{2}$ of a mile wide from 3 fathoms on each side, and lies more in the way than any other in the Bay of Chaleur. There are no marks for it. Its northern edge lies 3 miles northward of Carraquette Island, and its east and west ends bear N.N.E. from the corresponding points of that island. Great Anse Cliff and Donax Point in one, bearing W. by N., leads through the Fisherman's Channel.

* *Notes on the St. Lawrence Fisheries*: By Captain R. FAIR, R.N.—“In cruising near the east end of Prince Edward's Island, and running along the shore, we observed a great number of American fishing-vessels, but none near the shore, nor was there a single case which called for our interference; on the contrary, the Americans say, that a privilege has been granted them, and that they will not abuse it. Between the east end of Prince Edward's Island, to within 7 leagues of the Bay of Chaleur, we passed through a fleet of from 600 to 700 sail of American fishing schooners, all cod fishing.”—*Naut. Mag.*, June 1839.

Pokesudie Shoal.—This extensive *flat* runs off 2 miles to the north-eastward from Pokesudie Island, and has only 6 or 7 fathoms water on a great part of it. The eastern part of this shoal forms the western part of the Shippigan Channel. Carraquette steeple bearing W. $\frac{1}{2}$ S., in one with the sandy S.E. point of Carraquette Island, leads over the north point in 2 fathoms; and to clear the shoal in 4 $\frac{1}{2}$ fathoms, the steeple must be kept half-way between the extreme of the sandy point and the extreme of the trees on the same island.

SHIPPIGAN SOUND is formed by Shippigan Island and flats to the eastward, and Pokesudie Island and the main land on the west: it is an extensive place. Simon's Inlet, on the western side of the sound, at the southern point Pokesudie Island, is the best harbour in the sound; here you can lie land-locked, with water enough for large ships. On the opposite side is Alemece Harbour, where you lie perfectly secure from all winds, in 3 and 4 fathoms at low water. There is a church and village at the head of the bay. There is a *bar of mud and sand* across the entrance of Alemece Bay, reducing the depth to 2 $\frac{3}{4}$ fathoms at low water, and into Shippigan Harbour to 2 $\frac{1}{2}$ fathoms. The church and village of Shippigan stand on the south point of the bay; and 2 $\frac{1}{2}$ miles to the southward of the church is the entrance to the gully, where the tide is very rapid, but it is used by shallops and fishing boats, although there is often a very heavy surf. Shippigan Harbour has lately been visited by several vessels for timber, where they lie very secure.

The *Channel* leading from Shippigan Flats to the church is 9 miles in length, without buoys; the water is deep, but the channel is narrow and crooked, without leading-marks, and some of the banks very steep, so that an experienced pilot is absolutely necessary to navigate a large vessel into this harbour with safety. In Shippigan Harbour it is high water at 3h. 40m; spring-tides rise 5 $\frac{1}{2}$ to 6 feet, and neaps 3 feet. In the channel the rate seldom exceeds a knot. In fine weather the stream is regular, running in through the gully and through the Sound to the northward into Chaleur Bay, from about $\frac{1}{2}$ ebb to $\frac{1}{2}$ flood by the shore; and in a contrary direction from $\frac{1}{2}$ flood to $\frac{1}{2}$ ebb.

Carraquette Island is low and wooded, and 1 $\frac{1}{4}$ mile long, in a direction nearly parallel to the coast; sandy points extend from both ends of the island towards the main land, so as to form a bay, in which there is a land-locked anchorage for vessels drawing under 15 feet. To the westward of the island it is all shoal to Point Mizzenette.

Carraquette Shoal extends 4 $\frac{1}{2}$ miles to the eastward of the island, from which it dries out nearly 2 miles, and it is very shallow on all parts of it. From its east end, Carraquette steeple bears W. $\frac{1}{2}$ S., and in one with the extreme of the trees on Carraquette Island; and Shippigan steeple, *south*, in one with Pokesudie Point. This latter bearing clears the shoal to the eastward, in 3 fathoms at low water; but a large ship must keep Pokesudie bearing S. by W. $\frac{3}{4}$ W., and in one with Point Marcelle.

Mizzenette ledge of rocks, with 5 feet least water, lies N.N.W., 1 $\frac{1}{2}$ mile from the west end of Carraquette Island. Donax Point just open of Mizzenette Point W.N.W. $\frac{3}{4}$ W., clears the ledge to the northward, in 3 $\frac{1}{2}$ fathoms; and also leads along the north side of the Carraquette Shoals, but will lead over the *Scallop Patch*, of 16 feet at low water, rocky; when on this patch, Carraquette Church steeple and the N.W. end of Carraquette Island are in one; the S.E. end of the island will then bear S.S.W. $\frac{1}{2}$ W., distant 2 miles: keep along the northern edge of Carraquette Shoal in 4 fathoms.

THE HARBOUR OF CARRAQUETTE.—The *channel* forming the entrance to the harbour lies between the Carraquette and Pokesudie Shoals for about 2 $\frac{1}{2}$ miles, and it has water enough for the largest ships, but it is crooked, about 2 $\frac{1}{2}$ cables' length wide, and very steep to the edge of the shoals, and being without good leading-marks, it becomes a very difficult channel. The *harbour* commences immediately to the westward of Pokesudie Island, and extends westward between the main land and Carraquette Island and Shoal. Carraquette Church stands conspicuously on a ridge opposite Mizzenette Point, and the fish stores and houses of Lower Carraquette will be seen farther eastward opposite the island.

Between the island and the main the channel is only 120 fathoms wide, and 2 $\frac{1}{2}$ deep, but farther westward it becomes wider, and has a depth of 4 $\frac{1}{2}$ fathoms; within the harbour the bottom is mud, but the entrance is of sand. Although an excellent harbour for merchant-vessels of large burthen, it is an exceedingly dangerous place for a vessel to attempt without a pilot. Winds from N.W. round north-easterly to S. by E. are

fair for going in. Vessels from the westward should pass outside of Fisherman's Ledge, not going to the southward into a less depth than 6 fathoms, until Pokesudie and Marcell's Points come in one, S. by W. $\frac{1}{2}$ W.; you must then haul up upon those leading marks, and enter the channel as from the eastward. A small vessel may pass through the Fisherman's Channel. The tides rise from 6 to 3 feet, and they seldom run stronger than a knot an hour.

From Point Mizzenette to the Bar of Bathurst, a distance of 9 leagues, the coast is all clear of dangers, except *Norton Shoal*, of 3 fathoms, which lies a mile to the westward of Norton Point, and 3 leagues eastward of Nipisight; it lies $\frac{1}{2}$ of a mile from the land. The coast is generally high sandstone cliffs, and the shoal water seldom extends $\frac{1}{2}$ a mile from shore, which may safely be approached every where by the lead to 12 or 10 fathoms. At Great Anse, 8 miles from Mizzenette, there is a church and a fishing establishment; and there are settlements all along the shore. There is a small river at Pokeshaw, 3 miles westward of Great Anse, and shelter for boats at both places.

BATHURST HARBOUR, at the head of Nipisight Bay, is about 2 cables' length in width, between Carron and Alston Points; these points are of sand, with stores and other buildings upon them. There are two beacons on Carron Point, on the S.E. side, which, when kept in one, bearing S.W. $\frac{1}{2}$ S., lead in through the narrow channel over the bar, in 7 feet at low water, and 14 at high water, spring-tides. From 3 fathoms outside the bar to the entrance of the river is $\frac{1}{2}$ mile, very narrow the whole distance, and between sandy shoals, nearly dry at low water. Between the sandy points, or just outside in 3 or 4 fathoms, vessels generally moor to take in timber. It is high water at Bathurst Harbour at 3h. 15m.; spring-tides rise 7 feet, neaps 4 feet.

The *Town of Bathurst* is well situated $2\frac{1}{2}$ miles within the entrance, and at the head of the basin; a depth of 14 feet at high water can be carried up to the wharfs of the town, and vessels may lie in 14 feet at low water, in some parts of the channel; here the tide runs from $1\frac{1}{2}$ to 2 knots, and sets fairly in and out over the bar, which should never be crossed without a pilot, who are always on the look-out for vessels. *Bathurst Bar* bears from Paspebiac Point, on the Canadian shore, S.W. by W. $\frac{1}{2}$ W., distant 8 leagues.

From the Bar of Bathurst to Belledune Point, the distance is about 16 miles, between which the coast is clear, and may safely be approached by the lead; about midway between will be seen the church and village of Rochette. From Belledune Point to the east end of Heron Island, the course is N.W., 13 miles; and you may safely approach within a mile of the shore the whole distance.

HERON ISLAND is 4 miles long, in a N.W. by N. and S.E. by S. direction, with good anchorage between it and the main; but the shoals running off from each side render the channel narrow and difficult; it is from 3 to 5 fathoms deep at low water. *Heron Rock*, near the eastern part of this channel, lies nearly in the middle, and directly in the way of vessels; it has only 6 feet on it, with 4 to 5 fathoms all round it. The S.E. end of Heron Island bears E.N.E. from it, distant a mile; and a *rock*, 300 fathoms north of Beaver Point, and always above water, W. $\frac{1}{2}$ S., 250 fathoms. The latter rock is quite bold, and a vessel, by passing within 1 or 2 cables' length of it, may clear the Heron Rock on the south side. Large vessels should always take a pilot, as this is an intricate and dangerous channel.

Nash River.—Vessels sometimes load timber in the bay off this river; they moor in 4 fathoms mud, with the east point of Heron Island N. by W., $2\frac{1}{2}$ miles, and Black Point N.W., about a mile. There is good anchorage at the west end of Heron Island, between it and the River Carlo; this latter river only admits boats.

DALHOUSIE ISLAND is 2 cables in length, rocky, high, wooded, and joined to the main by a *shoal* that dries to the low point of Dalhousie, where there are large storehouses belonging to the town of Dalhousie; the town and church will be seen pleasantly situated by the south side of a hill, S.W. of the island. About 3 cables' length to the westward of the island, is a small islet at the end of a sandy spit; this islet forms the western side of the shallow bay of Dalhousie, and a *shallow bank* runs from the island to the islet; along the north edge of this bank the timber-ships lie to load their cargoes, in 6 or 7 fathoms.

Dalhousie Harbour may be entered either from the eastward, between Dalhousie Island and the Middle Ground, or from the north-westward, by passing round to the

northward of the Middle Ground; in the western passage is most room, but you must cross a *flat* of 3 fathoms at low water, but the eastern passage is only $1\frac{1}{2}$ cable's length wide; it is 6 fathoms deep, and quite safe. The *Middle Ground*, which lies on the north side of the harbour, opposite the island, is $5\frac{1}{2}$ cables' in length, N.N.E. and S.S.W., and 4 cables in breadth, with 6 feet on its eastern and shoalest part, and a black buoy is placed on its N.E. point. The channel between this part of the Middle Ground and main land to the eastward, is about $\frac{1}{2}$ of a mile wide, with 12 to 15 fathoms in it; here the tide runs about 2 knots.

Ships bound to Dalhousie Harbour may, when off Charlton Point, with the point bearing north, distant 5 miles, steer N.W. by W., 34 miles, which will bring them between the east point of Heron Island and Tracadigash Point; in this run you will shoal your water regularly from 12 to 10 fathoms. The leading-mark to clear Heron Island Bank, which runs from its N.E. side, is Mount Scaumenac open north of Dalhousie Island; this mark will carry them near Maguacha Point, off which a *spit* of only 6 feet runs off to the S.W., almost a mile; approaching this latter point, you must bring Mount Scaumenac open to the S.W. of Dalhousie Island; keep these marks on until you are in 8 or 9 fathoms on the New Brunswick shore, and have the *Bonami Rocks* S.W. of you, $\frac{1}{2}$ a mile, then haul to the northward, keeping in 8 or 9 fathoms, till Lalime Point, the western point of New Brunswick, comes just open north of Dalhousie Island, and the rocks and islet to the westward of it, bearing W. by N.: now steer in on these leading-marks W. by N., until you approach Dalhousie Island, leaving it 50 or 100 yards to the southward of you, and you will enter the harbour with safety, where you can anchor in 6 fathoms abreast of the town.

If bound into the harbour by the western channel, you must steer to the northward, past the buoy on the Middle Ground, rounding it at 2 or 3 cables' length: then keep on W. by N. or west, until the Church of Dalhousie bears S. by W., and midway between the island of Dalhousie and the islet to the westward of it. Steer in with the church S. by W., and it will take you across the 3-fathom flat into the harbour.

RISTIGOUCHE RIVER.—The entrance of this river lies between Maguacha Point and the Bonami Rocks, and is about 2 miles wide. The rocks bear W. $\frac{1}{2}$ N. from the point, and may be safely approached within 2 cables' length; but the *spit* off Maguacha Point must be carefully avoided. From hence to Campbell Town, at the head of the navigable river, the distance is 15 miles; the river is navigable for large vessels to within 4 miles of Campbell Town, where the channel becomes narrow and intricate. A stranger should not attempt to go farther than Dalhousie or the anchorage at Fleurant Point, which is 2 miles to the northward of Dalhousie, without an experienced pilot. The Fleurant Point anchorage is very convenient for vessels wanting supplies of wood and water; you can anchor in 7 or 8 fathoms, and leave it at any time of the tide, and with any wind.

CAMPBELL TOWN is situated on the south side of the river, at the foot of the Sugar-Loaf Mountain, which is 950 feet high. At high water vessels of 19 and 20 feet water can get up to the town, and lay afloat at low water. It is high water at Campbell Town at 4h.; spring-tides rise 9 to 10 feet, neaps 7 feet.

Carlton Road.—This is an excellent roadstead, affording an extensive anchorage, in 6 to 7 fathoms, and is situated in the bay on the west side of Tracadigash Point. Within this point is the entrance to a small lagoon, which boats can enter. On the north side of this lagoon stands the village of Charlton, with its church; the village extends along the north shore of the bay a considerable distance to the westward. The west side of this bay is shallow some distance off. Carlton Mountain lies immediately to the northward of the village, and is 1830 feet high. The best berth to anchor is with Carlton steeple E. by S., and Tracadigash Point S. by E. $\frac{1}{2}$ E. The tides in this bay are very weak. *Tracadigash Spit* runs off $\frac{1}{2}$ a mile from the sandy point, and must be carefully avoided when taking or leaving the anchorage. The mark to clear the spit, in 5 fathoms, is Mount Dalhousie just open south of Point Maguacha, bearing about W.N.W. $\frac{1}{2}$ W.; at night come no nearer than 10 fathoms. When Carlton Church steeple bears N.E. by E., you may haul to the northward for the anchorage, coming no nearer than 7 fathoms, until the point bears southward of east.

CASCAPEDIAC BAY.—From Tracadigash Point to Black Point the bearing is E. by S., distant 13 miles; between lies the capacious Bay of Cascapediac. At the head of the bay is the river of that name, but it can only be entered by boats. There are

extensive shallows at the head of the bay, as will be seen by the chart. Black Point is 400 feet in height, bold, and rocky. The west side of the bay is all settled by French and Arcadians.

RICHMOND.—This village, with its church, stands well within the bay on the eastern side, nearly 4 miles N.N.W. of Black Point, and a mile to the northward of Indian Point. The anchorage for the timber ships is before the town, in 3 fathoms, with the church bearing N.E. $\frac{1}{2}$ E., and Black Point S.E. $\frac{1}{2}$ S.; you may anchor farther out in 5 or 6 fathoms, but not so well sheltered. When coming towards Richmond from the east, in order to avoid the *shoal* that stretches off to the westward $1\frac{1}{4}$ mile from Indian Point, keep Red Point well open of Black Point S.E. $\frac{1}{2}$ E., and come no nearer than 4 or 5 fathoms, until the church bears N.E. by E.; then steer for it, and anchor as before.

Bonaventure Point lies S.E. $\frac{1}{2}$ S., 16 miles from Black Point, and 7 miles from Red Point; Bonaventure River lies 2 miles northward of the point, and has only 2 feet over the bar. A *rocky shoal* runs off from the point to the westward, nearly a mile, and continues at some distance from the shore to near Red Point.

CARLISLE POINT lies 5 miles E.S.E. from Bonaventure Point, and forms the western point of Paspebiac Bay, which is an excellent roadstead, and here is the principal fishing establishment in the Bay of Chaleur. New Carlisle is the county town, and the court house and jail can be seen from the anchorage: the point is wooded, and consists of sand.

Paspebiac Point, which is $3\frac{1}{2}$ miles to the eastward of Carlisle Point, and forms the eastern point of the bay, is a triangular point of sand and a shingle beach inclosing a small lagoon. The town is considerable, although straggling along the coast; and there is an English and Roman Catholic Church. On the west side of the point are a number of fishing-huts, and the extensive white buildings belonging to the fishing-establishment of Messrs. Robins & Co., of Jersey. Vessels lie in this excellent roadstead, sheltered from S.E., round north, to west, although open to southerly winds. Jersey vessels lie moored here all the season: the holding-ground is excellent. A *sandy spit* runs out south-westward, nearly $\frac{1}{2}$ a mile from the point. The best berth to anchor is in 6 fathoms, clay, with the sandy point S.E., and Robins' flagst. ff east.

In rounding Paspebiac Point from the eastward, keep Daniel Hill open to the southward of Nouvelle Point E.N.E. $\frac{1}{2}$ E., until the Roman Catholic Church opens to the westward of the south end of the sandy spit N. by E. $\frac{1}{2}$ E.; keep the lead going, and steer towards Carlisle Point, until Robins' store and the Roman Catholic Church come in one N.E. $\frac{1}{2}$ E.; now haul in to the northward for the anchorage by your lead, taking care to give the west side of the spit a berth in going in.

Nouvelle River is $5\frac{1}{2}$ miles to the eastward of Paspebiac; it has 2 feet on the bar at low water, and will be known by its stages and fish-stores; its west side is a high cliff of red sandstone. From Nouvelle River to the west point of Port Daniel, the course is E.N.E. $\frac{1}{2}$ E., distant 3 leagues; this part of the coast is bold-to, and nearly straight. Daniel Hill, which is about 400 feet high, and stands about a mile to the westward of the point, will serve to point out the port.

PORT DANIEL.—This is a fine deep bay, with a river at the northern part of it; it is of a moderate depth of water, having 7 fathoms in a line between the points, decreasing to 5 and 4 fathoms towards the river, which will only admit boats at high

* *Notes on the St. Lawrence Fisheries:* By Captain R. FAIR, R.N.—“At Paspebiac is by far the most important and most extensive fishing establishment in the gulf. It belongs to the firm of Robins & Co., who have very extensive stores at this place: they build ships of considerable burthen, and send them loaded with fish to all parts of the world; their chief markets are the Brazils and Naples. They employ in the trade, from this place, four ships, three brigs, and a schooner, amounting to about 1500 tons, their crews about 150 men.”

“We left Chaleur Bay and proceeded to the Magdalens, anchored in Pleasant Bay 19th of May (1838). We found the herring fishery had commenced (chiefly in the Harbours of Amherst and House Harbour), by about 146 sail of American fishing-schooners, of from 60 to 80 tons, each carrying 7 or 8 men. It is computed that the American schooners average nearly 700 barrels each, and the barrel is valued at one pound sterling, making for the 146 sail then in the bay, a presumed product of 100,000 barrels, value £100,000; the tonnage employed about 10,000 tons, and the number of men 1000.”—*Naut. Mag.*, June 1839.

water. There are several houses and stores near the river; and wood and water may be obtained. The bay is open to easterly winds; and the west side of the bay is shallow nearly $\frac{1}{2}$ a mile off from the West Point round to the river. Pillar Point is the eastern point of the bay; about $\frac{1}{2}$ of a mile within it is White Point, known by its colour; about midway between White Point and West Point, in 6 fathoms, is the best anchorage; but easterly winds send in a heavy swell, and on their appearance you ought to leave this anchorage.

Macquereau Point lies 6 miles to the eastward of Pillar Point; about midway between is Red Point, known by its colour. Point Macquereau is about 200 feet high, and covered with wood. From Macquereau Point to Cape Despair the course is E.N.E. $\frac{1}{2}$ E., 23 miles. In the bay between are the fishing establishments of Newport, Great and Little Pabou, and Grand River: the latter is a considerable stream; here is a village and extensive fishing establishment.

CAPE DESPAIR, the N.E. point of the bay of Chaleur, is of a moderate height; it consists of red sandstone cliffs. Nearly S.S.E., $1\frac{1}{2}$ mile from Cape Despair, lies the *Leander Rock*, on the shoalest part of which is 16 to 18 feet; it is about $\frac{1}{2}$ of a mile in diameter: as this rock lies in the fairway of vessels coming from the northward for Chaleur Bay, it should be avoided by giving the cape a berth of 3 miles. In clear weather, when the marks can be seen, Perce Rock kept well open of White Head, will lead clear outside of the shoal. There is a good channel between the cape and the rock; and White Head kept in the middle of Perce Rock, will lead through this inner channel, in 15 or 16 fathoms.

Bonaventure Island lies E. by N., 7 miles from Cape Despair; it has bold perpendicular cliffs on all sides, except the west, rising in places to 250 feet above the sea. From its west side shoal water runs off nearly $\frac{1}{2}$ of a mile. Between the channel and Perce Rock the channel is $1\frac{1}{2}$ mile wide, and free from danger.

PERCE ROCK is 288 feet high, precipitous all round, and bold to seaward; it is about $\frac{1}{2}$ of a mile long, in a S.E. direction; between this rock and White Head is Perce Bay, and along its shores is the town of Perce, chiefly inhabited by persons engaged in the fisheries. From Perce Rock, nearly half-way across, the shoal water runs nearly $\frac{1}{2}$ of a mile; and *Perce Reef*, which is rocky, runs off $\frac{1}{2}$ a mile from the centre of the town; although small vessels anchor on each side this reef, it is not a safe roadstead for shipping. Perce Mountain is very remarkable, and can be seen at sea 40 miles off. Perce Rock is joined to the main by a reef. There is a regular tide of flood and ebb (but weak) sets through Perce Bay; but a few miles without Bonavista Island, the current from the river St. Lawrence runs to the southward at all times.

MAL BAY is 4 miles deep, and 5 or 6 miles wide, and is entirely open to the south-eastward. The cliffs on its S.W. side are perpendicular, and 666 feet in height; a fine broad sandy beach extends across the head of the bay. There is a river at the N.W. corner of the bay, which admits boats at high water. The N.E. part of the bay has low cliffs. There is anchorage round the shores of this bay; but it cannot be recommended as a roadstead.

POINT PÉTRÉ, the south point of Gaspé and N.E. point of Mal Bay, is low, and covered with white houses. Flat Island lies 4 cables' length eastward of the point; it is small, and low. There is a clear channel of 5 to 9 fathoms between it and the island, but no anchorage. Cape Gaspé bears from Flat Island N.N.E., 7 miles.

GASPE BAY.—This fine bay has a good outer roadstead, off Douglstown, on the south side, and a fine safe harbour at its head, capable of holding a large fleet in safety; also a basin, where ships might be refitted or hove down. From Flat Island to Sandy Beach Point the course is N. by W. $\frac{1}{2}$ W., 16 miles; and from Cape Gaspé N.W. $\frac{1}{2}$ N., $11\frac{1}{2}$ miles. The southern shore presents a succession of steep cliffs, which are 200 feet high; but inland, a few miles, the mountains rise to 1,500 feet in height; all along this shore shoal water runs off from the cliffs nearly $\frac{1}{2}$ a mile.

CAPE GASPÉ is a remarkable headland, its N.E. side being all high cliffs, nearly 700 feet in height. *Flower-Pot Rock* lies close to the cape, and is a remarkable object; and for 5 or 6 miles within the N.E. side of the bay, is covered with houses, chiefly fishing establishments belonging to Jersey merchants. This part of the bay is free from danger, except the *Seal Rocks*, which lie about $6\frac{1}{2}$ miles within Cape Gaspé, and a mile S.E. of Cape Brule; this reef has only 4 feet water on its shoalest part, is about $\frac{1}{2}$ a

nile long and $\frac{1}{4}$ of a mile wide. The mark for the outer edge of this shoal is, Cape Brule in one with the next cliffy point up the bay; therefore, when beating, keep Cape James well open of Cape Brule.

DOUGLAS TOWN stands on the south side of the river St. John, on a rising ground. The water, which is deep at the outer part of the bay, shoals regularly as you approach the anchorage off Douglas, where there is plenty of room, in any depth between 5 and 10 fathoms, sand and clay bottom; anchor, with the entrance of the river St. John N.W. by W., in 6 to 8 fathoms, and you will be a full mile from the entrance. Water may be obtained at the river St. John, about 2 miles within the entrance.

Cape Haldimand is a bluff cliff, about 2 miles northward of Douglas; from the N.E. side of which Sandy Beach Point runs out, in a northerly direction, and forms Gaspé Harbour; it is a narrow, low point of sand; the side next the sea is shallow near $\frac{1}{2}$ a mile off, as will be seen by the chart; but the inner, or western side, is bold and steep-to; on the eastern side it is also very steep immediately outside the shallow water, which extends from the beach; this renders it very dangerous at night, as the lead gives so little warning.

The peninsula lies on the opposite side, about a mile to the northward of the Sandy Beach Point; it is low, and covered with trees, having several sheds near its west point; between the shoals that run off from the north end of Sandy Beach Point, and those that extend eastward from the peninsula, is the entrance into Gaspé Harbour, which is only about 4 cables' length wide, and 10 to 11 fathoms deep, mid-channel.

GASPÉ HARBOUR.—When you get within Sandy Beach Point and the peninsula, you are in the harbour of Gaspé, and completely sheltered from all winds; bottom mud, and the deepest water 11 fathoms. Within the harbour the river divides into two branches, called the N.W. and S.W. arms; within the latter is the basin, where a great number of vessels may lie as securely as in a dock. The town of Gaspé is on the south side of the entrance to the basin, and along the shores of the basin the principal inhabitants reside; and here is the custom-house. Several schooners are employed in the whale-fishery from this place; and an extensive cod-fishery is carried on in the bay, chiefly by the Jersey merchants.

It is high water, full and change, at 1h. 50m.; spring-tides rise 5 feet, neaps 3 feet. Vessels having occasion to go to Gaspé to report or clear, can anchor off Douglas, and then go up to the town in a boat. A stranger, without a pilot, had better anchor off Douglas, than attempt to take the harbour on a dark night.

In the summer there is generally a land and sea-breeze, the sea-breeze setting in between 9 and 10 a.m., and continuing till sunset; it then falls calm, and the land-breeze comes on about 9 or 10 at night.

When entering *Gaspé Harbour*, the mark for the north end of Sandy Beach Point is, Point Panard, (a woody point on the north shore, nearly 3 miles within the peninsula,) in one with the inner, or north side of the whale sheds on the peninsula point. The spruce-trees on the peninsula are to the northward of the whale sheds. The marks to lead in clear of Sandy Beach Point are, the extremity of the spruce-trees on the peninsula in one with Point Panard, bearing N.W., a little westerly; keep this mark on until the windmill (which stands on the inside of Sandy Beach Point, near the main land,) comes in one with the inner, or west side of the end of Sandy Beach Point, bearing S. $\frac{1}{2}$ W., when you must haul to the westward for the anchorage, or proceed for the basin.

When working into the harbour, you must, when standing to the southward towards Sandy Beach Point, tack as soon as the leading-mark comes on; but when standing to the northward you may go by the lead.

CURRENTS.—Off Cape Gaspé the currents set strongly to the southward towards Flat Island, sometimes 2 knots, which ought to be carefully guarded against when making for this bay with a northerly wind. When this current meets the swell from the southward, it causes a high short-breaking sea from Cape Rozier across the entrance of Gaspé Bay. In light winds a vessel becomes quite unmanageable in this sea. Vessels approaching the coast in this vicinity, should, at night, or in dark weather, keep the deep-sea lead going, as soundings extend a great distance from the land.

VIII.—NORTH COAST OF THE RIVER ST. LAWRENCE,
FROM THE RIVER ST. JOHN TO POINT DE MONTS, AND FROM
THENCE TO POINT MILLE VACHE.

Variation 22° westerly, decreasing to 14° at Quebec.

FROM the River St. John to the Great Boule Island, which is the easternmost of the Seven Islands, the course is W. by N. $\frac{1}{2}$ N., distance 77 miles. The coast is only partially wooded; the hills next the sea seldom exceed 200 to 300 feet in height; but a short distance back they form a range of greater elevation, from 500 to 700 feet in height, and no where exceeding 1000 feet. The appearance of this part of the coast, from a vessel in the offing, is so much alike, that it is difficult to make out one part of it from another. Mount St. John, lying N.E. $\frac{1}{2}$ N., 11 miles from the mouth of the River St. John, is 1416 feet in height, and readily distinguished. Although this coast appears bold, it should be approached with caution, for there are several *rocks* along it, both above and under water; several of them are very dangerous, and nearly a mile from the shore.

The River St. John.—The entrance of this river lies in latitude 50° 17' north, and longitude 64° 23' 30" west; it is a large stream, frequented by fishing schooners early in the season. The entrance is 130 fathoms wide; between a sandy point on the east and clay-cliffs on the west, immediately within the entrance, the breadth increases to nearly $\frac{1}{2}$ a mile, and then gradually decreases again. There are two log-houses on the west bank, about $\frac{1}{2}$ a mile within the entrance, where the salmon fishermen reside, and vessels lie in 12 feet at low water, close to them. This river has a *shifting bar*, $\frac{1}{2}$ a mile outside the entrance, rendering it impassable with south-westerly winds; there are only 3 or 4 feet on the bar at low water, and 7 to 10 feet at high water. There is good anchorage outside the bar, shoaling gradually to 3 fathoms $\frac{1}{2}$ of a mile off.

Maggie Point lies W.N.W., 8 miles from the River St. John; between them is Magpie Bay, in which there is good anchorage with off-shore winds, in a moderate depth of water. Magpie River discharges itself by a rapid stream near the centre of the bay; the entrance is only 10 fathoms wide, and just within it there is a waterfall of 30 feet, so that even boats cannot enter. Nearly a mile westward of the river, and $\frac{1}{2}$ of a mile off shore, is a *rocky shoal*, on which the sea breaks; a heavy sea sets in with southerly winds.

Ridge Point lies W.N.W. $\frac{1}{2}$ W., $3\frac{1}{2}$ miles from Magpie Point. From the former a *long narrow ridge* extends $4\frac{1}{2}$ miles to the westward, with 4 to 6 fathoms on it, all rocky ground; within this reef there is one large and several small islets. There are 20 fathoms just outside the ridge, and a heavy sea on it sometimes.

Sawbill River is about 8 leagues to the westward of the River St. John. It may be distinguished by the peculiar hills on each side of it, which are barren, and also by the clay cliffs just within the entrance. It can only be entered in very fine weather: it then affords shelter for boats and small coasters.

Shallop River lies N.W. by W., $7\frac{1}{2}$ miles from Sawbill River. It only affords shelter for boats, and these can only enter when there is no surf. Off this, as well as off Sandy River, $2\frac{1}{2}$ miles farther westward, there are several *rocks*, both above and under water; some of them lie full $\frac{1}{2}$ a mile from the shore.

MANITOU RIVER lies N.W. by W., $4\frac{1}{2}$ miles from Shallop River, and 35 miles westward of St. John's River. It is the largest on the coast between the River St. John and Moisie. It may be readily known by a vessel when several leagues in the offing, by two remarkable patches of clay cliff; one of these is close to the eastward, the other a mile to the northward of it. At a short distance within the entrance of this river, is one of the most magnificent waterfalls in Lower Canada; it falls 113 feet perpendicular in one unbroken sheet of water. There is good anchorage off the river in fine weather, with off-shore winds, in 15 fathoms, the entrance bearing N.E. $\frac{1}{2}$ E., $1\frac{1}{2}$ mile; small vessels may anchor farther in-shore. There is a *small rocky shoal* lying W. by N., $2\frac{1}{2}$ miles from the entrance of the river, about $\frac{1}{2}$ of a mile from the land.

Basin River lies W.N.W. $\frac{1}{4}$ W., 10 $\frac{1}{2}$ miles from *Manitou River*; it is only fit for boats. There are rapids $\frac{1}{2}$ of a mile within the entrance. *Cape Cormorant* is $\frac{1}{4}$ mile to the westward of *Basin River*. *Beaskowitz Point* is $5\frac{1}{2}$ miles W.N.W. $\frac{1}{4}$ W. from *Cape Cormorant*; between them are the *Cormorant Islets*, joined to the shore at low water. The *Cormorant Reef* is dangerous; it has only 12 feet of water on it; it lies about a mile from the shore, and $2\frac{1}{2}$ miles W. $\frac{1}{4}$ N. from *Cormorant Point*.

Point St. Charles is the eastern point of *Moisic Bay*. A reef runs off this point, which is extremely dangerous, by being so bold, that there is no warning by the lead, and very little by the deep-sea lead. It is composed of numerous rocks, having deep water between them; some of them are always above water, but the outermost are always covered; these latter lie S.S.W., $\frac{2}{3}$ of a mile from *Point St. Charles*. Vessels beating here should guard against getting becalmed to the westward of this reef, lest the heavy S.W. swell should set them towards the reef, for the water is too deep to anchor, till close to the breakers.

Moisic Bay lies between *Point St. Charles* and *Moisic River*. It is 11 miles across, having a depth of 50 or 60 fathoms between the points. *Trout River* is nearly in the centre of the bay. The eastern shores of this bay are rocky; but the western shore, from *Trout River* to *Moisic River*, is a bold sandy beach. *Seal House Cove*, on the east side of the bay, affords shelter only for boats.

Moisic River enters the sea at the western point of the bay, *Moisic Point* forming the western side of the entrance. This is a larger river than *St. John*, but is much obstructed by sand-bars; it has about 9 feet at low water at the entrance, but boats cannot go far up the river, on account of the rapids. The tides rise here from 5 to 8 feet. Close to the bar of this river it is very steep, having 40 fathoms close to it. From *Moisic Point* a shoal runs off in a westerly direction, $3\frac{1}{2}$ miles, forming a large triangular shoal, of from 1 to 2 fathoms. Near the S.W. extremity lies the *Moisic Rock*, of only 9 feet; this lies $1\frac{1}{2}$ mile from the shore, and is extremely dangerous, being as bold as a wall on the south and S.W. sides, and can generally be seen in fine weather, from the change in the colour of the water. When a vessel is standing in towards this rock, she should tack when the north side of *Manowin Island* comes on with the south side of *Great Boule Island*, bearing W.N.W. $\frac{1}{4}$ W.; you will then be a mile from the edge of the shoal.

Sandy Point lies N.W. by W., 9 miles from the *Moisic Rock*; between which lies *Boule Bay*, a place where vessels ought not to venture, on account of the southerly swell rolling in, as they would find it difficult to beat out. The *East Rocks* lie near the centre of *Boule Bay*; they are low, bare of trees, and always above water.

The SEVEN ISLANDS lie directly before the beautiful bay of that name; they are very remarkable, being high, steep, and thinly wooded, and may be seen 7 or 8 leagues. The two easternmost islands are named the *Great* and *Little Boule*; the former is 695 feet high; the passage between them is unsafe, on account of the baffling winds and strong tides. Westward of these are the two *Basque Islands*; *Great Basque Island* is 500 feet high. S.W. of the *Basque Islands* lie the *Manowin* and *Carousel Islands*; the former is 457 feet high, the latter is much lower, and is the southernmost of all the six islands. There are only six of these; but the peninsula which forms the western part of the bay, has every appearance of an island from a ship in the offing, and is the highest, being 737 feet above the sea. This peninsula forms the western point, and *Sandy Point* the eastern of this fine bay.

SEVEN ISLANDS BAY is completely sheltered by the before-mentioned islands; the entrance between *Sandy Point* on the east, and the high peninsula on the west, is $2\frac{1}{2}$ miles wide. A fine broad, bold, sandy beach extends for 3 miles northward from the east point of the bay, to the entrance of the principal river, near which stands the *Hudson's Bay Company's* trading post. You cannot see these houses from the outer parts of the bay; but there is a wooden store on the beach, off which vessels usually anchor. This fine bay is sufficiently extensive for the largest fleets to lie in perfect safety, and so nearly land-locked as to resemble a lake.

There are three channels leading into this bay, viz.:—The *Eastern*, *Middle*, and *Western Channels*. The eastern channel, between *Sandy Point* and *Basque Island*, is seldom used, having a rock in its centre, which is only covered at high tides, and a reef runs off to the eastward of the rock $\frac{1}{4}$ of a mile, with 6 to 9 feet on it. The principal and best channel is the middle one, between *Carousel* and *Manowin* on the

west, and the Basque Islands on the east; leaving the West Rocks and Point Chasseo on the peninsula, on your port hand; giving the latter point a berth of $1\frac{1}{2}$ cable's length, to avoid a reef that runs off 120 fathoms. The course through the middle channel into the bay is north, by compass.

The West Channel, though much narrower than the middle one, is also free from danger, being $\frac{3}{4}$ of a mile wide, between Point Croix and the West Rocks, off which there are two or three rocks lying a cable's length to the northward; therefore give the West Rocks a berth of 2 cables' length in passing. The ebb-tide is turned off towards these rocks by Point Croix, which must be attended to. No leading-marks are necessary; for simply by giving the shores a berth of 2 cables' length in every part, you may enter the bay with safety, even with the largest of ships. With a scant wind from the north-westward, this channel is preferable to the Middle Channel, as it will save a good deal of beating into the bay. The ground is not fit for anchorage until you are well within the bay. The best berth for a large ship is in 9 or 10 fathoms on the eastern side of the bay, with Sandy Point and Little Boule Island in one. You may also anchor in the S.W. part of the bay, in 13 fathoms, perfectly smooth, and land-locked.

Captain HARDY, of the *Savage*, says, this bay is so safe a shelter from westerly gales, that he strongly recommends every master of a vessel to run for it; the islands will sufficiently point it out, and the channels in are clear and bold; wood and water may be easily obtained, and the ground and shelter is perfectly good: for, he observes, it will be always totally impossible for even a fast-sailing vessel, during westerly gales, to gain ground or make any head-way up the River St. Lawrence; and a merchantman may beat about in vain, and possibly be too late in attempting to run for a roadstead, after having split her sails and harrassed her crew, for the squalls in the river are violent, and in thick weather give very little warning; but having run for the Seven Islands Bay, and anchored there, you may wait in safety for the first favourable slant, and be up at Quebec far more readily than you would do by continuing in the river beating about.

THE TIDE in the bay flows till 1h. 40m., full and change; spring-tides rise 9 feet, neaps 5 feet.

Between the west point of Anticosti and Seven Islands Bay, the River St. Lawrence is 22 leagues wide, forming a clear open sea, without any danger whatever; but to the westward of Seven Islands Bay the main land bends to the southward, until it reaches Point de Monts, between which, and the opposite shore of Cape Chatte, the river becomes contracted to about 8 leagues; the shore is bold all the way; but Point de Monts, and the land to the eastward of it, is somewhat lower than that to the westward, and there are a few places where vessels may occasionally anchor.

St. Margaret's Point lies W. $\frac{1}{2}$ S., distant 4 leagues from Point St. Croix; between which is *St. Margaret's Bay*. Nearly in the centre of the bay is the river of that name, having a bar extending $\frac{3}{4}$ of a mile from the entrance; although a large stream, it only affords shelter for boats. *St. Margaret's Point* is rocky $\frac{1}{2}$ of a mile off; and there is no warning by the lead, having no bottom at 68 fathoms within less than 2 miles of it.

Great Cawee Island lies S.W. by W. $\frac{1}{4}$ W., 16 miles from *St. Margaret's Point*. The coast between is low, and bordered with small islets and rocks close in-shore; but this part may be approached by the lead to 20 fathoms: the deep-sea soundings off this part of the coast are very irregular. Great and Little Cawee Islands are high, and bare of trees. On the N.W. side of Great Cawee Island there is a bay, in the mouth of which anchorage may be found at a cable's length from the island; here you will be sheltered from W. by S. round to N.E. and easterly; but S.W. winds blow right in, and send in a heavy sea. The entrance to this place is dangerous and intricate, and too small for large ships, yet it might be of use to a vessel in distress.

To enter this anchorage from the eastward, steer N.W., past the N.E. side of Great Cawee Island, going not nearer than $\frac{1}{2}$ a mile, to avoid the shoal off the mouth of the cove, until the point of the main land to the westward opens clear of the north side of the island. Then steer for the point of the main land, keeping it midway between the north side of the island and the large rocks to the northward of it. When you arrive between the rocks and the island, haul into the mouth of the small bay which you will see on the N.W. side of the latter, and anchor in 7 fathoms at low water.

To enter this anchorage from the westward, the best and safest way is to pass between Little and Great Cawee Islands, hauling close round the west point of the latter into the anchorage. The tides run fair through between the main and the islands, seldom exceeding $1\frac{1}{2}$ knot, but often less.

English Point lies S.W. by W., 11 miles from Great Cawee Island; between which is Lobster Bay, a good open roadstead. The anchorage is between Sproule Point, which lies $\frac{3}{4}$ of a mile westward of Little Cawee Island, and the Crooked Islands. The N.E. part of this bay is an extensive flat, dry at low water, on which plenty of lobsters are found. Here is room sufficient for the largest of ships. Penticost River enters this bay about $1\frac{1}{2}$ mile westward of the Crooked Islands; it affords shelter for boats, and even small vessels; but the entrance is only 30 yards wide, and the ebb-tide runs out rapidly. From hence to English Point is a fine, bold, sandy beach.

Egg Island lies about S.S.W., 2 miles from English Point; between which lie the N.E. Reef and North Rocks, which are low, narrow, and without trees; they are about $\frac{3}{4}$ of a mile long, in a N.N.E. $\frac{1}{4}$ E. direction. The North Rocks, which are always above water, lie 4 cables' length distant N.N.E. from the island, thence forming a black, low, narrow reef, 3 cables' length in the same direction, both towards the main. A reef, under water, runs out from these rocks in a S.S.W. direction, 250 fathoms, leaving a very narrow channel between them and the island, with only 3 fathoms in it. The N.E. Reef runs off 6 cables' length from the N.E. part of Egg Island, and is the greatest danger on the coast between Point de Monts and the Seven Islands; some of the rocks are awash at low tides.

The island and the reefs form a natural breakwater, $1\frac{1}{2}$ mile long, in a N.N.E. direction; the northern end is $\frac{3}{4}$ of a mile from the main land, and the southern nearly a mile. Within, and westward of this breakwater, is good anchorage; but it is very much narrowed by the flats running off from the main, which, opposite to the north end of Egg Island, is only about 370 fathoms. The best anchorage is to the S.W. of this narrow part, in 9 fathoms, sand. As the water is deep towards the island and reefs, a ship should have a good scope of cable with a westerly wind, lest the anchor should start, and you drive on the rocks before a second anchor can be let go; with easterly winds you drag up hill, and there is not much danger of the anchor starting. You will lie sheltered from N.E. winds, with the S.W. end of Egg Island S.E. by S., and the inner side of the North Rocks N.E. The tides are very weak, from $\frac{1}{2}$ to a knot.

There is nothing in the way entering this anchorage from the southward, the south end of Egg Island being bold. If you intend running through between the island and the main, stand to the northward to 8 or 9 fathoms, or until English Point is open $\frac{1}{2}$ a point to the northward of the North Rocks; then steer for English Point, giving the inner side of the North Rocks a berth of a cable's length, until you have passed them $\frac{1}{2}$ of a mile; you may then haul out to sea, not going to the southward of S.E. by E. till clear of the N.E. Reef. You may run through this channel from the eastward, by reversing the directions.

Calumet River lies $2\frac{1}{2}$ miles W. by S. of Egg Island. There are reefs to the S.W. of the entrance a full mile, extending 600 fathoms from the shore. Caribou Point lies $6\frac{1}{2}$ miles southward of this river; on each side of this point are sandy coves, where pilot-boats find shelter, and often stop to look out for ships.

TRINITY BAY lies N.E. by E., 2 leagues from Point de Monts, and 5 miles south-westward of Caribou Point; it is a safe and convenient anchorage for vessels unable to beat round Point de Monts with westerly winds; and pilots are often found waiting here for vessels bound upwards: but with easterly winds they take shelter in St. Augustine's Cove, about $1\frac{1}{2}$ mile to the westward of the cape.

On the N.E. point of the bay are also two large rocks; the northern one dries to the main with spring-ebbs, but the southern one dries nearly $\frac{1}{2}$ of a mile to the southward of the point. This bay is 3 miles round, and there is a river falls into it, where good water may be obtained; another stream may also be found about $\frac{1}{2}$ a mile to the westward of the west point of the bay. Wood is abundant.

To sail into Trinity Bay, either from the S.W. or N.E., come not nearer either shore than 15 fathoms until the bay opens; then haul in, and anchor in 7 fathoms, with the lighthouse on Point de Monts bearing S.W. by W. Small vessels may anchor in 3 fathoms, just within the reef, the western point bearing S.W.; and large vessels may take a berth a little farther out.

POINT DE MONTS LIGHTHOUSE stands 5 miles south-westward of Trinity Bay, and $1\frac{1}{4}$ mile N.E. by E. $\frac{1}{2}$ E. from the extremity of the cape; it stands low down and close to the sea, is of the usual form, nearly white; the lantern is elevated 100 feet above the level of the sea, and shows a bright fixed light, which may be seen 6 or 7 leagues.

A ledge of rocks lies off Point de Monts S.W. from the light, and S.E. from the extremity of the point, and $\frac{1}{2}$ a mile from the shore; there is only 9 or 10 feet water on it. Another rock, of 2 fathoms, lies $\frac{1}{2}$ a mile from the light, and there is another rock nearly as far off as the light to the E.S.E. These rocks are dangerous at night when rounding the light in thick weather; come no nearer to them than 15 fathoms at any time. Vessels being to the eastward, in a dark night, when the land cannot be seen, should tack when the light bears W.S.W., or even W. by S., if they are as near as Trinity Bay. Vessels to the westward of the light should tack as soon as it bears E. $\frac{1}{2}$ N.; when it bears east, it will be shut in by the land.

St. Augustine's Cove lies $1\frac{1}{2}$ mile to the westward of Point de Monts; it only affords shelter for boats, and pilots are often found here waiting with easterly winds. The land begins to rise considerably immediately you are to the westward of Point de Monts.

CAPE ST. NICHOLAS, a high, bare point, bears W. by N., 17 miles from Point de Monts; and 3 miles north-eastward from the cape is St. Nicholas Harbour; this is a narrow inlet between granite hills, 500 to 700 feet high, and runs in the direction of N.W. $\frac{1}{2}$ N., $1\frac{1}{2}$ mile. This harbour is very secure, and a vessel might be laid on shore and repaired as if she were in a dock. The entrance is 75 fathoms wide, and within the harbour 190 fathoms. The shoals on the east side of the entrance dry out so far as only to leave a channel 30 fathoms wide, with 5 feet in it at low water, spring-tides; but at high water there are 14 to 17 feet, bottom of sand. There are some large stones which can be seen and avoided, if not water enough to go over them. In the deepest part of the harbour are $9\frac{1}{2}$ fathoms. From Cross Point, the western point of the entrance, which is bold, the shoal water extends across a small bay to the westward of the point 400 fathoms, and off shore 100 fathoms. The anchorage between the shoals off the harbour's mouth is too much confined for large ships, being only about 3 cables' length in width, but the ground is good and depth moderate; here you may anchor, and prepare for warping in.

To enter this harbour from the bay, bring Cross Point, on which is placed a small wooden cross, to bear N.N.E.: steer for it, taking care to leave it from 30 to 50 yards on your port hand; if the wind is free enough, you must continue to run on at the same distance from the shore, on the west side, until you deepen the water. If, when rounding the point, you meet with baffling winds out, you must immediately run a line on shore on the west side; if getting stern way, drop your anchor under foot, then warp into deeper water. The bar, which commences at Cross Point, continues 200 fathoms within it, and the channel is rendered narrow by the shoals off the eastern side. In order to have the most room, you should anchor farther in than the three large rocks which will be seen on the eastern side of the harbour. To leave this harbour you should have a N.W. wind, or take the advantage of the land-breeze, or a calm morning, to warp out. The best wind to enter with is from W.S.W.; a S.E. wind, if blowing fresh, causes too much sea in the entrance, and a N.W. wind blows right out.

It is high water, full and change, 1h. 55m., spring-tides rise 12 feet, neap-tides 7 feet. Water can be easily obtained on the eastern side of the harbour, or at the head of the harbour at high water.

Point St. Giles lies W. by N., $13\frac{1}{2}$ miles from Cape St. Nicholas: it is high and rocky, similar to the coast to the eastward; but Manicouagan Point, which lies W.S.W. $\frac{1}{2}$ W., $17\frac{1}{2}$ miles from the cape, is low, and thickly wooded, with a broad sandy beach extending to the westward all the way to Outard Bay. The above change in the coast line is an excellent guide to warn mariners of their approach towards the *Manicouagan Shoal*. The entrance to Manicouagan Bay lies between the before-mentioned points, and is all dry at low water, except a few narrow channels leading up the river. The ebb-tide runs out over Manicouagan Bar, to the eastward, at the rate of $1\frac{1}{2}$ knot, and the flood is nearly as strong.

MANICOUAGAN SHOAL is of sand, with many large boulders on its eastern and southern parts; the easternmost point of this extensive and dangerous shoal lies E.S.E.,

2½ miles from St. Giles Point, and E. by N., 5½ miles from the N.E. part of Manicouagan Point. From the south point of the shoal it continues to the westward, curving with the land past Outard Point full 16 miles, and extending from the shore from 2 to 2½ miles. Near to Outard Point are all sand and clay cliffs. The tide of flood and ebb sets all along the edges of this shoal, but it is not perceptible more than 5 or 6 miles off shore. Great rippings are frequently met with without the edges of this shoal, particularly off its south point.

Bersimis Point lies S.W. by W., 10 miles from Outard Point, between which is the large Bay and River Outard; this river is full of shallows, and only fit for boats. Anchorage may be had in Outard Bay, on the west side, in 14 fathoms, with Bersimis Point bearing S.W. by W., distant 3½ miles; but the water in this bay is generally too deep for anchorage, and being open to easterly winds, cannot be recommended. Bersimis River has *sand bars* and *shoals* 1½ mile without the entrance, which dry at low water, and is, therefore, of no use to shipping. Immediately without these *shoals* the water becomes suddenly very deep (50 or 60 fathoms) within a mile from them. This point is low, of sand, and wooded with spruce-trees; it is difficult to be seen at night, and the lead affords no warning, rendering this point *very dangerous* when beating up at night or in foggy weather.

From the south point of Bersimis, Point Mille Vache bears S.W. by W. ½ W., 29 miles. Jeremy Island lies 5½ miles W. ¾ N. from Bersimis Point: a low sandy shore extends all the way between them. The island itself is low and rocky; and close to the shore, on the main, within the island, is a trading post of the Hudson's Bay Company, the houses of which may be seen 6 miles distant. Just to the eastward of Jeremy Island is a remarkable white patch in the land, which, in fine weather, looks like a church, and is a sure mark for the island.

Cape Colombier lies 5 miles to the westward of Jeremy Island; between them is a *rocky* and *broken shore*. Off this cape lies the *Gulnare Shoal*, discovered in 1830; it is a narrow ridge of granite rock, nearly 2 miles long, running parallel to the shore, having 2 to 3 fathoms over it at low water; it is very dangerous; there are 23 fathoms close to its S.W. end, and 4 to 5 fathoms between it and the shore. *Wildfowl Reef* lies 4 miles S.W. by W. ½ W. from Cape Colombier; it is a large *bed of rocks*, extending ¾ of a mile from the shore. Vessels should be careful when standing in towards this part of the coast from Wildfowl Reef to the Gulnare Shoal; 30 fathoms is near enough to approach this part.

Baie de Laval lies 4 miles to the westward of Wildfowl Reef; it will be easily known by a *rocky island* off its mouth, and the clay cliffs to the S.W. of it. The bay within is all dry at low water. Vessels may safely stand towards it; 10 fathoms being 2½ miles from the shore. Off the clay cliffs there is good anchorage, in 6 or 7 fathoms.

Port Neuf lies to the south-westward of Baie de Laval, and has another fur trading and fishing establishment belonging to the Hudson's Bay Company; this port stands 4 miles north-eastward of Point Mille Vache; and the houses and a small church can be plainly seen from a vessel in the offing. About ¾ of a mile S.S.E. from the church, upon a low narrow peninsula, there is a clump of pine-trees; this peninsula runs N.N.E. for about 2 miles, and joins the remarkable clay cliffs before mentioned. There is 7 to 12 feet water between the main and the peninsula at high water. Here small vessels may find good shelter, by laying aground on the sand at low water.

POINT MILLE VACHE lies S.W., 4 miles from Point Neuf; it is low, sandy, and wooded with spruce-trees. The *shoals* off this point narrow the navigable channel between them and Biqueette, on the opposite side, to 11½ miles; both sides are bold-to, and the greatest attention to the soundings, and a good look-out, are absolutely necessary to a vessel running up in dark nights or foggy weather. A revolving light has lately been established in Biqueette Island.

Bersimis Point bears from Father Point (the pilots' rendezvous,) N. ¾ E., distant 24 miles; and from Barnaby Island, N. by E. ¼ E., distant 25 miles. Here vessels, with the wind at west, and a flood-tide, may cross over, and engage a pilot for the river; should the wind be S.W. by W., they will do well to keep the northern land on board, until they can make certain of fetching Father Point.

The current is always strong between Mille Vache and Biqueette, running to the N.E.

When abreast of Point Mille Vache, or near it, the island of Bic will bear S.S.E.

The tide flows at Mille Vache Point, full and change, at 2h. 10m. Spring-tides rise 12 feet, neaps 7 feet.

THE SOUTHERN SHORE OF THE RIVER ST. LAWRENCE,
FROM CAPE GASPÉ TO THE ISLAND OF BIC.

SOUTH CHANNEL.—The coast of the district of Gaspé is high, bold, and rugged, steep-to, and totally destitute of harbours. About 2 leagues to the northward of Cape Gaspé is Cape Rosier; it is a low rocky point, but the shoal water only runs off about $\frac{1}{2}$ of a mile. In the bay to the southward, at the distance of $1\frac{1}{2}$ mile, there is a reef runs off $\frac{1}{2}$ a mile. Vessels may find anchorage here in 14 to 7 fathoms, sheltered by the cape from N.W. winds, but the ground is not very good. There are fishery establishments near the cape.

Griffin's Cove lies N.N.W. from Cape Rosier, distant $6\frac{1}{2}$ miles; it is of no use to shipping; but boats belonging to the fishermen find shelter in this small bay, whose houses may be seen around it. Wood and water might be obtained here. Great Fox River lies 5 miles farther north-westward; it is only a small brook, which enters a little bay, having reefs off each point. Vessels might anchor off this place in the summer months. Here is a small settlement, where wood, water, and provisions might be had; the houses will be seen on its banks.

Great Pond River lies N.W. $\frac{1}{2}$ N., 16 miles from Great Fox River; it is only a small creek, affording shelter to boats; it may be known by the houses and stages of the fishermen.

Magdalen River lies N.W. $\frac{1}{2}$ W., 24 miles from Great Pond; the mouth of this river is on the N.W. side of a sandy bay, close under Cape Magdalen, its N.W. point, off which a reef runs south-eastward 2 cables' length. This is a considerable stream, and sometimes visited by shallows and schooners of 80 tons; at spring-tides 13 feet water can be carried into this river. Vessels may anchor, in 7 fathoms, off the mouth of this river, in fine weather, at $\frac{3}{4}$ of a mile from the sandy beach.

Mount St. Louis River lies W.N.W., 16 miles from the Magdalen River, and is a much smaller stream, falling into a little bay, a mile wide, where vessels may anchor in fine weather in from 8 to 16 fathoms, mud, towards the west side, good holding ground; but it cannot be recommended to large vessels. You may easily know when you are off this river, by four large openings in the high land within the space of 10 miles; the westernmost opening is Pierre River, the next, eastward, is Claude, then Mount Louis, and, to the eastward, Great Matte River.

CAPE ST. ANN lies 26 miles farther to the westward. The mountains of St. Ann commence about 4 leagues south-westward of the cape, and continue in that direction 10 or 12 leagues; in clear weather they may be seen 80 or 90 miles; the highest peak lies 14 miles within Cape Chatte, and is 3,973 feet above the level of the sea. It is the highest land in British North America.

There is a settlement at St. Ann's River, about $3\frac{1}{2}$ leagues E.N.E. from Cape Chatte, where a few families reside, who are always ready to afford the mariner assistance, if required; but the little river of St. Ann's, as well as that near Cape Chatte, are both barred at the entrance, and afford very little advantage to shipping; but the former may be entered by small schooners at high water. The latter, called Cape Chatte River, becomes almost dry at low water, except one spot, where 10 feet water may occasionally be found; these rivers are therefore little frequented.

CAPE CHATTE is a remarkable headland, in latitude $49^{\circ} 6'$ north, and longitude $66^{\circ} 49'$ west, and known by a short sugar-loaf hill upon it; it is the most northerly point of land (by compass) on the south side of the River St. Lawrence, but the land that surrounds it, as well as that behind, is much more elevated.

This shore, along the whole extent from Cape Gaspé to Cape Chatte, although free from danger, should be particularly guarded against in dark nights, or in foggy weather; for all along it the water is too deep to afford sufficient warning by the lead for the safety of vessels; and should a vessel get on shore on this rocky coast, even if

the crew escaped, they would, in all probability, perish before they could reach a settlement.

From the N.W. end of Anticosti to Cape Chatte, the bearing and distance are W. $\frac{1}{2}$ S., 33 leagues; and from Cape Chatte to the opposite shore at Cape de Monts, the distance is only $8\frac{1}{2}$ leagues, these capes bearing from each other S.E. $\frac{1}{2}$ S. and N.W. $\frac{1}{2}$ N. The land about Cape Chatte has a remarkable appearance, the mountains being broken, notched, and irregular at their summits; this is a certain and good mark for the River St. Lawrence, for there is no land like it to the westward.

From Cape Chatte to Matins or Matane River, the coast trends W. $\frac{1}{2}$ S., distant nearly 11 leagues; the coast between them is indented with three places like bays, but no shelter on any part of the coast for anchoring. The shore is all bold and rocky.

The soundings between them, beyond the depth of 15 fathoms, are all sand, but within that depth all hard and foul. In 15 fathoms water you will not be $\frac{1}{2}$ a mile from the rocks, and in some places close to them. The water deepens very fast from 15 fathoms, so much so, that $1\frac{1}{2}$ mile from shore you will have 50 and 60 fathoms, with fine clean sand, and somewhat farther off on ground at 100 fathoms.

The tide flows, by the shore, till 2 o'clock nearly, at Cape Chatte; but the tides in the River St. Lawrence are very much influenced by the winds. Strong easterly winds make them flow much stronger and rise much higher, while westerly winds have a contrary effect. Common springs will rise 12, neap-tides 8 feet.

The shore is all very barren quite up to Matane, and nothing to be got from it but wood and water.

MATANE is a small river, of little use except to small vessels. When abreast of this river, and not more than 3 or 4 miles from it, you will see several houses, and a bluff cliff standing by itself close to the west side of the entrance. If desirous of entering, you should never attempt it without a pilot, and at, or near high water, as the bar shifts, and there is seldom more than 4 feet at low water, and 15 at high water, spring-tides. Outside the bar there is anchorage, in 5 fathoms, $\frac{1}{2}$ a mile off shore, or a little farther out, in 10 fathoms, bottom sand and clay. The entrance of the river is narrow, and a very rapid tide sets out during the ebb.

Ships may procure pilots or provisions here, if in want, or in distress; when, with a pilot and high water, they may haul close round the east side of the entrance, where the sandy beach extends $\frac{1}{2}$ of a mile to the eastward, inclosing a large space, dry at low water.

Tide flows at Matane till 2 o'clock, full and change.

When 1 or 2 leagues to the eastward of Matane, and 3 miles from shore, you will see the Paps of Matane bearing S.W.; they stand in land, to the westward of the river, and this is the best bearing to distinguish them in; Mount Camille will then bear S.W. by W. $\frac{1}{2}$ W., distant 14 or 15 leagues; this mountain appears to the northward of all the land then in sight, in the form of a circular island.

The course from Matane to the coast opposite Mount Camille, is about W. $\frac{1}{2}$ S.; between them, and 8 leagues to the westward of Matane, lies Little Matis Cove; it is a place where small vessels may find shelter from westerly winds. The coast is all barren from Matane to this place. There are several buildings and a fishing establishment on Matis Point, the outer point of the bay. A reef runs out from this point, nearly $\frac{1}{2}$ of a mile to the eastward; it is very bold on the north side, which enables small vessels to remain at anchor, in 3 fathoms, with the wind as far to the northward as N.W. Large vessels may anchor, in 5 or 6 fathoms, farther out. Vessels of this class may anchor, in fine weather, all along the coast from Matis to Green Island.

About 5 miles W. by S. from Little Matis to Grand Matis, is a small cove, with a river on the S.W. side, of no use to ships, as the cove nearly dries at low water; however small vessels may anchor there with S.W. winds, in 3 fathoms at low water, but with westerly winds they will have no shelter. Notwithstanding, vessels lie here during the summer-months, to load timber; they generally moor with the river bearing S.S.W., distant $1\frac{1}{2}$ mile, in 6 fathoms at low water, bottom mud. A vessel may occasionally anchor any where off the bay, in 6 to 12 fathoms, bottom good, and sufficient room to get under weigh. Grand Matis has risen into notice from the saw-mills erected on a fall about 3 miles up, where quantities of fine spruce deals are cut.

Little Matis is known from Grand Matis by its having a round bluff rock lying E.S.E. from the north reef, distant $1\frac{1}{2}$ mile; a little eastward of the bluff rock stands a small hill, on the mountain, in the form of a sugar-loaf. Grand Matis has a large rock standing in the middle of the cove; Little Matis has none. You must be within 2 leagues of the shore to make the cove out, for the points of land and the reefs which form the coves are very low.

The soundings from Matane to Grand Matis extend farther to the northward off the Matis's than off Matane, having 35 fathoms water, with sand, 4 miles from shore, and from 4 to 6 miles off you drop into 60 or 70 fathoms. The north edge of the bank is very steep quite up to Green Island. Within 10 fathoms water the ground is all hard and foul, and very bad landing with a boat, except in fine weather, at the coves at Little and Grand Matis. The coast between the Matis's is very full of rocks; in some places they run nearly $\frac{1}{2}$ a mile from the shore.

The tide flows at Matis till 2h. 10m., full and change. Spring-tides rise 13 feet, neaps 8 feet.

From Grand Matis to Cock Cove, the easternmost part of Father Point, the land trends W. by S., and the distance is $3\frac{1}{2}$ leagues. The ground is all foul $\frac{1}{2}$ a mile from shore; but in from 12 to 15 fathoms vessels may stop in calm weather with clean ground. The current generally runs strong down on the south shore. Mount Camille is between Grand Matis and Cock Cove, and bears from the latter S.E. by S., 8 miles, and serves to point out its position.

From Cock Cove to the west part of Father Point, the land trends due west, and the distance is 5 miles. Between the cove and point the land is low, and well stocked with houses; and the pilots live on shore here (at least many of them), as this place is the general rendezvous for them all. On the west part of the point stands a house, with the body of it painted red; it is the westernmost pilots' house. From this house to the island of Barnaby, the bearing is due west, $3\frac{1}{2}$ miles.

BARNABY ISLAND lies W. by S., 3 miles from Father Point, and between them is the Road of Rimousky; vessels lie here during the summer, and take their cargoes of lumber. The best berth is in 4 or 5 fathoms at low water, with Rimousky Church S.S.W. $\frac{1}{2}$ W.; the east point of Barnaby W. by N.; and Father Point E.N.E., good holding ground. Small vessels may find shelter from westerly winds under the east end of this island, in from 2 to 3 fathoms at low water. There is a round large stone on the reef, which runs to the eastward of the island $\frac{1}{4}$ of a mile. Cross the reef by the lead, and haul to the S.W., till the large stone bears N.W. by W., and the body of the island bears W. by N., then anchor $\frac{1}{4}$ of a mile from the island. Small vessels may likewise find good shelter from easterly and N.E. winds, under the west end of this island, in Barnaby Road; run up to the westward until the church, which stands on the main, is just open to the eastward of a bluff rocky island which lies close to the main, and due south from the west end of Barnaby; with this mark, cross the reef in 3 fathoms (which runs to the N.W. from Barnaby), and come to midway between this bluff island and Barnaby. Barnaby will then bear N.E., and you will have from 2 to 3 fathoms at low water.

The channel from Barnaby to the bluff island is $\frac{3}{4}$ of a mile wide, and all clean good ground. At high water, spring-tides, there are 12 feet water in the channel between Barnaby and the main, and at neaps 7 feet; but this becomes quite dry at low water, having many large stones here and there. Vessels of 7 feet water may run through safely between the island and the main, should they be caught at anchor at either end, by the wind shifting suddenly; but it must be at spring-tides, or nearly so. The tide flows at Barnaby Island, full and change, till 2h. 15m. There are no houses on Barnaby Island, and very little water: ships in want of water must go to the river. The Church of Rimousky is to the eastward of the river, and there are many houses directly opposite the island.

From Barnaby Island, Bic Island bears west, and Bicquette W. $\frac{1}{2}$ N. The first is $3\frac{1}{4}$ leagues distant, and the latter 11 miles; Cape Arignole bears W. by S., distant $3\frac{1}{4}$ leagues. Cape Arignole, or Original, and the east end of Bic Island lie due north and south of each other; the west end of the Island Bic bearing N.W., and the east end of the reef, which extends S.E. from the island, N.N.E.; the distance from the cape to the body of the island is about $2\frac{1}{4}$ miles.

Between Barnaby and Bic Island lies the River Ottey and Old Bic Harbour. The River Ottey bears S.W. from Barnaby, distant about 5 miles, and is of little use to shipping except to water at. Old Bic is to the westward of Ottey River, about 3 miles, and is a very good place for small vessels to lie sheltered from westerly winds. This harbour has two round islands on the east side of it, and it is $\frac{3}{4}$ of a mile from them to the west side of the harbour; anchor midway between the westernmost island and the west side of the harbour in 3 fathoms at low water, the west point bearing west, distant $\frac{1}{2}$ of a mile. When coming from the N.W. for this anchorage, keep the westernmost of the two round islands, its own breadth open to the eastward of the west point of the harbour; this will lead you clear of the eastern *rock* of the *Cape Arignole Reef*; this is the only danger in the way. A single family resides here, who occasionally can furnish you with provisions, if necessary.

Cape Arignole bears from the Harbour of Old Bic due west, and is distant about $2\frac{1}{2}$ miles. From the cape runs out a reef E. by N., a mile, and the east part of that reef, the west point of Old Bic Harbour, and the west end of the island of Bic, are in a direct line, bearing W.N.W. and E.S.E.; the distance from the east end of the reef to Old Bic Harbour is a mile. To the S.E. of the cape is a bay, of no use to shipping, being all foul ground and shoal water. Another good leading-mark to clear the eastern reef of Cape Arignole, going in and out of Old Bic Harbour, is to keep the swashway in the S.E. part of Old Bic Harbour, open to the eastward of the west point of the harbour, bearing E.S.E. $\frac{1}{4}$ S., in 4 fathoms water, spring-tides.

The swashway here mentioned is made by a river running down between the mountains. Just to the westward of the swashway the land appears like chalk, but it really is a white barren rock. It forms a very good mark for small vessels coming down from the westward, and intending to anchor at Old Bic, as the east part of the reef of the cape is covered at high water, and is all *rocks*, which dry at low water.

The high land of Bic, which lies to the southward of Cape Arignole, is 1234 feet above the sea, and bears S.W. by S., about $2\frac{1}{2}$ miles from the N.W. point of the cape.

THE ISLAND OF BIC is moderately high, and well clothed with trees: its length, east and west, is about 3 miles, and it is surrounded on the east, west, and north sides by dangerous reefs. Off its northern shore lies a woody islet, $\frac{1}{4}$ a mile long and 100 feet high, called Bicquette; this is nearly a mile distant from Bic Island: there is a narrow channel for vessels between them, but it has several *rocks* in it, rendering it intricate and dangerous for a stranger to attempt. The best time to pass through is at low water, when the dangers show; by keeping mid-channel between them you will have 5 to 9 fathoms, irregular soundings. The northern side of Bicquette is steep-to, and there are 15 fathoms water at a musket-shot distance from it.

On Bicquette Islet is a revolving light, of the first class, shown every night from the 15th of April to the 15th of December in each year. The tower is 70 feet high, and the light stands 130 feet above the level of the sea, the N.W. Reef bearing from it due west, $1\frac{1}{2}$ mile. This light revolves at regular intervals of 2 minutes. A gun (a 9-pounder) is placed near the lighthouse, and will be fired every hour during foggy weather and snow-storms.

Bicquette and Bic Reefs.—Two reefs run off from the west end of Bicquette Islet, called the *West and N.W. Reefs*. The West Reef lies in a S.W. by W. $\frac{1}{4}$ W. direction. There are two large *rocks* above water, and a third that covers at high water; these extend in a line, nearly a mile from the island. The N.W. Reef is the greatest danger; it lies due west from the west end of the island, $1\frac{1}{4}$ mile. The north extreme of Cape Arignole, kept open of the west end of Bic, clears the N.W. Reef to the westward; this reef just covers at high water, and is bold on the north side. The S.E. Reef of Bic runs off from the east end of the island $1\frac{1}{2}$ mile in an E. by S. direction, and has three *rocks* at its outer part, always above water; these rocks are bold on the north and south sides. The *N.E. Reef of Bic* is a small patch of black rocks, which show at low water, and lie 400 fathoms N.E. by E. from the N.E. point of the island. To clear this reef to the eastward, keep both the Bicoques Islets on the east side of Old Bic Harbour, open to the eastward of the S.E. Reef. The West Ground of Bic extends from the west end of the island W. $\frac{1}{4}$ S., nearly $\frac{3}{4}$ of a mile, and may be approached by the lead to 5 fathoms.

Captain Bayfield, R.N., says "There is excellent anchorage under either end of Bic, and also between it and the main land, according to the wind; and vessels which may

be met with an easterly wind, had better anchor, than attempt to beat down the estuary in long and foggy nights of the fall of the year. More shipwrecks have happened in consequence of vessels obstinately endeavouring to beat down against an easterly gale, with its accompanying fog, than from any other cause, and yet all that they may gain by such a course, might be run in a few hours of a fair wind." The new revolving light on Biquette will be of the greatest service in pointing out this anchorage at night. The tides in the Bic Channel flow, full and change, at 2h. 15m.: its velocity at spring-tides is about $1\frac{1}{2}$ knot, but strongest near the main; but between Biquette and Green Island, the eddy flood-tide runs to the eastward.

FROM BIC ISLAND, ALONG THE SOUTHERN SHORE, WITH THE ISLANDS, ROCKS, AND SHOALS IN THE RIVER, TO QUEBEC.

THE ALCIDES ROCK.—This is a danger on which H.M. ship *Alcides* is supposed to have struck in 1760, and on which there are only 4 feet at low water; it is standing on a shoal 100 fathoms long, and about 50 fathoms wide: this small but dangerous rock lies much in the way of vessels passing through the Bic Channel. It is bold-to, and lies S.W., $3\frac{3}{4}$ miles from the west point of Bic, and W. $\frac{1}{2}$ S., $4\frac{1}{2}$ miles from the N.W. point of Cape Arignole, and is about $1\frac{1}{2}$ mile from the southern shore.

S.W., distant a mile from Cape Arignole, lies the east side of the Bay Ha-Ha; it is about $\frac{2}{3}$ of a mile wide and 1 deep. Small vessels may anchor with the east part of the bay bearing N.E.; the east end of Bic Island will then be shut in with it, in 2 to 4 fathoms at low water, sheltered from easterly winds; but the bay is of no use to large vessels.

Between 2 and 3 leagues to the westward of Ha-Ha Bay, there is a small rivulet, where, in the spring of the year, there is a remarkable waterfall; and $1\frac{1}{2}$ league farther west are the Razade, or Bumper Islands.

THE RAZADE ISLANDS are, strictly speaking, two large barren rocks, appearing always above water, and bearing from each other N.E. $\frac{1}{2}$ E. and S.W. $\frac{1}{2}$ W., being about $1\frac{1}{2}$ mile apart; they are about $1\frac{1}{2}$ mile from the shore, and there is no passage between.

BASQUE ISLAND lies W.N.W. from the western Razade, distant $3\frac{1}{2}$ miles, and S.W. by W. $\frac{1}{2}$ W. from the island of Bic, distant about 6 $\frac{1}{2}$ leagues; it has a round appearance, and is covered with trees; at present there are no houses upon it, and its northern side is bold-to. Behind Basque Island, and situated on the main land, is Three Pistoles, a small settlement. There is no passage between this island and the south shore; shoal water extends $\frac{1}{2}$ a mile to the northward. There is a reef runs off from the west end, to the N.W. and west, 600 fathoms, where there is a rock that shows at half-tide.

APPLE ISLANDS lie $1\frac{1}{2}$ league W.S.W. $\frac{1}{2}$ W. from Basque Island; they are three barren rocky islets, the middle one being considerably the largest; it is about 40 feet high, and $2\frac{1}{2}$ miles from the main; but there is no passage between.

GREEN ISLAND lies to the S.W. of Apple Islands, from which its northern point is distant nearly $1\frac{1}{2}$ league; it thence continues in the direction of the land nearly N.E. and S.W., about 3 leagues: here, on a point that projects northward into the river, stands a lighthouse, which is 60 feet above the level of the sea, and exhibits a regular light from the 15th of April to the 15th of December, from sunset to sunrise, its bearings being as follow:—From Red Island E.S.E. $\frac{1}{2}$ S.; White Island E.N.E. $\frac{1}{2}$ E.; the Brandy Pots N.E. by E. $\frac{1}{2}$ E.; Apple Island W.S.W.; Basque Island W.S.W.; from the shoal at the N.E. end of Green Island S.W. by S.; and from the shoal at the west end of the island N.E. by E. To vessels either going up or down the river, the lighthouse will have the appearance of a ship, being very conspicuous, while the light will be visible 6 leagues off. There is no danger on the north side of Green Island, except the ledge that runs off the lighthouse, and which ledge stretches out $1\frac{1}{2}$ mile N.N.E. $\frac{1}{2}$ E. from it; it is covered at high water, spring-tides, but is steep-to and rocky. The extremity of the shoal lies directly in a line with Basque Island and Cape Arignole, bearing E.N.E. $\frac{1}{2}$ E. To clear Green Island Reef by day, in clear weather, keep the high land of Bic open to the northward of Basque Island.

There is a rocky reef at the western end of Green Island, which dries for a mile; the westernmost part of this reef is there detached from the dry part, and the flood-tide

sets through strongly towards Cacana. This part is only covered at quarter-tide; and when the lighthouse bears N.E. $\frac{1}{2}$ E., you will be in its direction.

Green Island Beacon.—A beacon is erected above and behind Green Island lighthouse, to lead vessels clear of *Red Island Reef*. It is white, like the lighthouse, but much smaller. When they are in one, bearing S.S.E. $\frac{1}{2}$ E. by compass, the beacon appears in the middle of a lane cut through woods behind it.

The following official notice was given of the additional buoys that were placed near the shoals, in the River St. Lawrence, in the year 1848.

NOTICE TO MARINERS. *Billiter Square, September 16th, 1848.*—Sir: I have been requested to forward to you by the Trinity Board at Quebec, the enclosed notice of the additional buoys that have been placed on the shoals in the River St. Lawrence.

W. MARKLAND.

To Captain G. A. HALSTEAD, R.N., *Secretary, Lloyds.*

Notice is hereby given, that the following additional buoys, with their bearings and depth of water, have been placed on the shoals, hereinafter mentioned, in the River St. Lawrence, viz. :—

North extremity of *Beaumont Shoal*, black, in 4 fathoms, St. Lawrence Church bearing north; Point Levi Church just open northward of Point Martinere.

West end of *Madame Island Shoal*, red, in 5 $\frac{1}{2}$ fathoms, St. Valiere Church bearing S. $\frac{1}{2}$ E.; a house on the west end of Isle aux Reaux just open to the northward of Madame Island.

West end of *Crane Island Shoal*, red, in 3 $\frac{1}{2}$ fathoms, St. Thomas's Church bearing S.S.E. $\frac{1}{2}$ E.; Middle Island and Crow Island in one; and the south side of Crane Island bearing E. by N.

North extremity of *St. Thomas's Shoal*, black, in 3 $\frac{1}{2}$ fathoms, St. Thomas's Church bearing S. $\frac{3}{4}$ E.; Haystack Island in one with the west end of Crane Island; and Point St. Valliere and Belle Chasse touching.

East end of the *patch*, east end of *Beaujeu Bank*, white, in 3 fathoms, Onion Island bearing N.W. by W. $\frac{1}{4}$ W.; and the south side of Crane Island S.W. by W. $\frac{1}{2}$ W.

Patch off St. John's Church in the Traverse, black, in 3 $\frac{1}{2}$ fathoms, St. John's Church bearing S. by E.; the high rock off Goose Island Reef, just shut in behind the south point of the South Pillar, bearing S.W. $\frac{1}{2}$ W.

Middle of *St. Rogue's Shoal*, in the Traverse, black, in 3 $\frac{1}{2}$ fathoms, the east end of Coudre Island in one with Riviere de l'Eglise, on the north shore, bearing N. $\frac{1}{2}$ W.; the wood pillar, shut in its own breadth with the south side of Goose Island, bearing S.W. $\frac{1}{4}$ W.

West end of the *Middle Ground*, north side of the Traverse, red, in 3 fathoms; the east end of Coudre Island in one with Riviere de l'Eglise, bearing N. $\frac{1}{2}$ W.; the wood pillar and Goose Island touching.

West end of *Hare Island Shoal*, red, in 4 fathoms; Kamourasca Church a little open to the westward of the large island of Kamourasca; the north side of Hare Island Reef in one with the north side of Hare Island, bearing N.E. $\frac{1}{4}$ N.

North extremity of the *Pilgrim Bank*, black, in 4 $\frac{1}{2}$ fathoms, with the west end of Hare Island and the west end of the Great Pilgrim in a line, bearing N.N.W. $\frac{1}{4}$ W. and S.S.E. $\frac{1}{4}$ E.; the west end of the Brandy Pots and White Island touching.

The *Knoll*, at the east end of Hare Island Reef, red, in 3 $\frac{1}{2}$ fathoms; the south side of Hare Island and the middle of White Island in one; the west end of Hare Island bearing N.W. $\frac{1}{4}$ W.

East end of *Middle Bank*, off the south side of Hare Island, white, 1 $\frac{3}{4}$ fathom, the east end of Brandy Pots bearing N.W. $\frac{1}{4}$ W.; the west end of Hare Island in one with the summit of the Eboulemens Mountains, bearing W.S.W. $\frac{1}{4}$ W.

The east end of *Red Island Reef*, red, in 5 $\frac{1}{2}$ fathoms, the south side of Red Island in one with the north side of Hare Island; and the beacon on Green Island open a little to the eastward of the lighthouse.

N.B. Depths are at low water, spring-tides.

Notice is hereby given, in order better to distinguish the channels of the River St. Lawrence, during the ensuing and following seasons of the navigation, all the buoys on the north side will be painted red, and those on the south side will be painted black, with the following exceptions, viz. :—

West end of Madame Island Shoal, a red buoy.

West end of Beaujeu Bank, a white buoy.

East end of the patch, east of Beaujeu Bank, a white buoy.

Patch in the Traverse, chequered white-and-black buoy.

West end of Hare Island Bank, a red buoy.

East end of the Middle Bank, off the south side of Hare Island, a white buoy.

Barret's Ledge, a chequered white-and-black buoy.

East end of White Island Reef, a black buoy.

East end of Red Island Reef, a red buoy.

—*Trinity House, Quebec, August 14th, 1848.*

CACANA is the high bluff land lying S.S.W. from the S.W. end of Green Island: the water between is deep. At $1\frac{1}{2}$ mile to the westward of Cacana, and just to the northward of the stream of it, lie the *Perce* or *Percy Rocks*; these form two clusters, about $1\frac{1}{2}$ mile in extent; they are distant from the main nearly a mile, and are almost covered at high water; but there is a narrow passage to the southward of them, with $3\frac{1}{2}$ fathoms in. You will always go clear of them to the northward, by keeping in not less than 8 fathoms water.

BARRET'S LEDGE is *two detached rocks*. On the south-western rock lies a chequered black-and-white buoy, having the northern extremity of the main land within Green Island, in a line with the northernmost high land of Cape Arignole, bearing N. 64° E.; the summit of the southernmost mountain in the Highland of Kamourasca, in one with the south point of the Great Pilgrim Island, S. 30° W.; the eastern side of the trees on Hare Island, in one with the west cape of the Bay of Rocks, on the north shore, N. 47° W.; and two houses near the River du Loup, S. 29° E.; the latter are the only two houses between the church and River du Loup. These rocks are distant from each other $\frac{1}{4}$ of a mile, bearing N. 63° E., and S. 63° W.; the N.E. rock has 10 feet water over it, and the S.W. rock only 12, while between them are 8 fathoms. The leading-mark through this part of the channel, leaving the Barret's Ledge and Middle Ground to the northward, and Percy Rocks and Pilgrim Shoal to the southward, is Green Island lighthouse, just shutting in with the S.W. point of the island, N.E. $\frac{3}{4}$ E.

RED ISLAND.—This is a low, flat, reddish-looking island, without trees, and not above 20 feet above the level of high water mark. It is surrounded with *shoals*, except its S.W. side, which is bold; but the *rocky reef* at its east end runs N.E., $2\frac{1}{2}$ miles. You may anchor in 10 fathoms S.E. of this latter reef, in good holding-ground. This island is situated nearly in the middle of the river, bearing from Green Island lighthouse W.N.W., distant $5\frac{1}{2}$ miles; while the outer or eastern extremity of the reefs about it bears from the same lighthouse N.W. by N.

A lighthouse is erected on Red Island, bearing a red fixed light.

A buoy, painted red, has been lately laid down near the east end of Red Island Reef; it lies in $5\frac{1}{2}$ fathoms, with the south side of Red Island in one with the north side of Hare Island; and the beacon on Green Island open a little to the eastward of the lighthouse.

WHITE ISLAND.—This is a small island lying S.W. $\frac{1}{2}$ W. from Red Island, distant $3\frac{1}{4}$ leagues, being round and covered with trees. A *reef of rocks* extends N.E. $\frac{1}{4}$ E., full 5 miles from the east end of Hare Island, drying to about half that distance; a black buoy is placed at the N.E. end of this reef. Midway between the Red Island and this reef are 20 and 15 fathoms.

It may be proper to remark here, that from the east part of Red Island Reef to the west part of Hare Island Reef, a distance of 32 miles, the river is, by these islands and reefs, divided into two channels; that to the south-eastward is the one most commonly frequented, the other, to the north-westward, having strong tides, deep water, and no good anchorage. The north channel is without buoys or lights; but in the south channel a vessel can anchor almost any where above Green Island, at any time when it may be necessary.

HARE ISLAND lies S.W. $\frac{1}{2}$ S., distant only $1\frac{1}{2}$ mile from White Island; thence it extends to the S.W., $7\frac{1}{2}$ miles, in no part exceeding in breadth a mile, but in several places not equalling $\frac{1}{2}$ a mile. S. by W., a mile from the east end of Hare Island, lies the southernmost of some small islets, called the Brandy Pots, on which a telegraph is erected. The northernmost Brandy Pot is close to the southern one; it is high, and covered with trees; the southernmost is a whitish rock, nearly barren: they are each about $\frac{1}{2}$ a mile long, lying N.W. and S.E. of each other, the ground between them drying at low water; they lie nearly $\frac{1}{2}$ of a mile from the south side of Hare Island, with only a passage for boats between. A little to the east of the northern Brandy Pot is the Noggin, a small islet, covered with trees; at low water these are connected by a chain of rocks, leaving a passage only fit for boats. Half-way between the Noggin and the east end of Hare Island is a reef of rocks, which dries at low water; it lies close to Hare Island, and therefore not in the way of shipping, and by keeping in 7 fathoms, you will always go clear.

To the westward of the Brandy Pots the south side of Hare Island has a flat of hard ground extending from it, being 4 miles long and nearly $\frac{1}{2}$ a mile broad. The whole of this side of the island is bounded by rocks.

MIDDLE GROUND.—South-westward of Barret's Ledge, and between Hare Island and the main land, lies a shoal, called the Middle Ground; its N.E. end begins where the Brandy Pots bear N.W., distant 2 miles; it runs S.W. by W. from thence about 5 miles. The least water on its N.E. part is 10 feet, on which a white buoy has been placed, with the east end of the Brandy Pots bearing N.W. $\frac{1}{2}$ W., and west end of Hare Island W.S.W. $\frac{1}{2}$ W.; on its middle are 3 fathoms, and on its western end 4 fathoms. The anchorage upon it is good in fine weather.

HARE ISLAND SHOAL.—This is a long shoal, beginning about a mile above the west end of Hare Island and running up in a S.W. by W. direction, full 9 miles; a considerable part of it becomes dry at low water: this dry part is about $2\frac{1}{2}$ miles in extent, and lies on the northern part of the bank; it is covered with grass and spruce bushes, and is about $2\frac{1}{2}$ miles S.W. from Hare Island. There is good anchorage on the south side of this bank, in 7 fathoms. The west end of the reef bears from the west end of the Pilgrims N.W. by N., $3\frac{1}{2}$ miles; but the bank, of 2 to $2\frac{1}{2}$ fathoms, runs nearly 4 miles farther, in a S.W. direction, and is now marked by a red buoy, which lies with Kamourasca Church a little open to the westward of the large island of Kamourasca. Near the east end of this bank is a knoll, of 12 feet, on which a red buoy is placed; it lies with the west end of Hare Island N.W. $\frac{1}{2}$ W., about $1\frac{1}{2}$ mile. About $\frac{2}{3}$ of a mile eastward of the buoy, is another knoll, of 3 fathoms; there is a narrow channel between the S.W. end of Hare Island and the bank, with $3\frac{1}{2}$ to 4 fathoms in it. From the east end of Hare Island Bank a narrow bank, with only $3\frac{1}{2}$ to 4 fathoms on it at low water, extends to the north-eastward 5 miles, to the Middle Knoll, on which a white buoy (before mentioned) is now placed; between this bank and the island are from 10 to 18 fathoms. Heavy ships should not attempt to cross the Middle Bank at low water, spring-tides.

THE PILGRIMS are five islands, connected together by reefs, that become dry at low water; they occupy a space of about $4\frac{1}{2}$ miles, and are distant $1\frac{1}{2}$ mile from the main; but there is no passage between them and the south land. The N.E. of Great Pilgrim bears from the Brandy Pots S. 18° W., distant 7 miles, and from the S.W. end of Hare Island S. 36° E., distant $4\frac{1}{2}$ miles; this is the highest island, and covered with trees; the others appear white and barren. The south-westernmost, or Long Island, has a telegraph upon it, and lies in the direction of S.W. and N.E.; its west end bears from the west end of Hare Island S. by W. $\frac{1}{2}$ W., 6 miles; they are all bold-to on the northern side.

PILGRIM SHOAL is a narrow bank, about 4 miles in length, lying without the edge of the Loup Bank; it has from 12 to 15 feet upon it; its west end lies abreast of the middle of the Pilgrims. The north extremity of this shoal is now marked by a black buoy; it lies in $4\frac{1}{2}$ fathoms, with the west end of Hare Island and the west end of the Great Pilgrim in a line, bearing N.N.W. $\frac{1}{2}$ W. and S.S.E. $\frac{1}{2}$ E. The leading-mark through, between Pilgrim Shoal and Hare Island, is the north side of Burnt Island just open of Grand Island, bearing S.W. $\frac{1}{2}$ W.

KAMOURASCA ISLANDS.—These are a collection of small islands lying off the south side of the river, between the Pilgrims and Cape Diable, and in front of the

church and settlement of Kamourasca. The Great or N.E. Island bears from the western Pilgrim S.W. by W., distant 2 leagues; there is a *bank* extending from one to the other, with 2 fathoms upon it, called the *Bank of Andre*; its northern edge is steep-to: the second is called *Burnt Island*, and lies to the westward of Great Island; on its western end is a telegraph. Crow Island lies S.S.W. from the west end of Burnt Island, distant $\frac{3}{4}$ of a mile: there are also two lesser islands at the inner side of Burnt Island. These islands occur, a space of 3 miles, and are about $1\frac{1}{2}$ mile from shore, the bank between drying at low water. Great and Burnt Islands are both bold and steep-to on the north side; but Crow Island has shoal water around it, and bears from Kamourasca Church N.W., distant $\frac{3}{4}$ of a mile; between is a safe landing-place. After passing Kamourasca, the edge of the south bank may be easily followed, in 7 fathoms, or in 10 fathoms with a large ship, up to St. Ann's buoy.

From Crow Island Cape Diable bears S.W. $\frac{1}{2}$ W., distant nearly 3 miles; but from the cape, in the direction of Crow Island, runs a *rocky reef*, the easternmost part of which is covered at a quarter-flood. At $2\frac{1}{2}$ miles above Cape Diable is Point St. Denis, to the southward of which is a little cove. There is good riding opposite this cove, at $1\frac{1}{2}$ mile from the shore, in from 6 to 8 fathoms.

The land from St. Denis runs S.W. to Point Ouelle, and is all low, with *rocks* scattered before it. Point Ouelle has a *rocky reef* attached to it, which stretches out west and south-westerly. All the way to St. Roque large stones are scattered throughout this mud-bank. Rounding this point you will open the River Ouelle, on the eastern banks of which is a church and settlement; from Cape Diable to Point Ouelle the distance is 8 miles. Nearly 8 miles to the south-westward of Point Ouelle, is Point Roque. A *sand-bank* stretches out from this latter point full 4 miles, and continues full that distance from the shore, to the eastward, as far as Point Ouelle; near the north extremity of this bank, and N.N.W., about $4\frac{1}{2}$ miles from Cape Roque, the light-vessel is moored, which must be always left on your port or south side, when bound upwards. Between Points Ouelle and St. Roque is an extensive bay, commonly known by the name of St. Ann's Bay; it is shallow all over; for a *sandy flat*, beginning at Point Ouelle, extends itself so far as the bay off St. Roque; this flat is studded with *sunken rocks*, and is very dangerous.

THE NORTHERN SHORE, from Point Mille Vache to Coudre Island.—The course and distance across the bay of Mille Vache to Esquimine Islets is S.W. $\frac{3}{4}$ W., about $11\frac{1}{2}$ miles; these islets consist of two large *rocks*, having three small ones nearly a mile S.W. of them. From these islets to the entrance of Saguenay River, the course is nearly S.W. by W., 22 miles. Little Bergeron lies 16 miles from the Esquimines, between which the coast is clear, excepting a *flat* which occupies a bay on the west side of Cape Bondesir; but this lies so close in as to be little in the way, and there are 50 fathoms water very near the rocks on this part of the coast. Great and Little Bergeron are two coves only separated by a point; they are full of *rocks*, and dry at low water. Point Vache, the east point of Saguenay River entrance, lies 6 miles S.W. of Little Bergeron. The high clay cliffs at this point, named Saguenay Cliffs, may be readily known; you may anchor, with these cliffs bearing W. by S., distant 3 miles, in 7 fathoms, with the S.W. end of Green Island and Red Islet in one, nearly a mile off shore; but immediately without this you fall into deep water. A black buoy is placed on a *12-feet patch*, off Vache Reef; to be left on the right hand when entering the Saguenay.

In working up between the Esquimines and Red Islet Reef, observe, the flood does not extend above 5 or 6 miles from the north shore; therefore, keep within that distance. The tides here are regular, and off Bergeron spring-tides run 2 to 3 knots.

Should you be suddenly caught to the northward of Red Islet Reef by a shift of wind to the eastward, so that you cannot fetch round the east end of the reef and gain the south channel, you may safely bear up and run to the westward, by giving Red Island, White Island, and Hare Island, with its reefs, a berth of 2 miles, on your port hand, in passing. When you are 10 miles to the westward of Hare Island, you may safely haul across for the south channel. Observe, that by keeping Kamourasca Church just open to the westward of Grand Island, bearing S. by W. $\frac{1}{2}$ W., you will clear the S.W. end of Hare Island Reef, (on which a red buoy is placed,) in 3 fathoms at low water. As the river is all clear to the westward, there is no necessity for hauling across

so near to the reef. There is anchorage along the north side of Hare Island, in 6 to 8 fathoms water, but this is pretty close in.

Lark Point is the S.W. point of the entrance of Saguenay; it lies S.W. $\frac{1}{2}$ W., 2 $\frac{1}{2}$ miles from Point Vache, and is composed of low clay cliffs. E.N.E., a mile from the point, lies Lark Islet, low and small.

Lark Reef, dry at low water, extends 3 miles, in a S.S.E. direction, from the point. Between this *extensive reef* and those running off 1 $\frac{1}{2}$ mile S.E. from Point Vache, is the entrance to Saguenay River, which has a depth of 12 to 18 fathoms midway between the two shoals; but just within the entrance it suddenly deepens to 100, and a little farther up to 150 fathoms. The mark to clear the Lark and Vache Reefs is, the western side of White Island and Brandy Pots in one, just open southward of Hare Island, bearing S.S.W. $\frac{1}{2}$ W.

On *Bar Reef*, 2 $\frac{1}{2}$ miles eastward of Lark Point, a chequered buoy is placed; to be left on your port hand when entering the Saguenay.

The northern shore of the river, from Saguenay to Coudres Island, is bold and mountainous. The granite hills, in most parts, rise immediately from the river; those near the Saguenay are about 1,000 feet in height; but Mount Ebeutemens, near Goose Cape, is 2,547 feet in height.

Cape Basque lies 6 $\frac{1}{2}$ miles S.W. of Lark Point; about 1 $\frac{1}{2}$ mile to the northward of the cape, lies Echafand Island, small and rocky; it lies before a cove full of *rocks*. Basque Roads is directly off this cove, and between the cape and Lark Reef; here is very good anchorage, sheltered from easterly winds, with Echafand Island bearing W.N.W., rather less than a mile. Here is room for a number of ships, to lie in 10 or 11 fathoms: in this depth the tide is not strong, and the holding ground good. From hence to the Murray Bay there is no good anchorage on the north shore.

The *Bay of Rocks* lies 2 $\frac{1}{2}$ miles S.W. of Cape Basque; it only affords shelter for boats. About 3 miles farther is Cape Dogs, bold and high, and of bare granite. Cape Salmon bears S.W. $\frac{1}{2}$ S., 9 $\frac{1}{2}$ miles from Cape Dogs, and is similar to it; Black River and Port Parsley lies between them. Port Salmon lies 1 $\frac{1}{2}$ mile to the westward, and will admit large boats at high water. The settlements on the north shore are continuous from here along the coast to Quebec. Cape Eagle lies 5 $\frac{1}{2}$ miles S.W. by W. $\frac{1}{2}$ W. from Cape Salmon, and is of the same character.

Murray Bay lies W. by S. of Cape Eagle, distant 6 $\frac{1}{2}$ miles; it is about 1 $\frac{1}{2}$ mile wide, and the same depth; it is nearly all dry at low water; a rapid and unnavigable river falls into it. There is a church and village round the head of the bay; and the settlement extends some miles back. On this river are grist and saw-mills; at the latter, quantities of deals are cut, and shipped in small vessels for Quebec. Vessels occasionally anchor off here, and take in lumber; with Point Gaze, its east point, W. by N., 400 fathoms; Point Pique, its west point, S.W. $\frac{1}{2}$ W.; and Point Heu, E.N.E. $\frac{1}{2}$ E., in 10 or 12 fathoms, good holding ground, and the tides easy.

Goose Cape lies S.W. $\frac{1}{2}$ S., 9 $\frac{1}{2}$ miles from Point Pique, the west point of Murray Bay; it is bold and rocky. Midway between is Mal Bay, in which there is no good anchorage. Cape Martin lies 3 miles W. by S. from Goose Cape; between them is good anchorage, well sheltered from easterly winds. Vessels anchor in 7 fathoms, with Gross Bank bearing N. by W. (Gross Rock lies about midway between the capes.) Here you will be sheltered from the tides, which run past Goose Cape with great rapidity, often occasioning great rippings.

COUDRE ISLAND lies opposite the Traverse and Point St. Roque on the south shore; here the navigation of the river becomes impeded by numerous *shoals* and *islands*, which form the Traverse, Middle Channel, &c.

The island is about 6 miles long, and 2 $\frac{1}{2}$ wide; its east point bears from Goose Cape S.W. by W. $\frac{1}{2}$ W., distant 5 miles. *Balines Reef* runs off from this point nearly 1 $\frac{1}{2}$ mile; and the south side of the island is all rocky upwards of a mile from the island. This island has been cultivated from an early period, and has a number of settlers, which gives it a pleasant appearance. The N.E. shore of the island is bold to Prairie Bay, where there is good anchorage, in 6 or 7 fathoms. *Prairie Shoal* runs off $\frac{1}{2}$ of a mile N.W. from the point of that name, and forms the west side of the bay; this shoal is rocky, and is covered at high water. The mark to clear this shoal is, Notre Dame Church in one with the N.W. end of the clay cliffs on Point St. Joseph, bearing E.N.E. From the

N.W. point of Prairie Shoal, Cape Corbeau, the east bluff point of St. Paul's Bay, bears N.N.W. $\frac{1}{2}$ W., and the water-fall on the north shore N.N.E. $\frac{1}{2}$ E. This reef continues along the north shore of the island for about 2 miles farther, stretching off full $\frac{1}{2}$ a mile, until it joins the Great Coudre Bank, which, at the west end of the island, is $3\frac{1}{2}$ miles wide. This bank extends all the way to the Burnt Cape Ledges, a distance of 6 leagues; its northern edge, which is nearly straight, forms the southern boundary of the North Channel in this part.

ST. PAUL'S BAY, to the N.W. of Coudre Island, is *shoal* and *rocky*, with a great ripple at some distance off. In the channel between the tides run very strong; sometimes 6 and 7 knots at spring-tides, and the water too deep for anchoring, except in Prairie Bay, before mentioned. Here it is high water, full and change, at 4h. 20m. Cape Corbeau forms the eastern, and Cape Labaic the western points of the bay; they are $3\frac{1}{4}$ miles apart. A *stony bank* runs off from the latter point nearly $\frac{1}{2}$ of a mile; and this bank extends about 11 miles to the westward along the north shore.

THE SOUTH TRAVERSE.—The narrows of the South Traverse lie between the Middle Ground and the St. Ann and St. Roque Shoals; the east end of the Middle Ground lies with the east end of Coudre Island N.W. by W., distant $3\frac{1}{2}$ miles. The narrowest part of this channel is pointed out by a light-vessel, which lies 5 miles W.S.W. from the black buoy* on St. Ann's Shoal, and which must be left on your port hand going up.

This is considered the most intricate part of the river; the currents here are various, irregular, and strong, so that it requires the utmost attention. A *bank* occupies the middle of the River St. Lawrence, stretching all the way from Hare Island to the Middle Bank; it is generally about a mile wide, with 8 to 14 fathoms on it; this was formerly called the *English Bank*. The soundings are regular, and the bottom sand and mud, affording good anchorage.

About a mile W. by S. of the light-vessel, a red buoy is placed, on the Middle Ground, to be left on your starboard hand; and nearly opposite is a black buoy on St. Roques Shoal, to be left on your port hand; 2 miles S.W. from the latter is another black buoy, also to be left on your port hand; and opposite to this is a red buoy on the S.W. end of the Middle Bank, to be left on your starboard hand. The narrows extend from these latter buoys to the light-vessel, a distance of 3 miles, and is little more than $\frac{1}{2}$ of a mile wide, with 4 to 10 fathoms at low water, spring-tides. Nearly 4 miles S.W. $\frac{1}{2}$ S. from the latter buoy is another black buoy, off St. Jean, to be left on your port hand, having a black buoy on a *spit* about midway between them; and a little farther on is a chequered black-and-white buoy, on the *Traverse Patch*, of 3 fathoms, to be left on your starboard hand; but there is plenty of water on the north side of this buoy. From hence a S.W. by S. course, $2\frac{1}{2}$ miles, brings you abreast of the Stone Pillar, on which a revolving light was established in September, 1843.

The *Wood Pillar* lies $1\frac{1}{2}$ mile west of the Stone Pillar; it is a high round *rock*, with some trees on its western part. The *Middle Rock*, which dries at half-ebb, and on which a beacon is erected, lies about $\frac{1}{2}$ a mile to the eastward of it; these are joined to Goose Island by a *reef*.

The *Seal Islands* and *Reefs* lie to the northward of the Pillars; they extend S.W. by W. and N.E. by E., about 4 miles; a great part of this reef dries at low water. An extensive *bank* runs from these reefs to the N.E. as far as Coudre Island and the Middle Ground; this bank forms the south side of the middle channel, from abreast of Coudre to Goose Island.

THE ROCHE AVIGNON dries at $\frac{3}{4}$ ebb, is 100 yards in length, quite round at the top, and lies 2 or 3 cables' length S.E. from the body of the South Pillar; there are 7 fathoms water close to it. Crane Island, kept well open to the southward of the large reef off Goose Island, leads clear to the southward of it.

S.W. $\frac{1}{2}$ W., about $1\frac{1}{4}$ mile from the South Pillar, begins a *ledge of high rocks*, which runs up to the S.W. end of Goose Island, from which the upper end is but $\frac{1}{2}$ a mile distant; with the exception of their eastern part, they are always above water; this is called *Goose Island Reef*, and forms the mark for clearing the Avignon. There is an

* By a recent official notice, all the buoys on south bank are said to be black, and those on the north banks red, with a few exceptions. (See page 147.)

opening between the east end of Goose Island Reef and the South Pillar, leading towards Pillier Boissé, having 4 to 5 fathoms in it.

GOOSE ISLAND is connected to Crane Island by low meadow land, the whole of which occupies an extent of nearly 11 miles in a S.W. $\frac{1}{2}$ W. and N.E. $\frac{1}{2}$ E. direction. A shallow flat runs off nearly a mile from the south side of this low land, which narrows the channel very much as you approach the Beaujeu Bank, on each end of which a white buoy is now placed. The eastern buoy lies with Onion Island N.W. by W. $\frac{1}{2}$ W., and the western buoy with the farm-house on Crane Island N. by W. There is a farm-house on the island, just to the eastward of which is the *Hospital Rock*; it is large, and close to the low water mark. At $2\frac{1}{2}$ miles from the Hospital Rock the shore becomes rocky, a long reef commencing, which, as it lies close to Goose Island, is out of the way, and consequently easily avoided.

CRANE ISLAND is about $3\frac{1}{2}$ miles long; the northern side is cultivated, and a farm-house appears at the east end: to the S.E. of this house, about $\frac{1}{2}$ a mile, lies Beaujeu Bank, having on its shoalest part not more than 6 feet water over it; it is separated from the flat that runs off from the main, by a channel, having 4 to 5 fathoms in it; but just within the west entrance of this channel lies a *knoll*, of only 12 feet. The channel between Beaujeu Bank and the eastern end of Crane Island has 4 to 5 fathoms in it; but its breadth scarcely exceeds $\frac{1}{2}$ of a mile. On the N.W. side of this channel two red buoys are placed, opposite the white buoys on the Beaujeu Bank.

BAYFIELD ISLANDS lie to the westward of Crane Island, exclusive of a number of small islets and rocks. The principal isles are the Canoe Isle, which lies northward of Crane Island; the Margaret Island; next westward is the Grosse Island, and the Isle aux Reaux, and the westernmost is Madame. The whole of these islands, from Crane Island to the west end of Madame Island, occupy a space of 14 miles. There are several passages between these islands, with a good depth of water, leading into the Middle Channel. The quarantine station* is at Grosse Island; the entrance is between it and Margaret Island, which is marked by a red buoy on the south, and a chequered buoy on the north side; your course in is about N. by E.

From the western end of Crane Island a reef of rocks extends $\frac{1}{2}$ a mile, drying at low water; and a shallow spit runs out $1\frac{1}{2}$ mile farther westward; on which a red buoy is placed, with St. Thomas's Church bearing S.S.E. $\frac{1}{2}$ S. Grosse Island is 2 miles in length, lying N.E. by E. and S.W. by W.; it is inhabited.

Reaux Island is about the length of Grosse Island, but narrow, and is about 150 feet high. Madame Island is somewhat smaller than Reaux Island; both are covered with trees. From Madame Island a rocky reef extends S.W. by W., $2\frac{1}{2}$ miles, drying at low water; and ships ought not to go nearer to it than 7 or 8 fathoms water. The mark to clear it is, some part of Reaux Island kept open to the southward of Madame Island. The western extremity of the reef lies with St. Valiere's Church bearing S. $\frac{1}{2}$ E. A red buoy is now placed to mark the western point of this reef, which here divides the western entrance of the north from the south channel.

THE SOUTHERN SHORE.—In following the southern shore from St. Roque Point, you will see the church of St. John's, standing on a projecting point, about $2\frac{1}{2}$ leagues distant from the church of St. Roque; behind the latter, at some distance inland, is a telegraph. Nearly at the same distance from St. John's Church, and in a similar direction, stands the telegraph of the islet; and between these is Port Jolie and Three Salmon River, fit only for small craft. Farther on is the church and telegraph of St. Ignace; this lies to the southward of Beaujeu Bank, from which it is distant nearly a league. The shore all the way from St. Roque Point to St. Thomas's River

* GROSSE ISLE.—QUEBEC, April 10th, 1848.—An extract of the *Official Gazette* has been issued, containing a Royal Proclamation for the regulation of the Quarantine Establishment at Grosse Isle during the ensuing year. The orders are most stringent. Every vessel having more than 13 passengers on board is to anchor at the quarantine ground. If there has been any disease on board during the voyage, or if the vessel has sailed from any port where infectious disease prevailed, the vessel is to undergo a thorough purification, and the dirty emigrants are to be landed on the island, and they, their clothing, and baggage, to undergo a compulsory scrubbing. The island is placed under the authority of a military commandant.—S.G., May 8th, 1848.

is lined with a *sandy flat* of 3, 2, and 1 fathom water. The country about here has a very pretty appearance, being thickly covered with white-washed houses and village churches.

At $1\frac{1}{2}$ league to the south-westward of Beaujeu Bank, and about the same distance from St. Ignace, lies the entrance to St. Thomas's, or South River. From this land a *flat*, or *mud-bank*, extends more than half-way to Crane Island; it is named *St. Thomas's Bank*; its northern extremity bears S.W. by W., distant $1\frac{1}{2}$ mile from the south point of the island; it is a *dangerous bank*, and chiefly dries at low water.

A black buoy is now placed on the north extreme of St. Thomas's Shoal, with St. Thomas's Church bearing S. $\frac{3}{4}$ E.

THE WYE ROCKS are immediately above the *bank of St. Thomas*; this *bank* lies in the direction of S.W. by W., and is about $\frac{1}{2}$ of a mile long; over its western end are only 3 feet water, and over its east end 6 feet. The long mark for this rock is, Belle Chasse Islands and St. Michael's Telegraph in one; the islands will then be twice their breadth open to the northward of Point St. Valiere.

The BELLE CHASSE ROCKS are two remarkable *rocks*, lying $6\frac{1}{2}$ miles to the westward of Wye Rocks; they lie $\frac{3}{4}$ of a mile from the shore, and about a mile W.N.W. from Berthier Church; behind them is a small sandy cove, with some *rocks* running off from the west point. St. Valiere Church stands 4 miles to the westward of Berthier, and bears from the church of St. John, on the Island of Orleans, S.E., distant 3 miles. The ground from St. Valiere's Point is foul, and affords no safe anchorage all the way to Quebec.

The *Church of St. Michael* stands 5 miles to the westward of Point St. Valiere; and 5 miles farther westward stands the Church of Beaumont, which is opposite to St. Lawrence Point, on Orleans. *Beaumont Reef* is an extensive *rocky reef*, extending half-way across the river from the south shore towards St. Lawrence Point; it dries at low water, is uneven, dangerous, and steep-to, having 8 to 10 fathoms close-to. A black buoy is now placed on the northern edge of this *shoal*, with St. Lawrence Church bearing north. From Beaumont the coast runs W. by N., 7 miles, to Point Levy.

THE ISLAND of ORLEANS.—The Island of Orleans bounds the starboard shore, from Madame Island to nearly abreast of Point Levy; its shores generally slope down to the beach, except in some places where small rocky cliffs arise, of neither great extent or elevation. It is well cultivated, and very fertile; its northern shores are flat and muddy, and lined with a *reef of rocks*, but its southern side is fine sand, with here and there a pointed rock. The Churches of St. John and St. Lawrence stand near the shore, the distance between them being $5\frac{1}{2}$ miles; this part is highly diversified with gardens and houses. Patrick's Hole is a little to the westward of Point St. Lawrence, and is a safe and well-sheltered cove, where vessels outward-bound commonly anchor in 10, 12, or 14 fathoms, previous to taking their final departure; the ground cannot be accounted good, but it is well sheltered from easterly gales, and the river here is bold on each side, being about $1\frac{1}{2}$ mile wide. Just to the westward of the cove stands the Telegraph, No. 2; and on the western part of the point is a cluster of neat houses, where accommodations of all kinds may be obtained.

About a mile eastward of the west end of Orleans are the *Morandan's Rocks*, running out $2\frac{1}{2}$ cables' length from the shore; they will have 6 to 9 feet water over them, and 10 fathoms in sailing past them. At the S.W. part of the island are other *rocks*, which dry at low water; these are close to the land, and may be safely passed in 10 fathoms water. This is the highest part of the island; and here stands the Church of St. Peter, about 4 miles from the western point, and nearly opposite to the Falls of Montmorency.

The Point of Levy is surrounded with a *reef*, which continues along shore to the westward; but by giving the land a berth, you will go safely in 10 fathoms.

QUEBEC.—The Basin of Quebec is about $\frac{3}{4}$ of a mile across, from Point Levy to Quebec, or to the opposite shore of Beauport; the water between is very deep. The HARBOUR of QUEBEC may be said to commence at St. Patrick's Point, and extend to Cape Rouge River, 3 miles above Quebec.

THE PORT of QUEBEC comprehends all that space which lies between Barnaby Island and the first rapid above Montreal. The BALLAST GROUND is a part

appointed by law to heave ballast into, being to the westward of the two beacons that stand on the south shore, between Patterson's and Charles's Coves: these beacons are situated on the brow of a hill, and, when in a line, bear S.E.

The regulations, with respect to shipping and quarantine, in the port and harbour of Quebec, must be strictly attended to: all pilots are bound to give the masters of vessels due information relative to quarantine, as soon as they come on board; and a copy of the harbour laws is delivered to each vessel, on her arrival, by the harbour-master: and those respecting shipping are always to be seen at the harbour-master's office.

The CITY of QUEBEC is built on Cape Diamond, which is exceedingly high; from hence, and from Point Levy, the views are magnificent, and beautifully varied; the capital, on the summit of the Cape, the River St. Charles flowing to the northward, the Falls of Montmorency to the north-eastward, and the well-cultivated Island of Orleans, form altogether a most beautiful spectacle.

The Island of Orleans divides the river into two parts, or channels; but the southern channel, which has been described, is the only one the pilots make use of for large ships.

The River St. Lawrence is not navigable from the early part of December to the middle of April, on account of the severity of the frosts; during this period, its upper part, from Quebec to Kingston, in Upper Canada, and between the lakes, with the exception of Niagara and the Rapids, is frozen over; but below Quebec, although the river is never wholly frozen, yet the strength of the tides continually detach the masses of ice from the shores, and such immense bodies are kept in incessant agitation, by the flux and reflux, that the navigation becomes impracticable. At the beginning of May, the ice is either dissolved or carried off by the current.

MIDDLE CHANNEL.—The north side of this channel is formed by Coudre Island and the banks which extend from its west end to Burnt Cape Ledge and Isle Reaux, and on the south side by the Middle Ground, Seal Islands and reefs, and the chain of islands and reefs extending from Goose Island to Margaret Island; here are several entrances between the islands. To the northward of the Seal Islands there are only 3 fathoms at low water. This channel, having neither buoys or beacons, is not used by the pilots; but most of the channels between the islands are used by the small coasting vessels.

THE NORTH CHANNEL, now very little frequented, was formerly the most commonly used; this channel runs to the northward of Coudre Island, along the north shore to Cape Tourmente, through the North Traverse, which lies between the spit and reef which runs off from the east end of the Island of Orleans, to the northward, and the Brule Bank and shoals lying northward of Reaux Island, to the southward. In this channel the water is generally deep, the adjacent lands high, the tides strong, and the North Traverse intricate and narrow, besides which there are few places fit to anchor in; it is the want of convenient anchorages which renders the eastern part of this channel unfit for general use.

Having arrived of the N.W. reef off Coudre by the marks already laid down for passing northward of that island, and having the west end of it clear of Cape Branche on Coudre, you have a fine straight channel for 21 miles to Cape Brule, and from 2 to 1½ mile in breadth, with from 20 to 5 fathoms in mid-channel; the latter depth is off Cape Rouge. The Coudre Bank, which forms the south side of this channel, is nearly straight, with regular soundings, of 4 to 6 fathoms, along its edge, up to the *Neptune Rock*, when the north shore should be kept close on board, to prevent you getting into the swash between the Burnt Cape Ledges and the Brule Bank. There is anchorage near the sides of this channel, where the tides are not so strong. Off Cape Mallard spring-ebbs run 4 knots, and the floods 3½ knots; but off St. Paul's Bay, within Coudre, the ebbs run 7 knots on spring-tides, and the floods 6, which cause great ripplings.

Along the high northern shore a *rocky shoal* runs off, nearly ¾ of a mile, from Cape Labaic, (the western point of St. Paul's Bay,) and extends along shore to the S.W. for 12 miles, where it terminates about 2 miles north-eastward of Cape Rouge; from hence to Cape Tormente the shore is all bold. There is a landing-place about a mile N.E. of Cape Gribanne, and nearly opposite the east end of Burnt Cape Ledge, the S.W.

part of which is always above water; this is about $4\frac{1}{2}$ miles from the Neptune Rock. From opposite the latter rock to Cape Tormente, the coast is very high, and washed by the river; but at this latter cape another *shoal* commences, named the *Seminaire Bank*. The N.F. part of the Brule Bank lies about a mile to the westward of the S.W. part of Burnt Cape Ledge; the mark for it is, the east side of Heron Island and the west part of Burnt Cape Ledge in one, bearing S.E.

The *North Traverse*.—The eastern entrance to this lies between Brule Bank and the Traverse Spit, which extends to the *reefs* that run off from the east end of Orleans, and is called the Eastern Narrows, being about 250 fathoms wide, with 4 fathoms at low water; the channel is not buoyed, but the Brule Bank, Traverse Spit, and also the banks N.W. of it, generally dry about half ebb, which serves to lessen the difficulty of these channels. The leading-mark through the Eastern Narrows is Point St. Valiere, on the south shore, on with the S.W. end of Reaux Island, bearing S.S.W. $\frac{1}{4}$ W.; after running on the latter mark about a mile, you must keep along the south edge of the Traverse Spit, by steering S.W. by W., about $1\frac{1}{2}$ mile farther, leaving all the shoals to the southward; having run the latter distance, you will arrive at the eastern entrance of the Western Narrows, and within $1\frac{1}{2}$ mile of the east end of Orleans. This part is also 250 fathoms wide, and from 4 to 6 fathoms deep, and lies between the Traverse Spit and the west sand. The mark for the east end of the west sand is, Berthier Church, just shut in with the S.W. point of Reaux Island, bearing S. $\frac{1}{2}$ W. From this spot the leading-mark through the Western Narrows is Point St. John and Point Dauphin, on Orleans Island, in one, bearing S.W. $\frac{1}{2}$ W.

As soon as you have passed the Western Narrows you enter a clear channel full $\frac{1}{2}$ a mile wide in its narrowest part, between Orleans and Madame Island and Reef; on the western extremity of the latter, a red buoy is now placed.

The North Channel* generally remains open and free from ice, in the fall of the year, some time after the navigation is closed in the South Channel; although it is seldom used, yet it might be advantageous to do so at times, as with a scant N.W. wind, when it was desirable to keep the north shore aboard.

DIRECTIONS FOR SAILING UP THE RIVER ST. LAWRENCE, FROM ANTICOSTI TO QUEBEC.

REMARKS.—It has been observed, that the current between the S.W. point of Anticosti and the coast of Gaspé, sets strongly from the river to the south-eastward; that in the spring of the year, probably in consequence of the melting of the snow, its velocity is always the greatest. In summer it may be averaged at about the general rate of 2 miles an hour; but in spring it becomes variable, and much beyond that rapidity: at times it will run $3\frac{1}{2}$ miles an hour, and often more than that, depending greatly on the quantity of ice and snow that has accumulated. And it has been said, that, during the months of May and June, the water will be elevated 2 or 3 feet above its ordinary level.

Mariners entering the river between Anticosti and Gaspé, when in the fairway, having the wind at north or north-east, and being uninformed of this current, will be led to imagine they are making a reach up, when really they will be approaching the southern shore; this is an error that must be particularly guarded against, especially in long dark nights and foggy weather; be, therefore, always careful to tack in time.

Ships coming up with contrary winds, should work up on the south side of Anticosti, and being far enough to the westward to weather the west point of Anticosti, should stand to the northward, and endeavour to work up, within 3 or 4 leagues of the north-

* MR. LAMBLY, many years principal harbour-master at Quebec, emphatically says, "He believes few men now living will undertake to carry a ship through it, and that he considers it would be the extreme of folly to attempt to open the use of it;" and further states to have "heard of men who knew and could do this, but never saw any of them take a ship through it;" and adds, "he is sure they never will."

ern shore: for the land is all bold-to; you will be out of the strength of the current, and the nearer you get to the land, the more you will be favoured by the tide; and when up to Trinity Bay, should your vessel sail well, you will, by keeping in with the north shore, have the advantage of a flood-tide, and may probably be enabled to get through the Narrows; but should your ship sail badly, you can take shelter in Trinity Bay, which is described in page 139 of this work.

When between the S.W. and west points of Anticosti, both the currents and swell set in shore; and as the bottom is bad, the anchors will not hold; therefore, the greatest caution is necessary, on the first appearance of a decrease of wind, to endeavour to stand off the land; or, in the event of a calm, you might be set on shore, by the current, near the St. Mary's cliffs, as a heavy swell sets in frequently some hours before there is any wind.

When off the west end of Anticosti, with a fair wind, steer well to the northward, so as to keep out of the strength of the current, steering about W.N.W., or towards English Point; when you have run better than half of the distance, you must steer more southerly toward Point de Monts, and endeavour to make the light. Observe, this lighthouse is not on the extreme point, but $1\frac{1}{2}$ mile N.E. of it; and there are rocks $\frac{1}{2}$ a mile from the point: in clear weather the light can be seen 6 or 7 leagues. In thick weather, this is a most dangerous part of the navigation; for when the wind is fair it is generally thick; and the greatest caution is necessary when approaching this point; the ship should be put under snug canvas, and the deep-sea lead kept going; for if you are to the northward of the point, soundings will be obtained 5 or 6 miles from the land, in 40 to 50 fathoms. The vicinity of Cape Chatte has long been the dread of mariners navigating this river, from the number of wrecks, and still more numerous hair-breadth escapes that have occurred near it; the errors in the variation in the old charts, the current, and local deviation, all tending to draw vessels upon the south shore.

Captain Bayfield, R.N., in his general remarks on the navigation of the St. Lawrence, after his remarks on the errors in the variation, given in former charts, says, "There is another source of error, independent of charts altogether, which it is astonishing to find obtaining so little attention, particularly in the merchant-service, considering how much has been written concerning it of late years. I allude to the deviation, or local attraction of the needle. This subject may be seen fully treated in Mr. Barlow's treatise on magnetic attraction; and Scoresby, in his works on the arctic regions, and on the Greenland whale-fishery, gives many valuable and practical directions respecting the methods available, under different circumstances, for finding its amount in various positions of the ship's head, and applying a correction accordingly to the course steered. The amount of error, from this cause, will be a point of the compass in most vessels; and, in particular circumstances, may become twice that quantity in those latitudes.

"An opinion is prevalent that the compasses of vessels are disturbed in the Gulf and River St. Lawrence, and such disturbance has been attributed to the magnetic ores of iron in the hills, particularly those of the north coast. The magnetic oxide of iron does exist abundantly, and attracts the needle very powerfully at some points; particularly along the coast from the Bay of Seven Islands eastward. Among the Mingan Islands we found the variation to vary, from this cause, from 19° to 31° west. At Port Neuf, and on Manicouagan Point, the needle was also disturbed; but these effects were only noticed when the instruments were placed on the shore. In two instances only, when sailing within 2 miles of the shore, have we observed any effect of the kind upon the compasses on board the *Gulnare*, and then only to the amount of a few degrees.

"When running from place to place, at greater distances from the coast, nothing of the kind has been noticed; so that I feel sure that in nine cases out of ten, where this erroneous reckoning has been alleged as the cause of accidents to vessels, they originated either in errors of the chart, or in the local attraction on board the vessels themselves."

Captain Bayfield further adds—

"To render the effect of deviation apparent, I will suppose it to amount to a point of the compass, no common occurrence in a six or eight point course, and the ship to be steering W.S.W. $\frac{1}{2}$ W., by the compass in the binnacle, she will then, in reality, be making a S.W. by W. $\frac{1}{2}$ W. course, which would soon put her on shore on the south coast; an event that would be accelerated by the current, which, instead of stemming, she would have on her starboard bow, checking her in-shore.

"A case exactly similar to the one I have supposed, occurred on the night of the 8th of September, 1831, when the ship *Jane*, of Belfast, having several large chain-cables, and other extra iron on board, by which the deviation must have been greatly increased, ran stem-on to Bicquette, with a fair wind, but thick fog. She was steering the regular course up the middle of the estuary, but her master was quite unaware of the effect of the great mass of iron in her hold upon her compasses; and equally so, that previous to the accident which caused the total loss of his vessel, he had been running, for many miles, in less than 20 fathoms water, the bank of soundings not being laid down on his chart.

"These remarks, and others which I have made respecting the deviation, will, I trust, show how important a knowledge of it is to the safety of a vessel; and will, moreover, point it out as the duty of every commander, to endeavour to ascertain its amount during the voyage, and before he arrives in a difficult navigation like the St. Lawrence, where fogs may frequently oblige him to run as high as Green Island without having been able to obtain a pilot."

In clear weather you may run along the south shore; from off Cape Chatte, a W. $\frac{1}{4}$ S. course, 11 or 12 leagues, will bring you abreast of Matane. The paps of Matane appear as two hills standing somewhat inland, when on a S.W. bearing. Mount Camille will also be visible, bearing W.S.W., distant 14 or 15 leagues; it forms in the shape of a circular island, and appears to the northward of all the southern land. From off Matane to abreast of Mount Camille, steer W. by S., according to the wind. Continuing that course, you will pass Little and Great Matis; and continuing on W. by S., 5 leagues from Great Matis, you will arrive at Father Point, the principal residence of the pilots, and from which Mount Camille bears S.E. $\frac{1}{4}$ E.

GREAT MATIS is 2 leagues west from Little Matis, and is also only fit for small vessels; these may find shelter and anchorage with S.W. winds, but it nearly dries, and therefore is of little use to shipping. Little Matis may be distinguished from Great Matis by a round *bluff rock*, which lies S.E. from the north reef, distant $1\frac{1}{2}$ mile, and a small *sugar-loaf hill* to the eastward of the rock. Great Matis has a *large rock* in the middle of the cove; Little Matis has none; but you must be within 2 or 3 leagues of the shore to make these coves out, for the points of land they are formed by are very low. The bank of soundings extends 4 or 5 miles off from those coves; but to the eastward of Matane you will have 60 fathoms only 3 miles off the shore.

When beating up, it requires a tolerably good sailing vessel, and a flood-tide, to beat past Point de Monts against a wind right out; but short boards round the point, and along the north shore, up to Cape St. Nicholas, will most readily succeed. It is not, however, advisable to keep this shore close aboard farther to the westward, lest the wind should fall to a calm; for there is a strong indraught towards the mouth of the Manicouagan River during the flood-tide. If an easterly wind should chance to spring up, after the vessel has been drifted near the mouth of English Bay, it might be difficult to beat out, or weather the eastern side of the Manicouagan Shoals.

A vessel standing over to the southward from Point de Monts, with a west wind, on the starboard tack, will be carried over to the south coast at a rapid rate, having the current on the weather quarter; during her board back she will be retarded, the current then being directly opposite to her course. When sailing at the rate of 4 knots, it will usually require only about half the time to go from Point de Monts over to the south shore, that it will take to return from the latter to the former. This is a most important circumstance, which it is necessary to guard against when beating up during dark nights, and especially in foggy weather.

When running up, during foggy weather, when the land cannot be seen, the object should always be to strike soundings on the bank along the south coast, about Matis, or Father Point at farthest; and then following it as a guide to the westward. Father Point is low, covered with houses, and the regular rendezvous of the pilots. With the point bearing south, by compass, distant 5 miles, the depth is 30 fathoms, soft clay; but you may haul in-shore to 10 fathoms, in foggy weather; and by bringing-to with your head off, and firing a gun or two, you will get a pilot off.

The distance from Cape Chatte to the west part of Father Point is about 24 leagues; and from thence to the anchoring place at Bic Island, is 17 miles: make an allowance for the current, and any ship may run it with safety.

Ships being off Little Matis will see the high land which is to the southward of Cape Arignole; but the cape itself and the island of Bic, being much lower, will not be visible; off Mount Camille, Bic Island may be perceived very plain in clear weather.

Some years ago, a master of a vessel mistook the island of Barnaby for the island of Bic, and hauled to the southward; when he found his mistake, after veering the ship, he just weathered Barnaby Island. Now, should a ship be running up in thick weather, and not be certain of her distance, if she should be near Father Point, she cannot approach the land without gradually shoaling her water, consequently, keeping the lead going, and being in 9 or 10 fathoms water, should she make an island suddenly to the southward, it must be Barnaby Island. And if falling in with an island suddenly, without having hove the lead, in any bearing to the westward of W.S.W., one cast of the lead will reduce it to a certainty; for from W.S.W. to west, Barnaby will only have from 7 to 5 fathoms, and the island of Bic will have, in the same bearings, from 15 to 12 fathoms.

Again, if the lead be kept going, and no soundings be found, then, falling in with land suddenly a-head, it must be Bicquette; for there is deep water in the stream of Bicquette, and when it bears south, 2 miles, there are 30 fathoms; and within $1\frac{1}{2}$ mile of the N.W. reef there is the same depth; a little off there are 60 fathoms: there are 12 fathoms close to both the island and reef. In the stream of Bicquette, when it bears W.S.W., if you should have 10 fathoms water, and see no land, you must haul off to the northward, c. run for Bic, as you think proper; if you are strangers, the safest way will be to haul off towards the northward, keeping in 9 or 10 fathoms water, and steer W.S.W. and W. by S., according to the depth of water; that course will lead to the southward of Bic, and if you get sight of the reef at the east end of the island, which is always above water, steer west $1\frac{1}{2}$ or 2 miles, and anchor in 11 or 12 fathoms.

Ships being near Bic Island, in thick weather, should stand off and on to the northward of the island, and wait for the weather clearing up.

The current between Mille Vache and Bic Island will always be found strong to the N.E.; this must be particularly attended to, as it might drift you towards the Manicouagan Shoals.

If desirous of anchoring on the south side of Bic, and the wind should be easterly, run boldly to the southward, looking out for the reef at the east end of the island, as before directed; give this reef a berth of $\frac{1}{4}$ of a mile, and run along in mid-channel until you find Cape Arignole bears S.S.E.; the body of the island then bearing N.N.W. Large ships may anchor in 11 fathoms, the ground clear and good; but small vessels may run on until the island comes N.E., and the depth 8 fathoms; you will then be $\frac{1}{2}$ a mile off the island, but the bottom will not be so clear as when you are in the deeper water. Fresh water may be obtained in the cove to the westward of the east end of the island. In foggy weather it is not recommended to run inside of Bic without a pilot; unless by persons very well acquainted. The new revolving light on Bicquette Island cannot fail to be of the greatest service to those navigating this part of the river.

But, if the wind should be westerly, and you are to windward of the island, intending to anchor there, stand to the southward, into 11 fathoms, then run down and anchor, as before directed; for, with little wind, 11 fathoms is the proper depth of the fairway, and the last half-flood and all the ebb set strongly between Bicquette and Bic.

Should you, with an easterly wind, be too far to the westward to fetch round the east end of Bic, then, in order to gain the anchorage, you should give Bicquette a berth of about $\frac{1}{4}$ a mile; run up, until the west end of Bic bears S.E., then Cape Arignole will be open of it. This latter mark leads to the westward of a reef, which is covered at a quarter-tide, and extends S.W. by W., a mile from Bicquette; while another reef, always visible, lies between the former and Bicquette. It also clears the N.W. Reef. By hauling round to the southward, with Cape Arignole open, you will pass athwart the opening between Bic and Bicquette, in from 13 to 6 fathoms. You cannot cross the West Grounds of Bic with these latter marks on; you must keep more to the westward. Come no nearer the west end of Bic than 5 fathoms; as the reef runs off W. by S., $\frac{3}{4}$ of a mile,

The N.W. reef of Bic will be cleared, by keeping, the west end of that island and Cape Arignole in a line, bearing S.E. When you are beating into Bic Harbour from the westward, while standing to the southward, take care not to shut in Mount Camille with Cape Arignole; and in standing to the northward, do not shut in Mount Camille with Bic Island.

The tides flow at Bic Island, full and change, 2h. 15m.; and rise, in spring-tides, 12 or 14 feet, neap-tides 7 or 8 feet.

The flood-tides never bend to the westward till an hour's flood by the shore, and in neap-tides the floods are very weak; but in spring-tides ships will always find a flood-tide from Father Point to Bic Island.

Between Barnaby and Bic Islands there is a *bank of soundings*, being a continuation of that which runs from Cape Chatte; at the westerly part, about Barnaby and Bic, it extends $2\frac{1}{2}$ leagues from the shore, and has regular soundings upon it; its edge is very steep, for from 35 fathoms it sinks suddenly into more than twice that depth; but from 35 fathoms, towards the land, it decreases gradually; vessels may therefore stand to the southward by the lead, and tack or anchor in any depth of water they think proper; but it will be advisable to go no nearer the land than $1\frac{1}{2}$ mile, with Bic Island bearing from W.S.W. to S.W., lest you shut in the channel to the southward of Bic; and with a sudden shift of the wind, should not be able to clear Bic to the northward.

Westward from Bic Island, the bank of soundings runs all the way to Basque Island, parallel to, and at 2 leagues distance from the shore; beyond Basque Island it bends nearer to the land, and continues on to the Apple Islands, and to near Green Island Reef, 13 or 14 fathoms being the fairway; ships may stand to the southward to 12 fathoms.

FROM BIC ISLAND TO GREEN ISLAND.—From the N.W. reef off Bicquette, Green Island lighthouse bears S.W. by W. $\frac{1}{2}$ W., 30 miles; in clear weather the fixed light can be seen 17 or 18 miles; and the revolving light on Bicquette, about the same distance. Vessels having arrived at Bic Island, without being able to obtain a pilot at Father Point, and finding none to be had at Bic, may proceed towards Green Island, the latter bearing from the former S.W. by W. $\frac{3}{4}$ W., distant nearly 10 leagues; in this course you will pass the Alcide Rock, Razades, Basque, and Apple Islands, which have been already described, page 146. The edge of the bank of soundings continues all the way steep-to; but from 35 fathoms, the depth decreases gradually towards the land, and between Bic and Green Islands vessels will find anchorage all the way in 14 fathoms, and ships of lesser burthen in 9 fathoms. Between Bic and Basque Island the ground is all clean; but between Basque and Green Island it is foul. There is shelter for small vessels at the east end of the Razades, and also under the east end of Basque Island, in 3 fathoms, giving the east end of the reefs, which run off those islands, a berth of $\frac{1}{4}$ of a mile; the anchorages are with the body of the islands bearing W. by S., or right abreast of Basque Island. Here, at Trois Pistoles, fresh water and provisions may be obtained, if necessary; and from hence are regular stages to Quebec. Pilots also reside here, and at Green Island.

Green Island Reef is extremely dangerous, and is rendered doubly so by the strong tides that set upon it, and which produce ripples, that cause alarm to strangers during a dark or foggy night; therefore, in a strong easterly gale, and thick weather, when the light on Green Island cannot be seen, the attempt to run through between Red and Green Islands is attended with great risk, as, during the ebb, the tide sets towards the reef at the rate of 5 knots. It requires an experienced pilot at such a time to take a ship safely through. In such weather it would be better to heave-to off Bic; even in doing this there is danger of vessels running. If Bic, or the Bicquette light has been seen, it is much safer to anchor under the lee, or to the westward of the islands, in 10 or 12 fathoms, even if 5 or 6 miles westward of them; the ground is good for holding. Here you could wait till daylight.

Vessels passing from Bic toward Green Island will keep about a league from shore, and have 14 or 15 fathoms all the way; and when up so far as Green Island, should the tide be done, they may anchor north-eastward of the reef, in 10 fathoms, and in the stream of the ledge, which runs N.E. by N. from the lighthouse point, at a mile distance from the ledge.

The high land of Arignole, kept open to the northward of Basque Island, will lead clear of the lighthouse ledge; and with the lighthouse bearing S.W. by S., the ledge will be exactly between the lighthouse and the ship. During north-easterly winds small vessels frequently run between the S.W. reef and Caçana, anchoring in 4 fathoms; but it will always be more prudent to bear up for the Brandy Pots, lest you should be caught by adverse stormy weather.

Should you, therefore, have passed Green Island lighthouse, and no pilot be obtained, the weather clear, and the wind fair, steer boldly on S.W. $\frac{1}{2}$ W., or S.W. by W., 3 leagues, you will then have White Island W. by S., and Hare Island with the Brandy Pots S.W. by W., or nearly a-head. Give the Brandy Pots a berth of $\frac{3}{4}$ of a mile, and run on a mile or more above them, then anchor in from 7 to 14 fathoms; or should the wind shift to the westward, and your vessel be up to White Island, the tide being spent, stand to the southward, into 9 fathoms, or towards White Island, into 6 or 7, then anchor; the ground is good.

RED ISLAND.—Vessels coming up the river, and giving the southern shore a wide berth, will necessarily go near Red Island; the body of this island bears from the lighthouse on Green Island W.N.W. $\frac{1}{2}$ N., distant $5\frac{1}{2}$ miles; and the eastern point of the *dangerous reefs* which are attached to it, bears from the same lighthouse N.N.W.; therefore the greatest care must be taken, especially at night, not to bring the light to bear to the eastward of S. by E., until you are sure you are within 5 miles of it; if with the light S. by E. you cannot venture to enter the narrows, wait the return of day, and should the wind be scant from the N.W., you may borrow on the south side of the Red Island, by observing these marks: open White Island to the northward of Hare Island, and, as you draw to the westward, you may approach the shoal of White Island by the lead, remembering that the ebb-tide sets strongly down between White Island and Red Island, and the flood the contrary. The mark to run through the south channel, midway between Green Island and Red Island, is the Brandy Pots touching Hare Island S.W. $\frac{3}{4}$ W. A vessel, in fine weather, may anchor on the south side of Red Island Reef, in 12 fathoms, at $\frac{3}{4}$ of a mile's distance; but the tides here are strong, and set all round the compass.

A red buoy is now placed on the eastern end of Red Island Reef. Should the buoy be gone, Green Island lighthouse and the beacon in one, bearing S.S.E. $\frac{1}{2}$ E., clears the reef to the eastward. A new lighthouse has lately been erected on Red Island, bearing a red fixed light.

The soundings between Red and Green Islands are irregular; for, at the distance of a mile from the latter, there are 40 fathoms, and from the former 20 fathoms; yet during the ebb-tides, and the wind easterly, the water breaks and ripples, but you need apprehend no danger.

In beating up the northern shore from Bic to Green Island, you cannot stand to the northern land by the lead, on account of the great depth of water; but *Mille Vache Shoal* begins at the little river of Port Neuf, and completely surrounds the whole of the low point that is to the westward of the houses, for nearly 4 miles; its southern extremity is distant $1\frac{1}{2}$ mile from the shore, part drying at low water, and steep to.

At Port Neuf is a trading post, and provisions may be occasionally obtained there. When you have passed *Mille Vache Point* and Shoal, the land forms a deep bay; but it is shoal and full of rocks, extending to the westward full 10 miles. At $3\frac{1}{2}$ leagues to the westward of the point are two *islets*, called the *Esquemin Isles*; to the eastward of these, nearly 8 miles, is *Saint au Mouton*, a small river, with a handsome cascade near its entrance, which falls 80 feet. This will always attract notice when passing. Between the *Esquemin Isles* and Saguenay are three small inlets,—*Bondesure*, and *Little Great Bergerone*; they are frequented by fishing boats, but unfit for shipping.

Ships working along the northern shore, between the *Esquemin* and Red Island, should keep within 2 leagues off the land; the shore is clear and bold, and the floods regular; but should a vessel be caught to the northward of Red Island by a sudden shift of easterly wind, and be unable to fetch round the east end of the island reefs, she may safely bear up, and run to the westward, giving Red, White, and Hare Islands a berth of full 2 miles; and when you have run 3 leagues above Hare Island, haul to the southward, across the English Bank, and enter the south channel towards Kamourasca. A red buoy is now placed on the west end of Hare Island Reef.

GREEN ISLAND TO THE BRANDY POTS.—From abreast of Green Island to the Brandy Pots, your course will be from S.W. $\frac{1}{2}$ W. to S.W. by W., and the distance 4 leagues: between these are the *Perce Rocks*, lying near the main, and *Barret's Ledge*, in the fairway or middle of the stream; the latter has been already described in page 148. There is no channel for shipping between Perce Rocks and the main, but vessels keeping in about 8 fathoms will go clear to the northward of them; abreast of these rocks, and between them and the western end of Green Island Reef, are 15 fathoms, mid-channel. Barret's Ledge has a chequered buoy upon it, lying in 12 feet water: the channel formerly used was to the northward of the ledge, keeping the southernmost mountain of Kamourasca in one with the saddle of the Great Pilgrim; these marks will lead you into the fair channel, and clear the ledge to the northward. There is a white buoy on the N.E. point of the Middle Ground, a mile S.W. of Barret's Ledge.

The best passage is to the southward of Barret's Ledge, leading to the southward of the Middle Ground, and up to the Pilgrims. The leading-mark through this channel is Green Island lighthouse, just shutting in with the S.W. point of the island, bearing N.E. $\frac{3}{4}$ E.; but the northern channel is more commonly made use of by large ships bound to anchorage at the Brandy Pots, as it would not be safe to cross some parts of the Middle Ground at low water, spring-tides.

In advancing towards White Island Reef, you may safely trust to the lead; but 7 fathoms will be sufficiently near for your anchorage, and it will be advisable to go into no less water before you tack, for this is the fairway to the Brandy Pots, which are steep-to, there being 8 fathoms close to their southern sides, but *shallows* run off from their S.W. side. The above anchorage having St. Andrew's Church open, or between the Great and Second Pilgrim, is very good; and so is the anchorage to the westward of the Brandy Pots, in from 9 to 14 fathoms: this latter being considered the best-sheltered roadstead for easterly winds, except that at Crane Island, of any in the river.

On the east end of White Island Reef a black buoy is placed; and on the knoll, at the east end of Hare Island Reef, a red buoy is placed. A ship, with a good working breeze, will beat up from below Green Island Reef to the Brandy Pots in one tide, except at the very worst of the neap-tides.

TIDES.—From the west end of Green Island ships will begin to have the advantage of a regular flood and ebb, the tide running 5 hours up, and 7 down the river; and being so far as the Brandy Pots, it sets regularly up and down,—that is, N.E. by E. and S.W. by W.

From the **BRANDY POTS** to the **TRAVERSE** and **GOOSE ISLAND.**—The passage from the Brandy Pots into the south channel is across the Middle Ground, where you will have only $3\frac{1}{2}$ to 4 fathoms at low water, spring-tides. Large ships, near low water, should pass round to the eastward of Barret's Ledge when leaving the anchorage at the Brandy Pots for the south channel, and bound upwards. On the N.E. end of the Middle Ground is placed a white buoy; it lies abreast of the Brandy Pot Islands, and nearly a mile S.W. of the buoy on Barret's Ledge; and near the S.W. end of the Middle Ground is a red buoy, on the knoll at the east end of Hare Island Bank. You may cross the Middle Ground any where between these buoys; they are nearly 5 miles apart.

The channel southward of Barret's Ledge is the deepest and best. Keep the S.W. point of Green Island just on with the lighthouse, and it will lead you in a fairway between Barret's Ledge to the northward, and the Pilgrim Shoal to the southward, on the north edge of which a black buoy is now placed. If clear, you will now pick up another mark to lead you between the Pilgrims and Hare Island Reef; this is the north side of Burnt Island, just open to the northward of Grand Island, S.W. $\frac{1}{2}$ W.: it leads through. When past the red buoy on the west end of Hare Island Bank, the river is all clear to the northward, so that you may stand from the south bank over to the north shore, until you are up to Cape Goose.

At night, or in hazy weather, after crossing the Middle Bank from the Brandy Pots, you should take either the north or south side of the channel, as a guide, for running up by the lead, in about 7 fathoms; you may take either side, until you are up as high as the middle of the Long Pilgrim; you should then follow the south side of the Hare Island Bank, in the above depth, as the western part of the Pilgrims, St. Andre Bank, and Kamourasca Islands are all so steep-to as to give no warning by the lead. When

past Kamourasca, keep along the edge of the south bank, in 7 or 9 fathoms, up to the black buoy of St. Ann's; if in a large ship, you may keep off in 10 fathoms.

There is no passage for shipping to the southward of the Pilgrims: the bank between the Pilgrims and Kamourasca is steep: the mark for tacking is, not to shut in the S.W. land with the great island of Kamourasca; in standing to the northward you will find 20 fathoms mid-channel, and tack the first shoal east you have from Hare Island Reef. The direct course from the Pilgrims to the first black buoy off St. Ann's is S.W. by W. $\frac{1}{4}$ W., distant $7\frac{1}{2}$ leagues; and there is anchorage all along the south shore, from Kamourasca to the buoy; and a vessel, with a good breeze, will beat the latter distance in one tide.

KAMOURASCA ISLANDS are Great Island, Burnt Island, and Crow Island: the two former are steep-to; but near Crow Island the bank becomes shallow. To the southward of Crow Island is a place where vessels may run on shore with safety; the mark for going in is, to open the church 3 sails' breadths to the west of Crow Island, bearing E.S.E., and steer in. With spring-tides you will have 14 feet, and with neaps 10; the ground being all soft mud.

Cape Diabl bears from Crow Island S.W., distant 3 miles; and the easternmost part of the reef runs from it to within a mile of Crow Island; therefore vessels from the westward should stretch along this reef, in 6 fathoms water, and then haul in for the church, agreeably to the mark just given. There are two openings in the reefs, but strangers must not attempt either.

With easterly winds, ships that have lost their anchors may run for the cove to the southward of Cape Diabl; to enter which, you should bring the church and Crow Island in the direction before stated; and having got within the reefs, run up westerly, leaving a small islet above the church on your port side, then put the ship on shore in the S.W. part of the cove, and she will be safe; but if the wind be westerly, run her aground a little to the eastward of the church.

THE TRAVERSE.—From abreast of Cape Diabl, distant 3 miles, your course to the Traverse will be S.W. by W. $\frac{3}{4}$ W., 5 leagues. This will lead you direct to the light-vessel, and past the black buoy off St. Ann's, to the black buoy off St. Roques Point, also to the red buoy on the Middle Ground opposite; and when St. Roques Church comes S.E. by S., the road behind the church will be in one with it. The channel of the Traverse is buoyed by four black buoys on the south bank, to be left on your port hand going up; and two red buoys on the Middle Ground, on your starboard hand; also by the chequered buoy of the Patch. Your course through the narrows, from the spot last mentioned, will be S.W. $\frac{1}{2}$ S., 4 miles, along the edge of the St. Roques Shoal, up to the third black buoy, and from thence S.W. by S., 4 miles, to the chequered buoy on the Patch; continue on to the southward of the Stone Pillar, on which is a revolving light: from thence a S.W. by W. course will take you past Goose Island Reef towards Crane Island. As the tides here run strongly, allowances must be made for them, whether ebb or flood.

In running from Cape Diabl for the Traverse, in thick weather, or at night, strike the bank, off the cape, in 7 or 8 fathoms; steer about W.S.W. $\frac{3}{4}$ S., and it will conduct you to the light-vessel, when you must haul to the southward, and keep the south side on board. In beating up from the cape towards the buoys, you should take the English Bank for your guide to tack from, when standing to the northward; and the flat of St. Anne, when standing to the southward; anchoring on either side, as the wind best suits: the water between them is deep.

In entering the Traverse with little wind, you ought to be careful to make proper allowance for the first part of the flood-tide, for that sets strongly towards the point of St. Roques Bank. In going through, if more than half-flood, be guarded against the S.W. by W. set, and always keep the south bank on board; but when above the Pillars, the tide sets fair up the river.

In beating into and through this passage, be careful to tack from side to side on the first shoal east of the lead, but more particularly so on the edge of the Middle Bank; and observe that the ship will go farther over towards the Middle Bank than towards the shoals of St. Roque: and, if there be but little wind, be sure to borrow on the south side of the channel.

Should the flood be done, and your ship in the narrows, or between the buoys, and any circumstance makes it necessary for you to anchor, do not bring-to in the channel, but on either side as most convenient, and come-to in 7 fathoms. After half-ebb the tides will be found to be more moderate. In the deep water they run very strongly; therefore, if you are obliged to anchor here, take care to give a good scope of cable before the stream comes strong; for should your anchor start, you may have to cut from it, as it seldom will take a fresh hold, the ground in every part of the Traverse being hard, foul, and unfit for holding well.

Farther on, at or above the Pillars, the tides have less velocity, being seldom more than $3\frac{1}{2}$ knots an hour; ships therefore will find good riding, with easterly winds, about 2 miles to the north-eastward of the South Pillar, in 7 fathoms, or to the southward of it, in a similar depth, on good ground.

From abreast of the South Pillar to Crane Island, your course will be nearly S.W. by W., and the distance 4 leagues. In your progress you will pass Goose Island Reef and Madame Beaujeu's Bank; both of which have been described in page 153 of this work. Crane Island is a little above Goose Island, to which it is connected by low meadow land. The southern side of this part of the channel is formed by a *muddy flat*, with regular soundings as you approach, and 3 fathoms over it, having good anchorage all the way; but the northern side has the Rock Avignon and the Goose Island Reef, both of which are dangerous, and must be avoided. The mark to clear the Rock Avignon is, the whole of Crane Island open of the S.W. of the large reef off Goose Island.

In standing towards Goose Island Reef do not get into less than 10 fathoms water; but when you have got above that reef, you may stand towards Goose Island to 7 fathoms, for it is bold-to, and the soundings are regular. When you have passed the Hospital Rock, which lies to the eastward of a farm-house, and close to the low water mark, vessels may, if necessary, be safely run on shore, for the beach is, for 2 miles, all soft mud.

TO CLEAR MADAME BEAUJEU'S BANK (which has now a white buoy placed on each end of it) you should keep the southernmost of the three mountains, which stand to the southward of Trois Saumon, on with the islet on which stands the telegraph; run on in 4 fathoms water, until you get M'Pherson's house, which is at the east end of Crane Island, to bear N.W.: you will then be close upon the bank; then bring the bluff point of St. Valiers 2 sails' breadth open to the southward of the west end of Crane Island, and that will carry you in the best water; and when up to Crane Island, you may borrow close to it, for there are 7 fathoms close to the rocks.

ANCHORAGES.—Ships may anchor all the way from Pillar to the east end of Crane Island, in 7 fathoms water, the ground clean and good; there is also good riding off the body of Crane Island, in 8 fathoms; but the best roadstead in the river, with easterly winds, is a mile to the westward of Crane Island. Vessels bound down the river, when advanced so far as the Pillars, if caught by strong easterly winds and bad weather, had always better run back to this place, than ride below it, at the risk of losing their anchors.

FROM CRANE ISLAND TO POINT ST. VALIERE the course will be about W. by S. $\frac{1}{2}$ S., and the distance 4 leagues. In pursuing this track you will have to pass the *flat mud bank* off St. Thomas's Church, the *Wye Rocks*, the *Belle Chasse Islets*, and the *small bank* off Grosse Island. (For a description of these dangers, see page 154.) In proceeding from Crane Island, you may keep the island on board, for it is steep-to; run on in from 7 to 10 fathoms, and S.W. by W., distant 2 miles from the southern part of Crane Island, you will meet with the northern extremity of *St. Thomas's Flat*, which runs out nearly 2 miles from the main land, and dries at low water. A black buoy is now placed on its northern edge. In rounding Crane Island, steer W. by S., or stand towards it into 7 and 6 fathoms, soft muddy ground; and when St. Thomas's Church comes S.E. $\frac{1}{2}$ E., you will be abreast of the point, and may steer up W.S.W. $\frac{1}{2}$ W. Having got above this flat; you will be abreast of the Wye Rocks. There is now a red buoy on the west end of Crane Island Shoal, with St. Thomas's Church bearing S.S.E. $\frac{1}{2}$ E.

THE WYE ROCKS lie about $\frac{1}{4}$ of a mile from the shore, and have 4 feet over their western end, and 10 feet at their eastern part. Keep in not less than 6 fathoms water, and you will at all times go clear of them; the long mark from the westward is, to keep Belle Chasse Islands always open to the southward of Point St. Valiere.

When you have arrived above St. Margaret's Island, you should stand to the northward, but not into less than 6 fathoms, on account of the *bank* which runs from Grosse Island; nor go nearer to Rat and Madame Islands than 7 fathoms, for both these latter shallow as you approach them. The south side of the channel is bold all the way to Belle Chasse Island, having 8 fathoms near the shore, and 7, 8, 9, and 5 fathoms quite across; the ground clean, the stream moderate, and the anchorages all along good.

On the S.W. tail of Margaret Island Shoal is a red buoy, and on the shoal south of Grosse Island is a white buoy; between is a channel $2\frac{1}{2}$ cables wide, and 5 fathoms deep, leading to the quarantine establishment at the south side of Grosse Island: the eastern part of Grosse Island N. by E., leads in.

Ships being up so far as Belle Chasse Islands, should stand no nearer to them than 8 fathoms; nor to Madame Islands than 6 fathoms; the channel here is about $1\frac{1}{2}$ mile over. S.W. by W., 3 miles, from the west end of Madame Island, a *rocky shoal* runs out, which dries at low water; come not nearer to it than 8 fathoms; on the west end of this shoal a red buoy is placed, lying with St. Valiere's Church bearing S. $\frac{1}{2}$ E.; but always keep some part of Rat Island open to the southward of Madame Island, and you will be sure to pass to the southward of the *bank* in safety; and when St. Valiere's Church bears S.S.E., you will perceive it to be *bank* with an old windmill; you will then be to the westward of the danger, for the *bank* end of the shoal bears from St. Valiere's Church directly north. From Belle Chasse to Point St. Valiere, you will have 8 fathoms all along the fairway of the channel; but having passed St. Valiere's Point it deepens to 15 and 16 fathoms.

FROM ST. VALIERE TO QUEBEC the course is W. by S. $\frac{1}{2}$ S., for about 3 leagues, or up to St. Lawrence's Point, in Orleans, both shores being bold-to; you may, therefore, borrow on the northern side to 7 or 8 fathoms, and on the southern to 8; while in the middle of the channel there are 16, 17, and 18 fathoms, all the way to abreast of the Church of St. Lawrence, where vessels may anchor towards the island of Orleans, in from 16 to 10 fathoms; but the ground from St. Valiere's Point up to Quebec is not good for holding.

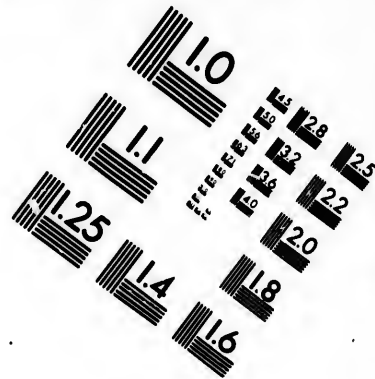
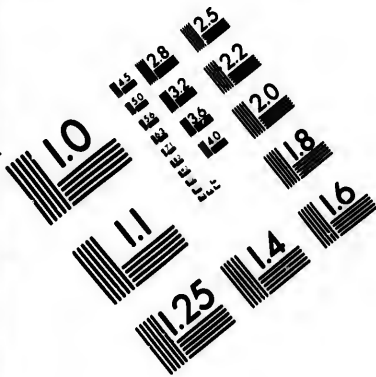
As you advance towards St. Lawrence Point the channel narrows, being not above a mile across; on the opposite point stands the Church of Beaumont; between this and the Church of St. Lawrence, bearing from each other S.W. by S. and N.E. by N., is a large *rocky shoal*, extending almost half over the channel, and drying at low water: this is dangerous and steep-to, having 10 fathoms close to its edge; you must therefore be careful to avoid it, by making short boards, until you are fairly above St. Lawrence Point; then you may safely stand to the southward into 10 fathoms water. A black buoy has lately been placed on the northern edge of the *Beaumont Shoal*, with St. Lawrence Church bearing north.

From Point St. Lawrence steer W. by N. towards Point Levy, the distance being $2\frac{1}{2}$ leagues. About $1\frac{1}{2}$ mile to the westward of St. Lawrence is St. Patrick's Hole, a roadstead for vessels bound outward, with easterly winds, but the ground does not hold well; the river here is a mile wide, and ships may tack into 10 fathoms water; in the middle of the river are 19 fathoms. In proceeding along the north shore, you must give the *Morandian's Rocks* a berth; they lie about a mile from the west end of the island of Orleans, and have only 6 to 9 feet over them: pass them in 12 fathoms. There is also a *reef* stretching from the west end of Orleans; but come not into less than 10 fathoms, and there will be no danger. Another small *reef* runs to the northward from Point Levy; but it lies close in shore, and requires only a moderate berth.

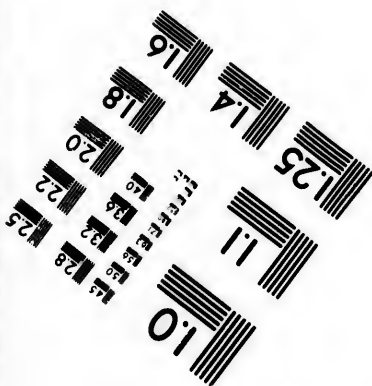
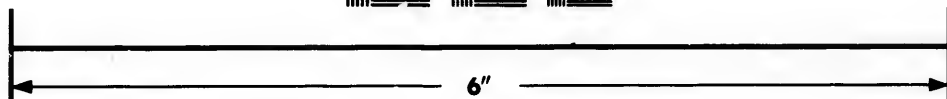
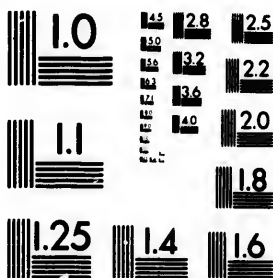
Having arrived at Point Levy, steer W.S.W. for Quebec, the distance being only 2 miles; on the northern side of the passage lie the *Beaumont Shoals*, which are readily cleared, by coming into not less than 10 fathoms. In the day-time the mark for the eastern part of these shoals, which have some *rocky patches* among them, is the small steeple of the Roman Cathedral, and the steeple of the English Cathedral in one, bearing S. 36° W.; therefore keep the small steeple open to the northward of the English Cathedral, and running up, keep the above small steeple midway between the two large ones: observe that the Roman Cathedral has two steeples on it, the small one standing at the east end, and the large one at its west end; both churches are covered with tin; the English steeple is a spire, and the Roman has two cupolas.

THE BASIN OF QUEBEC.—Ships arriving at Quebec, with a flood-tide and easterly wind, should take in their sails and have their cables ready, for the ground dries





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not hold well; the tides are commonly strong, and the water deep. If obliged to come in the middle of the stream they will have from 16 to 20 fathoms abreast of the town; but within 2 cables' length of the wharfs there will be 11 fathoms, and here the vessel may easily be brought up; while in the offing it will require 60 fathoms length of cable. On the Point Levy side is a depth of 30 fathoms, and strong tides; near the wharfs they will not be so strongly felt; but should the wind be violent, and from the eastward, the best riding will be above the wharfs, abreast of Diamond Harbour, in 10 fathoms.

The observation bastion at Quebec is in latitude $46^{\circ} 49' 8''$ north, and longitude $11^{\circ} 16' 0''$ west, variation 14° west. It is high water, full and change, at 6h. 37m.; in an easterly gale spring-tides will flow 20 feet. The velocity of the tides off the town wharfs are, the floods 3 knots, and the ebb 4 knots. The floods run about $4\frac{1}{2}$ hours, and the ebbs $7\frac{1}{2}$ hours. Common springs rise about 18 feet, and neaps 13 feet.

THE BALLAST GROUND is the place appointed for vessels to discharge their ballast in; this is to the westward of two beacons that stand on the south shore, above Quebec, and are placed on the brow of a hill near Charles Cove, which, when in a line, bear N.W. and S.E. of each other.

The River St. Lawrence extends from Quebec to the city of Montreal, from which it is distant 155 miles, and from the island of Bic 90 leagues; it is navigable to the Rapids of Richelieu for vessels of 600 tons; the impediments are few, and those very easily surmounted. The banks of the river are in a high state of cultivation, and adorned with numerous towns and villages, most of which are built around and adjacent to a church, which commonly makes a handsome appearance, and is generally a stone edifice; while single houses and farms keep up a regular kind of communication.

From Quebec, the shores of which are exceedingly lofty, the hills gradually decline, and become less elevated, until you reach the River St. Maurice, where the tide entirely ceases: here, on the north side of the river, stands the town of the Trois Rivieres. Beyond Trois Rivieres, 33 miles, is the Richelieu Rapid; at the entrance of which, and above the Lake St. Pierre, is the town of William Henry, formerly called Sorel. Lake St. Pierre, which is between the two towns, is 22 miles in length, and in some places nearly 8 in breadth; but its western part is encumbered with numerous islands, which divide it into several channels, two of which are navigable: but that on the south is the cleanest, deepest, and best, and is pointed out by a light-vessel and buoy. The banks here are low, and shelve off to a considerable distance, leaving only a narrow channel of from 12 to 18 feet water: the river here is obstructed by masses of *rock*, and at the ebb-tide the descent of the rapid becomes so great, that the utmost caution must be taken to pass it; vessels, therefore, should wait for the proper time of tide, and, if necessary, they may anchor at the bottom of the rapid till a proper opportunity offers. From hence to Montreal, the banks are of moderate height, and uniformly level.

Montreal is considered the most fertile part of Lower Canada: its port is convenient, and situated on the S.E. side of the city. The harbour is not large, but vessels drawing 15 feet water can lie close to the shore, near the Market Gate, and both deliver and receive their cargoes with expedition: the depth is generally from 3 to $4\frac{1}{2}$ fathoms: its great inconvenience arises from the Rapid of St. Mary, which is about a mile below, whose current is sometimes so powerful, that without the benefit of a N.E. wind, or a steam-boat, vessels may be detained for weeks, within 2 miles of the spot where their freight should be delivered.

Steamers run regularly between Quebec and Montreal, with goods and passengers; and ships bound to Montreal with cargoes, may engage steamers for towing at Quebec. There is a regular rate of charges for towing ships, according to their draught of water and breadth of beam, for the whole or any intermediate distance that may be required.

From Quebec to Montreal the steamers generally perform their passages in 18 hours, and return from Montreal to Quebec in about 14 hours; this includes stoppages at William Henry and Three Rivers, of about an hour each.

REMARKS.—The laws of the Trinity House are very strict with respect to shipping in the Harbour and Port of Quebec; and require the masters of vessels to pay a proper observance of them. The regulations relative to quarantine, the pilot is compelled to make them acquainted with, so soon as he comes on board; and the harbour-master will deliver a copy of the laws of the harbour on their arrival, besides which the different laws are always kept open to view at the harbour-master's office.

Should ships have the misfortune to part with their anchors, either above or near Madame Island, it being high water, and the vessel's draught of water not too great, they will find a good cove at the west end of Grosse Island, where they may safely run her on shore, the ground being all soft mud. In this cove are 14 feet spring-tides, and 9 neap.

Should they part near Crane Island, they may safely run on shore on Goose Island, above the Hospital Rock.

Should they part in the Traverse, they may run into Kamarousca, observing the marks given in page 163.

Should they part near the Pilgrims, they may run on shore in safety on the S.W. part of Green Island, near Mr. Frazer's house.

Should they be obliged to run for a harbour, below Bic Island, Old Bic furnishes a proper place to run ashore: and to the southward of Barnaby Island a ship will be equally safe. Little Matis Cove is a good place for a vessel on emergency to take refuge in. (See page 144.)

As the ice sometimes sets in suddenly, should vessels be caught at that season, all the places above mentioned will be proper and safe to winter in; and also in the space between Kamourasca and the Pilgrims: but at all times they should be hove up to high water mark, spring-tides.

Should they be assailed between Hare Island and Kamourasca with easterly winds and in a dark night, and being bound up the river, they should run for Kamourasca, and have a night's drift, wearing as required by the lead, always taking the English Bank for their guide, and when day returns, either anchor or run up, as most convenient.

TIDES.—On the days of the full and change of the moon, the tides will be found to flow nearly as follow:—

At Seven Islands Bay it is high water at 1h. 40m.; at Point de Monts at 2 o'clock; at Manicouagan Bay at 2; Bersimes Point at 2; at Tadousac, River Saguenay entrance, at 2h. 45m.; and at St. Paul's Bay at 4h. 25m. Near Cape Chatte at 2; at Matis at 2h. 10m.; at Bic Island at 2h. 15m.; at Green Island at 2h. 45m.; at the Brandy Pots at 3½; at the South Traverse at 4½; at Crane Island at 5h. 15m.; and at Quebec at 6h. 37m.

At Seven Islands Bay spring-tides rise 9 feet, neaps 5 feet; at Point de Monts spring-tides rise 11 feet, neaps 6 feet; at Manicouagan Bay spring-tides rise 12 feet, neaps 7 feet; at Bersimes Point spring-tides rise 12 feet, neaps 7 feet; at Tadousac, Saguenay River, spring-tides rise 17 feet, neaps 10 feet; at St. Paul's Bay spring-tides rise 16 feet, neaps 10 feet; at Cape Chatte spring-tides rise 12 feet, neaps 8 feet; at Matane spring-tides rise 12 or 13 feet, neaps 8 feet; at Matis spring-tides rise 13 feet, neaps 8 feet; at Bic Island spring-tides rise 14 feet, neaps 9 feet; at Green Island spring-tides rise 16 feet, neaps 9½ feet; at the Brandy Pots spring-tides rise 16 feet, neaps 9 feet; at the South Traverse spring-tides rise 18 feet, neaps 11 feet; at Crane Island spring-tides rise 17 feet, neaps 11 feet; and at Quebec spring-tides rise 18 feet, neaps 13 feet.

OBSERVATIONS.—At the isle of Bic the stream never bends to the westward until an hour's flood by the shore. Here the neap-floods are very weak; and, with westerly winds, no tide will be perceptible. A spring-flood is, however, always found within 4 miles of the shore between Father Point and Bic Island. Hence, all the way to Quebec, the tide, when regular, flows tide and quarter-tide; but it always is influenced greatly the wind, and by no means to be depended on, as to its running anywhere below Hare Island, where there is a regular stream of both flood and ebb.

Between Barnaby and Bic the stream of flood sets in from the N.E. at the rate of about 1½ knot an hour; then fair through the channel until the last quarter-flood, when it sets to the N.W. by the west end of Bic, and then gradually to the N.E., as the flood slacks. The whole of the ebb, both to the eastward and westward of the island, sets strongly to the N.E. The current between Bicquette and the north coast is generally very strong to the N.E., without any regular change. In the summer and autumn, as well as in spring-tides, this current slacks, and near Bicquette, runs to the westward, during flood; but, until the upland waters have all run down, and the great rivers have discharged the freshes, caused by the thawing of the snows in the spring of the year, this current will always run downward.

From Bic to Green Island, on the southern side, the stream of flood is no where perceptible at $1\frac{1}{2}$ mile from the islands. The ebb, or rather current, comes strongly from the N.W. out of the River Saguenay, and through the channel to the northward of Red Island. Here it always runs in a S.E. direction, $2\frac{1}{2}$ miles an hour, with a westerly wind; but only so to the southward and eastward of Red Island. Between Red Island and Green Island, the ebb runs from 4 to 6 knots. In crossing over to the north shore, this easterly current will be found to diminish; for, on the north side, the flood is pretty regular, and the ebb much weaker. Eastward of the Razade Rocks, and near Bic, the current assumes a N.E. direction, and sets strongly between Bic and Bicquette. To the southward of Bic, spring-floods run at the rate of $1\frac{1}{2}$ knot; neaps are not perceptible. Ships that come to the southward of Bic, with a scant wind from the northward, should steer W. by N., to check the S.E. current, until they come into 18 fathoms water, or up to Basque, whence they may proceed for Green Island.

The first of the flood, with spring-tides, sets from the N.E. along the north side of Green Island, and strongly towards the west end of it; then S.S.W. over the reef towards Cacana. In the middle of the channel no flood is perceptible. At 2 miles to the southward of Red Island it sets strongly to the N.W., and the ebb contrary. During spring-ebbs, the meeting of the N.E. and S.E. tides, near the middle of Green Island, causes very strong rippings; and, to the eastward of Green Island, the S.E. ebb comes strongly about the east end of Red Island; here meeting, the N.E. tide causes a high rippling, much like broken water in strong easterly winds; but, in neap-tides, the floods are very weak, and in the spring of the year there are none; thus rendering this part of the river more tedious in its navigation than any other, unless with a free wind.

From the west end of Green Island a regular stream of flood and ebb commences; which runs 3 hours upward and 7 downward. At the Brandy Pots it flows tide and quarter-tide; and above the Perce Rocks, on the south shore, it sets regularly up and down, N.E. by E. and S.W. by W. From the Brandy Pots, the stream of flood sets towards Hare Island; and near the west end, N.W., with great strength, through the passage between the island and shoal.

Above Hare Island, the flood sets regularly up the river; the ebbs contrarywise.

From the Pilgrims up to Cape Diable the flood is very weak, but it thence increases up to the buoys of the Traverse, where it runs at the rate of 5 knots. The first of the ebb sets towards the English Bank and Hare Island Shoal, when abreast of the greater island of Kamourasca, and the ebb contrary. At the Traverse, on the full and change, the tide on shore flows at $\frac{1}{2}$ past 4, but it continues to run to the westward until 6 o'clock, when regular in the channel. With westerly winds there is a deviation; but it is certain that the tide on shore rises 3 feet before the stream flows to the westward; and this allowance must always be made in every part of the river. In the Traverse the first of the flood sets from the N.N.E.; at the buoys, a quarter-flood, it takes a S.W. direction; and when the shoals are covered at half-flood, at the Seal Reefs, it sets until high water S.W. by W. The ebbs, in a contrary direction, run with great strength; frequently, in the spring of the year, at the rate of 6 or 7 knots.

From Crane Island the flood sets fairly up the river, but the first of the ebb of L'Islet sets to the northward for $\frac{1}{2}$ an hour, then fair down the river, at the rate of not more than $3\frac{1}{2}$ knots an hour with spring-tides.

DIRECTIONS FOR VESSELS BOUND DOWN THE GULF.

Remarks on the passage down the River.—Vessels generally stop at the Brandy Pots for a fair wind; but supposing, after they have passed Green Island, that the fair wind fails, and they are met by an easterly wind before arriving near the island of Bic, it is recommended in that case to run up again to the Brandy Pots, especially if late, or very early in the navigable season: for all they will gain by beating about in thick weather, probably for several days and nights in succession, will not be worth the risk; but if they have arrived far enough down at the commencement of the easterly wind, the island of Bic affords good shelter and anchorage, which should be sought in time, before the fog commences (see page 160). There is no other anchorage lower down nearer than the Seven Islands, and after that Gaspé. Vessels without a pilot should

be cautious in attempting to run inside of the island of Bic in foggy weather, unless very well acquainted.

When leaving the Brandy Pots with a northerly wind and ebb-tide, keep well under White Island Reef, to prevent your being set over to Green Island Reef by the strength of the tide.

When beating down at night, or in thick weather, the South Bank should be your guide. You should tack from it after striking soundings on its edge, and should not stand to the northward more than half-channel over in any part; thus keeping in the strength of the current down, and avoid the possibility of accidents from the shoals on the north coast, which, being very steep, and affording little or no warning by the lead, have proved fatal to many vessels. Under those circumstances, there is no safety unless the lead be kept constantly going when approaching the south coast. In the board to the southward, sail should be sufficiently reduced for soundings to be easily obtained, and every thing in readiness to tack, or wear, at the shortest notice. These precautions become more necessary as the vessel descends the river, and the bank of soundings becomes narrower. Off Matane there are 30 fathoms, sandy bottom, 1½ mile from the shore, and 60 fathoms 3 miles off; at 5 miles off no bottom will be found at 100 fathoms. The south bank becomes still narrower to the eastward of Matane, and ceases, in consequence, to be of use to vessels. Off Cape Chatte there are 30 fathoms water little more than ¼ a mile from the shore.

Below Cape Chatte there is plenty of room; and the chart will show that there are soundings in various depths, between 50 and 100 fathoms, from off the western end of Anticosti, to nearly opposite the Seven Islands, and also between the west and S.W. points of Anticosti; but eastward of the S.W. point, the bank is very narrow, as far as Pavilion Point; from thence to Heath Point there is sufficient warning by the deep-sea lead, as will be seen by the chart.

RATES OF PILOTAGE FOR THE RIVER ST. LAWRENCE.

From <i>Bic</i> to <i>Quebec</i> . Per foot.	£ s. d.
From the 2nd to the 30th April, inclusive	1 0 6
1st May to the 10th November, inclusive	0 18 0
11th to the 19th November, inclusive.....	1 3 0
20th November to the 1st March, inclusive ...	1 8 0
From <i>Quebec</i> to <i>Bic</i> .	
From the 2nd to the 30th April, inclusive	0 18 3
1st May to the 10th November, inclusive	0 15 9
11th to the 19th November, inclusive.....	1 0 9
20th November to the 1st March, inclusive	1 5 9

Rates of pilot-water and poundage on pilot-money are payable at the Naval Office, by masters and commanders of vessels.

For every foot of water for which masters and commanders of vessels are bound to pay their pilots from *Bic* to *Quebec*, and from *Quebec* to *Bic*, 2s. 6d. currency, per foot.

For vessels going to *Three Rivers* or *Montreal*,

Of 100 to 150 tons, inclusive, 2 <i>l.</i> currency.	
151 „ 200 „ „ 3 <i>l.</i>	
201 „ 250 „ „ 4 <i>l.</i>	
250 tons and upwards .. .5 <i>l.</i>	

On settling with pilots, masters or commanders of vessels, or the consignees of such vessels, are to deduct 1s. in the pound for the amount of the sums to be paid for pilotage, which will be exacted by the Naval Officer at clearing out, the same being funded by law, under the direction of the Trinity House, for the relief of decayed pilots, their widows, and children.

Regulations for the Pilotage above *Bic* to *Quebec*.At or above the anchorage of the *Brandy Pots*;

Two-thirds of the present rate for a full pilotage.

At above the *Point of St. Roc*;

One-third of ditto.

For above the *Point au Pins*, on the *Isle aux Grues*, and below *Patrick's Hole*;

One-fourth of ditto.

And at and above *Patrick's Hole*.—The rates already established by law for shifting a vessel from one place to another in the *Harbour of Quebec*, viz.:—1*l.* 3*s.* 4*d.*Rates above the *Harbour of Quebec*.

From Quebec to Port Neuf.	For vessels of registered measurement, not	To Quebec from Port Neuf.
4 <i>l.</i> currency.....	exceeding 200 tons	2 <i>l.</i> 10 <i>s.</i> currency.
5 <i>l.</i>	If above 200 and not exceeding 250 tons	3 <i>l.</i> 10 <i>s.</i>
6 <i>l.</i>	If above 250 tons	4 <i>l.</i>
To Three Rivers, or above Port Neuf.	For vessels not exceeding 200 tons	From Three Rivers, and above Port Neuf.
6 <i>l.</i> currency.....	For vessels not exceeding 200 tons	4 <i>l.</i> currency.
7 <i>l.</i>	If above 200 and not exceeding 250 tons	4 <i>l.</i> 10 <i>s.</i>
8 <i>l.</i>	If above 250 tons	5 <i>l.</i> 10 <i>s.</i>
To Montreal and above Three Rivers.	For vessels not exceeding 200 tons	From Montreal and above Three Rivers.
11 <i>l.</i> currency.....	For vessels not exceeding 200 tons	7 <i>l.</i> 10 <i>s.</i> currency.
13 <i>l.</i>	If above 200 and not exceeding 250 tons	8 <i>l.</i> 15 <i>s.</i>
16 <i>l.</i>	If above 250 tons	10 <i>l.</i> 15 <i>s.</i>

Pilots are at liberty to leave vessels 48 hours after they arrive at the place of their destination.

IX.—THE SOUTHERN COAST OF NOVA SCOTIA.

FROM CHEDABUCTO BAY TO HALIFAX HARBOUR.

Variation 19° to 16° west.

DESCRIPTION OF THE LAND.—The eastern part of Nova Scotia is broken into the several islands and passages, as represented on the charts. Of the islands which are low and covered with stunted fir-trees, the first on the N.E. is called Durell's Island, the second, George's Island, and the third, Canso, or St. Andrew's Island; outside this latter island is the smaller one, called Cranberry Island, which is now distinguished by a lighthouse. This is an octagonal tower, built of wood, 88 feet in height, painted white and red horizontally, and showing two fixed lights, one above the other.

CAPE CANSO is the outer, or easternmost point of St. Andrew's Island. From this cape, westward, to Torbay, the coast makes in several white heads or points; here the country is much broken; and near the S.E. extremity many white stones appear from the offing, like sheep in the woods. During a southerly gale the sea is dreadful here. From Torbay to Liscombe Harbour there are banks of red earth and beaches; and from Liscombe Harbour to the Rugged Islands, (excepting the White Isles, which are white rocks,) the capes and outer islands are bound with black slaty rocks, generally stretching out in spits from east to west; and from the Rugged Islands to Devil's Island, at the entrance of the harbour of Halifax, there are several remarkably steep red cliffs, linked with beach.

The new lighthouse on Cranberry Island is now of great importance to the navigation of this part; and Mr. Lockwood, a gentlemen well acquainted with the subject,

observes, that "The Gut of Canso will, by its means, become the common thoroughfare to the Gulf and River of St. Lawrence, and tend to mitigate the inconvenience and rigours of a late or early passage to Quebec, &c."

The fishermen of Arachat are well acquainted with the channels and inlets on this coast, and frequent them, more particularly in the spring and fall, to catch mackerel and herrings, of which large shoals commonly resort here; but the rocks are so numerous, and the passages so devious, that no stranger should attempt them.

Of the many rocks hereabout, the outer breaker, called the *Bass*, a rock of 3 feet water, lies more than 2 miles E. $\frac{1}{2}$ S. from the lighthouse on Cranberry Island. At $\frac{1}{2}$ of a mile S.E. from Cape Canso, is a similar rock, called the *Roaring Bull*; and at a mile to the E.S.E. of the latter, there is said to be another, discovered by a fisherman of Canso, in 1813; but its existence seems to be questionable.

THE HARBOUR OF CANSO, within St. George's Island, is well sheltered, with good ground, and sufficient depth for vessels of any burthen. In a rough sea the dangers show themselves; but with smooth water it is hazardous to enter the passages without a pilot, or a leading wind.

Sailing from the westward into Canso Harbour, so soon as you have passed the Roaring Bull, over which the sea generally breaks, run for Pitipas, or Read Head, taking care, when above the black rocks, to keep them open of the rocky islets off Cape Canso, until you bring Glasgow Head and the north end of Inner Island in one, which will carry you above Man-of-war Rock; then steer westerly, being careful to avoid Mackerel Rock, and make for Burying Island, the north end of which you must not approach nearer than to have the depth of 5 fathoms; then anchor to the north-westward of it, on a bottom of mud.

Coming from the eastward, pass between Cape Canso and Cranberry Island, giving the latter a sufficient berth to avoid a *shoal* which stretches to the southward of it, and steer for Pitipas Head, as before directed.

The northern passage between Durell's and St. George's Island, notwithstanding its narrowness, yet, having a depth of water and a clear channel, will be found to be the best passage. In sailing in, keep mid-channel between Bald and Nett Rocks, the former being above water, and the latter drying at $\frac{1}{2}$ ebb; when you may steer with safety, by attending to the chart, and the situation of Burying Island. High water at 8h. 50m.; tides rise 5 to 8 feet.

DOVER BAY is a wild, deep indent, with a number of islands and *sunken rocks* at its head; yet shelter may be found on the western shore, or during a S.E. gale, by giving a berth to the rocks that lie off the south end of Big-Dover Island, which are very visible in bad weather; haul up under the island, and anchor between the small islands on the eastern side: within these islands Little Dover passage continues out south-eastward, having 5, 6, and 7 fathoms water, and quite safe.

St. Andrew's Passage, leading to Glasgow Harbour, being so thickly encumbered with rocks, can only be navigated by those who are well acquainted with its dangers.

These places (says Mr. Lockwood) deserve notice, as they may afford shelter in cases of emergency, and in war time are nests for privateers; while from the heights adjacent may be had an extensive view of whatever passes in the offing.

RASPBERRY HARBOUR is to the westward of that of Canso or Port Glasgow; it is small, and the shores within quite bold. At the entrance, on the eastern side, is an island, having a *ledge* close to it on the S.E. By rounding this ledge, you may steer directly into the harbour, and come to an anchor, under the island which lies in the middle of it, in the depth of 7 fathoms, where you will ride safely. The country here is rocky and barren, and there is a quarry of granite, much in request for millstones. The outlet between Raspberry Island and the main is a complete dock, where vessels can lash themselves to both shores, and ride in 30 feet water; but half-way through, it has only 10 feet.

WHITE HAVEN, which is 2 leagues to the westward of Raspberry Harbour, is a place of hideous aspect. Of its *rocky islets*, the larger and outer one, called *White Head*, from the colour of its sides, is 70 feet above the level of the sea. This islet appears round and smooth, and is a useful mark, as the passage in, on either side, is in mid-channel. Off the head are two breakers, one S.S.E. and the other E. by S. $\frac{1}{2}$ a

mile off; there is also a *patch*, of 4 feet, lying $\frac{1}{2}$ a mile S.S.W. $\frac{1}{2}$ W. from White Head. The most numerous visitors of this place are crows, eagles, &c.; yet the neighbouring fishermen, during spring and summer, find in it large quantities of mackerel, herrings, &c.

TORBAY.—The entrance of this bay is formed on the west by a bold headland, called Berry Head. The channel in is between this head and the islets to the eastward. E.S.E. from the head, and south of George's Island, are *three very dangerous rocks*, which do not break when the sea is smooth. Within the bay, under the western peninsula, there is excellent anchorage, in from 6 to 4 fathoms, muddy bottom, up to the eastern part of the bay. There is also anchorage on the western side of the bay, in from 7 to 3 fathoms, similar ground, where a vessel may lie in safety during any gale. The adjacent lands are rocky, but a few salt-marshes enable the inhabitants to maintain some cattle; and vessels are built here, of from 40 to 120 tons, which are employed in the fisheries.

The principal dangers to be avoided in entering are, the *small sunken rocks* in the offing, which in smooth water do not break; they should be left to the eastward. Within the bay the anchorage is excellent, on a muddy bottom, with the exception of a few spots of *rocks*, sheltered from every wind.

Torbay to Country Harbour.—From Torbay, westward, to Country Harbour, the land in general continues rocky and sterile, with deep water close in, but regular soundings without, and from 30 to 20 fathoms of water.

Coddle's Harbour, which is $3\frac{1}{2}$ leagues to the westward of Berry Head, affords shelter to small vessels only; and these enter on the eastern side, to clear the breakers. There is a deep inlet, called New Harbour, which lies about 7 miles from the islands, and connected with a chain of extensive lakes; but its navigation is obstructed by a *bar* across its entrance; and it is open to southerly winds.

COUNTRY HARBOUR.—The fine harbour, called Country Harbour, is navigable, for the largest ships, 12 miles from its entrance. It is, at present, but thinly settled; yet there are reasons for believing that, in consequence of improvements in the neighbourhood, the population will speedily increase. The shores are bold; the anchorage soft mud, with a depth of 13 to 5 fathoms.

Mr. Lockwood has said that "No position in the province is more advantageous for settlers than this harbour: at its mouth the islands afford shelter to fishermen and small vessels, as well as the means of erecting their stages; and the fishing grounds, at a short distance in the offing, abound in halibut, haddock, cod, and what they term the bait-fishery—that is, mackerel, gaspereaux, smelts, &c. Salmon are plentiful in their season; and, but for the improvident use of this valuable addition to the means of subsistence, would continue for ages."

The *ledges* off the harbour generally break, and between them are deep passages. On advancing from the eastward, there are *two rocks* to be avoided, which lie, as shown on the charts; proceeding inward, you should give Green Island a small berth, and the dangers on that side will be avoided. The *rocks* on the west of the entrance, named *Castor* and *Pollux*, are above water and bold-to. When above them, give Cape Moccodame a good berth, so as to avoid the *Bull*, a *dangerous sunken rock*, that breaks in rough weather, and lies about $\frac{1}{2}$ a mile from the extremity of the cape. The *black rocks* are partly dry, and from them, upwards, there is no danger, and the anchorage good.

Vessels entering this harbour must use the utmost caution in steering between the *ledges* and *rocks* which are scattered about: fortunately they commonly show themselves whenever there happens to be any sea; this will render the entrance less difficult: but having passed the black rock, which is the innermost danger, the navigation is perfectly safe for the largest fleet. The tides are scarcely perceptible, except when, in the spring, the ice and snow dissolve, and heavy rains are prevalent. It is high water, full and change, at 8h. 40m. Tides rise 6 to 9 feet.

HARBOUR ISLAND.—The islands on the east side of the entrance (Green Island, Goose Island, and Harbour Island, or the William and Augustus Islands of Des Barres), are low and covered with scrubby trees. Within Harbour Island is excellent anchorage.

FISHERMAN'S HARBOUR, on the west side of Country Harbour, is a favourite resort of fishing-vessels. In entering this place, between Cape Moccodame and the

black ledge, great care must always be taken to avoid the *Bull Rock*, which dries at low water, but is covered at high water, and only breaks when the weather is bad.

BICKERTON HARBOUR, to the west of Fisherman's Harbour, is fit for small vessels only; but it is a safe, convenient, snug little harbour. At 2 miles to the west of it is Hollin's Harbour, a place of shelter for coasters, and resorted to by the fishermen. Indian Harbour is a shallow and unsafe creek, but has good lands, well clothed with pine, maple, birch, and spruce. The next inlet, called Wine Harbour, has a *bar of sand*, which is nearly dry. There are but few settlers on these harbours.

ST. MARY'S RIVER.—The navigation of this river is impeded by a *bar* of 15 feet water, which extends across, at the distance of $1\frac{1}{2}$ mile above Gunning Point, the west point of the entrance. Below the bar, towards the western side, is a *middle ground*, which appears uncovered in very low tides; and, above the bar, nearly in mid-channel, is a *small rocky islet*. The passage over the bar is on the eastern side of this islet. The tide, which is very rapid, marks out the channel; the latter is devious, between mud-banks, extending from each shore, and dry at low water. The depths upwards are from 24 to 18 feet. Sailing in, you should proceed for 4 miles N.N.W., then 2 miles N. by W.; and afterwards N.N.W. to the Fork, where it divides, the western branch terminating in a brook; the eastern branch continuing navigable $\frac{1}{2}$ of a mile farther up to the rapids. The town of Sherbrook is, at present, a small village, at the head of the river, about 3 leagues from the sea.

WEDGE ISLE.—This islet, called Wedge Isle, which lies at the distance of $\frac{1}{2}$ a league south from the S.W. point of St. Mary's River, is remarkable, and serves as an excellent guide to the harbours in the neighbourhood. A beacon, erected upon it, may be seen from 6 to 8 miles off. This beacon is of wood; its top is 140 feet above the sea, covered at the top, and painted white. The side of this islet, towards the main land, is abrupt, and its summit is 115 feet above the sea. From its S.W. end *ledges* stretch outward to the distance of $\frac{1}{2}$ a mile; and some *sunken rocks*, extending towards it from the main, obstruct the passage nearly half-way over. About $2\frac{1}{2}$ miles south from the Wedge is a fishing-bank, of 30 to 20 feet, the area of which is about 200 acres.

THE HARBOUR OF JEGOGAN may be readily found, on the eastward, by Wedge Isle, above described; and, on the westward by the bold and high land called Redman's Head. The passage in is at the distance of $\frac{1}{2}$ of a mile from that head; because, at the distance of $\frac{2}{3}$ of a mile, is a *dry ledge*, called the *Shag*. Within the small island on the east side of the entrance, called Tobacco Isle, there is anchorage in 4 or 5 fathoms, muddy bottom.

LISCOMB HARBOUR.—The entrance of this harbour, which is one of the best on the coast, is between Liscomb Island and the headland on the west, called Smith, or White Point; a mile to the northward of this is Green Point, which is bold-to. From the S.E. end of Liscomb Island, a *ledge*, with breakers, extends to the distance of $\frac{2}{3}$ of a mile. Within, and under the lee of the island, is safe anchorage in from 13 to 8 fathoms. On the N.E. of the island, a vessel caught in a S.E. gale may be sheltered by Redman's Head, already described, with the head S.S.E., in 6 and 7 fathoms, on a bottom of clay.

On the west side, the ground, from Smith Point, is shoal to the distance of nearly a mile S.S.E.; and at 2 miles south from the point is a *rock*, with only 13 feet over it, and lies with Smith and Green Points in one. Another *shoal* of 12 feet, on which the sea breaks, lies $1\frac{1}{2}$ mile S.S.W. from the east end of Liscomb Island; a mile within, or nearer the island, in the same direction, lies a *rock*.

The *Black Prince Rock*, drying at low water, and on which the sea always breaks, lies S.E. by E. from the east end of Liscomb Island. To enter the harbour from the southward, between the 12 and 13 feet shoals, which are $1\frac{1}{2}$ mile apart, keep Green Point well open of Smith's Point, bearing N. by W. $\frac{1}{2}$ W.; when within a mile of Smith's Point, keep more to the northward, and run up in mid-channel. The island side is bold. The first direction of the harbour is nearly north, then W.N.W. Opposite to the first fish-stage, at $\frac{1}{2}$ a mile from shore, is as good a berth as can be desired, in 7 fathoms. From this place the harbour is navigable to the distance of 4 miles: it is, however, to be observed, that there are *two sunken rocks* on the north side.

BAY OF ISLANDS.—The coast between Liscomb and Beaver Harbours, an extent of 6 leagues, is denominated the Bay of Islands. Within this space the *islets*, *rocks*, and *ledges* are innumerable: they form passages in all directions, which have, in general, a good depth of water. At the eastern part of this labyrinth, near Liscomb, is Marie-et-Joseph, an excellent harbour, capable of containing a fleet of the largest ships, but requires caution to enter; the settlers on which keep large herds of cattle, &c. Nicomquirque is a small settlement in the same range; the inhabitants of which are an industrious set of people. Newton-quaddy, next east of Beaver, has a few families situated on the side of a shoal river; the land here is good.

The *White Islands*, nearly half-way between the harbours of Beaver and Liscomb, appear of a light stone-colour, with green summits. The latter are about 80 feet above the level of the sea. The isles are bold on the south side; the passage between them safe; and there is good anchorage within them, in from 10 to 7 fathoms. From these the *rocks* and *ledges* extend 5 or 6 miles from east to E.N.E.; they are bold-to and mostly dry; the water within them being always smooth.

BEAVER HARBOUR.—The Pumpkin and Beaver Islands are very remarkable to vessels sailing along the coast, particularly Pumpkin Island, which is a lofty and dark barren rock; but they afford a smooth and excellent shelter inside of them during a southerly gale. Southerland Island has, on its N.W. side, a deep and bold inlet, where a vessel may lie concealed, and as secure as in a dock. When in the offing, the harbour is remarkable, on account of the small island which lies north of the black rock, having at its southern end a red cliff, being the only one on this coast; having entered the harbour, you may choose your anchorage, according to the direction of the wind, the bottom being generally mud. The basin on the west side is so steep-to, that a vessel may be afloat with her side touching the beach. To enter the harbour, a stranger should take a pilot.

On Beaver Outer Island, or William's Island, a revolving light has lately been established; the light is visible $1\frac{1}{2}$ minute, and obscured $\frac{1}{2}$ a minute. The lighthouse is square, 70 feet high, painted white, with two black balls painted on its seaward side. A *reef* extends eastward from Beaver Island, a considerable distance, so that, on entering the bay, you should give the light a berth of $\frac{2}{3}$ of a mile; and steer in N.N.W. The lighthouse stands in latitude $44^{\circ} 47' 49''$ north, and longitude $62^{\circ} 25' 18''$ west, by chronometer. Sambro lighthouse bears from it W. $\frac{1}{2}$ S., distant 54 miles; and Cape Canso lighthouse E. $\frac{1}{2}$ N., distant 70 miles, bearings magnetic.

SHEET HARBOUR.—This harbour is nearly half-way between Country Harbour and Halifax. It is very extensive, but dangerous for vessels to approach in thick weather. The narrow channel, between Sober Island and the main, affords secure anchorage, on a bottom of mud. The name is derived from a blank cliff, on a rocky isle at the entrance, which appears like a suspended sheet.

Without the harbour are the several *ledges* shown on the charts. These ledges show themselves, excepting the outer one, called by the fishermen, *Yankee Jack*, and which, when the sea is smooth, is very dangerous. It has been asserted, that a *rocky shoal* lies $\frac{1}{2}$ a mile to the south of the Yankee, but its position has not been ascertained.

Within the entrance is a *rock*, 2 feet under water, which will be avoided by keeping the Sheet Rock open of the island next within it, on the eastern side. In sailing or turning up the harbour, give the sides a very moderate berth, and you will have from 11 to 15 fathoms, good holding ground.

The flood, at the entrance of Sheet Harbour, sets S.S.W., about a mile an hour. High water, full and change, at 8h. 50m.; tides rise 7 feet.

MUSHABOON.—To the westward of Sheet Harbour is a small bay, open to the S.E., which affords shelter at its head only, in from 7 to 5 fathoms, muddy bottom. It is connected to Sheet Harbour by a clear, deep, and bold passage, between an island and the main land. Here you may lash your vessel to the trees; and, lying in 5 fathoms, soft bottom, with the side touching the cliff, be perfectly sheltered from all winds. This place is uninhabited, the land being incapable of cultivation. In going through the passage to Sheet Harbour, you must guard against a *sunken rock* at its mouth, which, from the smoothness of the water, seldom shows its position; this rock lies 400 yards off Banbury Islands, and may easily be cleared by keeping the Sheet Rock open of the island.

SPRY HARBOUR.—Cape Spry, or Taylor's Head, divides Mushaboon from Spry, or Taylor's Harbour. It has, on each side of the entrance, a high, rocky, barren cape, distinguishable at a long distance. When sailing in, you will perceive the land in the centre of the harbour, appearing in three distinct hills; keep the valley between the two easternmost, on with the Bald Rocks, which will lead you between Mad Moll Reef and Moloney Rock. You may now steer in for the anchorage, at the western head of the harbour, where a fleet may lie land-locked on a muddy bottom. This harbour is open to S.E. and S.S.E. winds: at the entrance the flood-tide sets in at about a mile an hour.

DEANE, or POPE'S HARBOUR, on the western side of Gerard's Isles, has a ledge at its entrance, forming an obtuse angle at the two points, $\frac{2}{3}$ of a mile from each, and from which a shoal extends to the southward $\frac{1}{2}$ a mile. It may be passed on either side: but, on the west, care must be taken to avoid a shoal extending from the outer Tangier Island. The best shelter is under the smaller island on the eastern side, where there are from 8 to 6 fathoms, with good clay ground.

TANGIER HARBOUR, next to Deane, or Pope's, is formed by craggy, barren islands, which secure vessels from all winds. At about 2 miles from its mouth is a ledge that dries at low water. The anchorage is under the eastern shore above Fisher's Nose, in 5 to 4 fathoms, stiff mud. Here are some good tracts of pasture-land, and the few inhabitants are occupied in the fishing and coasting trades.

SHOAL BAY is the Saunders Harbour of Des Barres.—This bay has a good depth of water and excellent anchorage on fine white sand and strong mud. The latter is to the northward of the island now called Charles Island, and vessels lie in it, land-locked, in 7 fathoms. Off the mouth of the harbour is a rock, that always breaks; but it is bold-to, and may be passed on either side. Some parts of the harbour will admit large ships to lie afloat, alongside the shore, over a bottom of black mud. Supplies of stock, &c., may be obtained from the inhabitants of this place.

SHIP HARBOUR is easy, and safe to enter, having good anchorage in every part, the bottom being tough blue clay; it leads to Charles's River, above the narrows of which, a fleet of the largest ships may lie alongside of each other, without the smallest motion. In this harbour, and on the isles about it, are several families, who keep small stocks of cattle, &c. The entrance, called by Des Barres, Knowles' Harbour, is deep and bold: it lies between two islands, of which the eastern is Brier's, or Charles's Island, on the western side of which is a lighthouse. A white cliff, which may be seen from a considerable distance in the offing, is a good mark for the harbour: at first it resembles a ship under sail, but on approaching seems more like a schooner's topsail. There is good anchorage in every part of the harbour. Brier's Island, above mentioned, is a low, rugged island, and ledges, partly dry, extend from it $\frac{2}{3}$ of a mile to the eastward: avoiding these, when entering this way, you may range along the western island, and come to an anchor under its north point, in 6 or 7 fathoms, the bottom of mud.

OWL'S HEAD, or KEPPEL HARBOUR, which is next to the west of the harbour last described, although smaller than many other harbours on the coast, has sufficient space for a fleet. It may be known, at a distance, by Owl's Head, on the western side, which appears round, abrupt, and very remarkable. The neighbouring coast and isles are rugged and barren, but the harbour has a few settlers. The entrance is of sufficient breadth to allow a large ship to turn into it: and within the harbour shipping lie land-locked, when in 6 and 7 fathoms, with a bottom of mud. In taking a berth, you will be guided by the direction of the wind; as, with a S.W. gale) the western anchorage is to be preferred, and the eastern with a S.E. The flood-tide sets into this harbour from the S.W., at the rate of a mile an hour. At Owl's Head it is high water at 8h. 30m.; tides rise from 5 to 7 feet.

JEDORE HARBOUR is the Port Egmont of Des Barres. In the offing, at the distance of 2 leagues from the land, the body of the flood sets in from S.W. by S., at the rate of $\frac{1}{2}$ a mile an hour. It is high water at Jedore Head at 8h. 20m.; tides rise from 6 to 9 feet.

From the appearance of this harbour on the charts, it might be presumed that it is spacious and commodious; but, on examination, it will be found really different. The entrance is unsafe and intricate; a shoal, of only 11 feet, lies at its mouth; the channel within is narrow and winding, and there are extensive mud-flats, covered at high

water, and uncovered with the ebb; hence a stranger can enter with safety only at low water, the channel being clearly in sight, and the water sufficient for large ships. The best anchorage is abreast of the *sand-beach*, 2 miles within the entrance, in from 9 to 6 fathoms, on a bottom of stiff mud. At 2½ miles above the beach the harbour divides; one branch on the port hand is navigable nearly to its extremity, and has *several sunken rocks* in it; while to the starboard is a large space, with a clear bottom, and from 3 to 6 fathoms. On the eastern shore are Oyster Pond and Navy Pool, two deep inlets, but choked at their entrance by a *bed of rocks*; the river terminates with a rapid.

The lands at the head of the harbour are stony, but tolerably good; the rest barren and deplorable. The inhabitants, an industrious people, consist of several families; they subsist chiefly by coasting; and supply Halifax with wood, which they cut from the unoccupied lands around them.

Without the entrance, on the eastern side, are *two isles*, called *Roger* and *Barren Island*, between and within which the passages are good, and afford shelter in case of necessity; from these the land runs nearly E.N.E., and forms a deep inlet, called Clam, or Clamb Bay.

THE BRIG ROCK.—This is a very *dangerous rock*, of 3 feet, about the size of a frigate's long boat; it lies S.E. ½ E. from Jedore Head, and S.W., 2 miles from the isle called Long Island. The weed on the top of it may frequently be seen at the surface. The marks for this rock are, a house and barn in Clam Bay, just open of the east end of Long Island, bearing N. 5° E.; and the house on Jedore Head open to the N.E. of Jedore Rock.

POLLUCK SHOAL.—At about 9 miles south of Jedore Head is a *reef*, called the *Polluck Shoal*; its area is about an acre, having a depth of 24 feet over it; and, during a swell, the sea breaks over it with great violence.

JEDORE LEDGES.—Those advancing between the Brig Rock and Polluck Shoal, should be cautious in approaching any of the *Jedore Ledges*: they are laid down on the charts, and said to extend from 5 to 9 miles from the mouth of the harbour.

Between Jedore and Halifax there are no harbours of any consideration for shipping, but there are numerous settlements. The land in this extent is, in general, of moderate height, rising gradually from the shore. Red and precipitous cliffs, the characteristic of the eastern coast, may be seen from 7 to 9 miles off. The best harbour is that called Three-fathoms Harbour. When you are within this harbour, the passage will be found to be clear, between banks of soft mud; but it is only fit for schooners and sloops, although it has occasionally been visited by large vessels. The anchorage is tough blue clay. The cliffs are composed of bright red earth, remarkable to vessels coming from the eastward.

This harbour lies immediately to the east of an *islet*, called *Shut-in Island*; and, with the wind on shore, is difficult and dangerous; so that it is to be attempted only in cases of real distress. The channel lies ¾ over to the northward from Shut-in Island, and turns short round the starboard point to the westward.

In beating to windward, ships may stand to within 1½ mile of the shore, the soundings being tolerably regular, from 20 to 12 and 8 fathoms.

FROM HALIFAX TO CAPE SABLE.

GENERAL REMARKS.—Vessels coming from the eastward, and bound for the harbour of Halifax, should pay particular attention to their soundings, especially when they consider themselves in the neighbourhood of Sable Island; which island, and its surrounding banks, we shall hereafter describe. It will therefore only be necessary at present to remark, that the island is low, and appears like small sand-hillocks; that in summer it frequently is enveloped in a fog, but you may always discover your proximity to it by your soundings; and that on its N.E. and N.W. sides are *dangerous bars*; you will have, except on these sides, 2 fathoms 2 cables' length off, and your depth will increase in proportion to the distance you are from it, at a general rate of about 2 fathoms for every mile, until you are 20 miles from it. Signals are placed on the island, and also a gun, to answer such as may be heard from vessels in distress.

In making land more to the south-westward, and about Cape Sable, you must be particularly careful to avoid *Seal Island Rocks* and the *Brazil Rock*. To the westward of Great Seal Island the soundings are very irregular for upwards of 20 miles, at which distance are 45 fathoms, gravel and stones. Indeed, the soundings along Nova Scotia, from Cape Canso to Cape Sable, partake of the same irregularity, from 25 to 50 fathoms; therefore you should not come nearer the land than 35 fathoms, unless you are well assured of the exact part you are in, for otherwise, endeavouring to enter Halifax, you may be driven into Mahons or Mecklenburgh Bays, and be caught by S.E. winds. The weather is generally foggy 4 or 6 leagues off shore, both in spring and summer; but it becomes clearer as you get nearer the coast; and, with the wind off the land, it will be perfectly clear.

From 1 to 3 leagues out to seaward, mackarel, halibut, rays, haddock, and cod are found in plenty; and at the entrance of the harbours and rivers, salmon is taken from April to August; the bays abound with herrings in June and July, and with tom-cod all the year round.

HALIFAX, the capital of Nova Scotia, is situated in $44^{\circ} 39'$ north, and longitude $63^{\circ} 37'$ west; its harbour being large enough to accommodate any quantity of shipping in perfect safety. Its direction lies nearly north and south, being about 16 miles in length, and terminates in Bedford Basin, which is an extensive sheet of water, containing 10 square miles of safe anchorage. The town is situated on the declivity of a peninsula, at the western side of the harbour, about 10 miles from its entrance; and is said to have 15,000 inhabitants, a naval yard and hospital, together with a citadel. It is a free warehousing port, and contains two Episcopal churches, two Presbyterian, two Baptist, and three other chapels.

The village of Dartmouth is opposite to Halifax; it is thinly settled; but the lands behind it are in an improving state; and there are some fine farms belonging to the descendants of the original German settlers.

HALIFAX HARBOUR.—In approaching the harbour of Halifax, you will perceive the coast about its environs, particularly to the southward, to be ragged and rocky, with patches of withered wood scattered about; but the land is rather low in general, and not visible 20 miles off, except from the quarter-deck of a 74, the high mountains of Le Have and Aspotogon excepted, which may be seen 9 leagues off. When Aspotogon Hills, which have a long level appearance, bear north, and you are 6 leagues distant, an E.N.E. course will carry you to Sambro lighthouse; this stands on Sambro Island, and is rendered remarkable by being a high tower, elevated 210 feet above the sea. There are two 24-pounders placed on the island, under the direction of a small party of artillery-men; these are fired on the approach of vessels, and contribute much to the mariner's safety, by warning him off the adjacent breakers.

Sambro Island and lighthouse lie on the S.W. side of the entrance to the harbour; it is in latitude $44^{\circ} 26'$ north, and longitude $63^{\circ} 35'$ west. S. by E., distant 2 full miles from the lighthouse, lies the *Henery Rock*, with only 8 feet water over it; and E.N.E., distant a mile from the Henery, lies the *Lockwood*, of 12 feet; these appear to be but little known, although they are both very dangerous.

THE LEDGES.—About 2 miles to the westward are the *Western Ledges*; these are the *Bull*, the *Horses*, and the *S.W. or Outer Rock*; the Bull is the westernmost and nearest to the land: this is a rock about water, lying above $\frac{1}{2}$ of a mile S.E. by E. from Pendant Point, the lighthouse bearing from it E. 7° S. The Horses are about a mile to the south-eastward of the Bull, the lighthouse bearing E. by N., distant $1\frac{1}{2}$ mile; and the S.W. Rock, or Ledge, lies with the lighthouse bearing N.E., distant $1\frac{1}{2}$ mile. To avoid these, constant caution will be requisite, though they are surrounded by deep water, the channel between the Bull and the main having 10 fathoms water, and the passage clear. Between the Horses and the Bull are 11 fathoms, and no intermediate danger; and between the Horses and the S.W. Rock there are 20 fathoms.

The Owen Rock.—This rock was discovered by Captain Owen, R.N., in H.M. steam-vessel *Columbia*, on the 21st May, 1844; it has only 12 feet water on it. When the vessel touched there were 8 fathoms from the starboard, and 18 fathoms from the port paddle-box. It lies with Sambro lighthouse bearing S.W., distant $1\frac{1}{2}$ of a mile.

The *Eastern Ledges* are the *Sisters*, or *Black Rocks*; these lie nearly E. by S. from the lighthouse, distant $\frac{1}{2}$ of a mile. There is also the *Bell Rock*, lying farther in, and

about $\frac{1}{2}$ of a mile from the land, the extremity of Chebucto Head bearing N. by E. $\frac{1}{2}$ E., distant $\frac{3}{4}$ of a mile. In advancing up the harbour, you will meet with several other rocks, as the *Rock Head*, which lies with Chebucto Head S.W. by W., distant $2\frac{1}{4}$ miles; and the *Devil's Island* N.E. $\frac{1}{2}$ E., about the same distance; the *Thrum Cap*, which extends from the south end of *Mac Nab's*, or *Cornwallis's Island*; the *Lichfield*, on the western side of the harbour, having only 16 feet water over it; and the *Mars Rock*, lying also on the western side, Point Sandwich bearing north, distant $\frac{1}{2}$ a mile, and nearly in a line with it and the west side of George's Island; all these are distinguished by buoys and flags being placed upon them. There is also a reef, called the *Horse Shoe*, which runs out from Mauger's Beach on the west side of Mac Nab's Island; this is dangerous, and must carefully be avoided.

On Mauger's Beach is a tower, called Sherbrook Tower, on which is a lighthouse, elevated 58 feet above the level of the sea. This useful light is of a red colour, and intended to lead vessels up the harbour.

When abreast of Chebucto Head, or when Sambro light bears W.S.W., the light on Mauger's Beach should never be brought to the westward of north. By keeping the light from north to N. by E., will lead clear of the Thrum Cap Shoal. This lighthouse bears from the Thrum Cap buoy N. $\frac{1}{2}$ W., 2 miles.

Vessels coming from the eastward must keep Sambro light open to the southward of Chebucto Head, until the light opens on Mauger's Beach, which will then bear N. $\frac{1}{2}$ W., when they will be to the westward of Thrum Cap Shoal, and may shape a course up the harbour, always keeping the light on the beach open, and on the starboard bow.

Vessels from the westward will see the light when they are as far eastward as Chebucto Head, which, being kept on the starboard bow, leads them up to the beach.

Half-way between Mauger's Beach and George's Island is a *shoal*, on the opposite side, extending to the S.E. from Point Pleasant, nearly $\frac{1}{2}$ of the channel over, and having a buoy at its extremity; the thwart-mark for this buoy is a little islet at the entrance of the N.W. arm, on with a remarkable stone upon the hill, appearing like a coach-box, and bearing W.S.W. Between Point Pleasant Shoal and Mauger's Beach is a *middle ground*, of $4\frac{1}{2}$ and 5 fathoms, sometimes pointed out by a buoy; this middle ground extends north and south a cable's length, and is about 30 fathoms broad; as you fall off to the eastward of it there will be found from 7 to 13 fathoms water, muddy bottom; while on the west side there are from 10 to 14 fathoms, coarse rocky soundings.

REID'S ROCK has 12 feet over it, and lies in shore, about midway between Point Pleasant and Halifax; the thwart-mark for this danger is a farm-house in the wood, over a black rock on the shore, bearing W. by S.; and opposite to Reid's Rock is a buoy on a *spit*, extending from the N.W. end of Mac Nab's Island.

MAC NAB'S ISLAND lies on the eastern side of the channel, and is nearly 3 miles in length and 1 in breadth; there is a small island to the eastward of it, called Carroll's Island; boats can pass this way, or between it and the Devil's Island shore, in what is commonly called the S.E. Passage, but the channel is too shallow for shipping; and it is further obstructed by a *bar of sand* to the southward, over which is only 8 feet water. Mac Nab's Island is well cultivated; and in Mac Nab's Cove there is good anchorage, in from 9 to 4 fathoms, muddy bottom; the best situation is in 7 fathoms, with Mauger's Beach and Sandwich Point locked; George's Tower touching Ives Point.

Upon Rock Head is a floating-beacon, with a cask at the top; it lies with George's Island tower in one with Ives Point, and Sambro lighthouse just seen over Chebucto Head.

On Devil's Island, on the east side the entrance, a beacon of wood, painted white, is erected, 50 feet in height.

On Thrum Cap Reef is a beacon-buoy; it lies with George's Island open of Ives Point. The above three beacons and Mauger's lighthouse are to be kept on the starboard side going into the harbour.

There are also flag-beacons on the Lichfield and Mars Rocks, to be left on your port hand going in. The leading-mark in, between these beacons, is the flag-staff on Citadel Hill open of Point Sandwich.

In standing in for the land off Halifax Harbour, you may know on which side of the harbour you are by a remarkable difference that takes place immediately from its mouths, in the colour of the shores; for if it should be red, you are to the eastward of it, and if white, you will be to the westward of it.

To sail for Halifax Harbour.—Having made the lighthouse, and coming from the westward, at night, with a westerly wind, the light being 7 or 8 miles off, steer E.N.E. or E. by N., until you have passed the *S.W. Ledges*, and the lighthouse bears north; then run on N.E. or N.E. by N. until you bring it to bear N.W., which being done, take a N.N.E. or N.E. by N. course, until you bring it W.N.W.; you will then, agreeably to the wind, haul up north, or N. by E., for Chebucto Head, avoiding the *Bell Rock*. Chebucto Head is bold-to within $\frac{1}{2}$ a mile from the shore; run on north, along the west shore for Sandwich Point, which is also bold; thus you will safely pass the *Lichfield Rock*, leaving it on your port side; this rock has a buoy and flag placed on its eastern end. A mile northward of which is the Mars Rock, the situation of which is pointed out by another buoy and flag, which must also be left on the port hand. When abreast of Sandwich Point, get as near middle channel as you can, for on the opposite side is the *Horse Shoe*, a dangerous shelf, which stretches out from Mauger's Beach; steer on mid-channel between Mauger's Beach and the Horse Shoe, and having passed the latter, edge over to Mac Nab's Island. Midway between the island and Point Pleasant Shoals, on the extremity of which is a buoy, and rather more than $\frac{1}{2}$ a mile farther, on the same side, is *Reid's Rock*, the position of which is also denoted by another buoy: these are all to be left on the port side. On the starboard, or opposite side, is a red beacon-buoy placed upon the *spit* which runs off Mac Nab's Island; you will sail on between these two latter buoys, and having passed the reef, steer directly north for George's Island, which you may pass on either side, and run up for and abreast of the town of Halifax, where you will find anchorage in 9 and 10 fathoms, muddy ground, 2 cables' length east of the mooring-buoys, or near enough to the wharfs to throw your hawser on shore. There is a *middle ground* between Mauger's Beach and Point Pleasant Shoal, which sometimes has a buoy upon it, but not less than 5 fathoms has yet been found upon it.

"The great difficulty (says Mr. Chalmers, a Master in the Royal Navy) of making Halifax from the eastward, particularly in the winter season, is, that the winds are generally from the W.S.W. to N.W., and blow so hard as to reduce a ship to very low canvas, if not to bare poles: but should the wind come to the eastward, it is invariably attended with such thick weather as to prevent an observation, or seeing any great distance; and consequently renders it imprudent to run on a lee shore under such circumstances, and more particularly in the winter time, when the easterly winds are attended with sleet and snow, which lodge about the masts, sails, rigging, and every part of the ship, becoming a solid body of ice so soon as the wind shifts round to the N.W., which it does suddenly from the eastward. What adds considerably to the above difficulty is, having been several days without an observation, and subject to a current, which sometimes runs strong to the southward, you may have the Bay of Fundy open, and be swept into it by the strong indraught which prevails when the wind has been any time from the southward or eastward.

"From the above circumstances, I would recommend that ships bound to Halifax in the winter, should shape a southerly course, and run down their longitude in latitude from 38° to 36° ,* in which parallel they will make the principal part of the passage in a temperate climate, until they approach the coast of America, when they will be met by the westerly or even the N.W. winds, which will enable them (having got soundings, on St. George's Bank,) to make their course good along shore, and with a free wind and clear weather, cross the Bay of Fundy, with confidence of their situation; then, so

* It has been recommended by some navigators to keep in high northern latitudes when crossing the Atlantic from Europe to the northern parts of America, the weather being found less severe to the northward. By crossing the Grand Bank in latitude 45° or 46° in the winter season, you are well to windward in case of meeting a heavy north-wester; you also escape being retarded in your progress by the easterly set of the Gulf Stream. The New York packet-ships generally take this route in their winter passages; and by slipping in to the northward of the Gulf Stream, and to the southward of Sable Island, they find a westerly current in their favour. This latter route is also recommended to those bound to Halifax and New Brunswick.

soon as they have shut in the bay, keep the shore on board the whole way to Halifax lighthouse."

Observe, in coming from the eastward with an easterly wind, the Thrum Cap Shoals, which must be particularly avoided. A red buoy, with a flag, as before noticed, now marks their extremity. To go clear of them, you should bring the easternmost land in sight a ship's length to the southward of Devil's Island, bearing E. by N., nearly, and steer in west or W. by S., as best suits the distance you are from the island, and according to the wind and situation. With respect to the shoals, you may pursue a west, N.W., or W.N.W. course, until George's Island comes a sail's breadth open to the westward of Mac Nab's Island; then endeavour to get the leading-marks on, and haul up north for the harbour. Or, when coming in from the south-eastward, you may steer for Chebucto Head, until the leading-marks come on for entering the harbour; taking care, if in the vicinity of Rock Head, to keep Sambro lighthouse well open of Chebucto Head, until you get the marks on for entering the harbour.

Another long mark for Halifax Harbour, from abreast of Chebucto Head, and steering in north or N. $\frac{1}{2}$ W., is the middle of three hills, over Dartmouth village, having some trees upon it, in a line with the N.W. end of George's Island; this will lead clear of the dangers on both sides, and over the middle ground, in from 5 to 8 fathoms, and up to George's Island.

The following directions for sailing into Halifax Harbour, are given by Mr. Lockwood.—"In approaching from the westward, round the lighthouse, at the distance of a league, to avoid the *sunken rocks* which lie to the southward, when the light bears N.W. by W., haul in north or N. by W., according to your distance off. The flag-staves on Citadel Hill* above the town are distinguishable at a considerable distance; by keeping them open of Sandwich Point, you are led clear of the *Bell*, *Lichfield*, and *Mars Rocks* on the west side; and the Rock Head and Thrum Cap to the east. When arrived at Sandwich Point, keep Chebucto Head in sight, by not allowing it to be shut in; this plain mark will lead in the fairway home to George's Island. Leaving Point Pleasant Shoals on the left, and Mac Nab's Shoals on the right, round George's Island on either side, and anchor any where in 6, 10, or 13 fathoms, muddy ground. From George's Island to the entrance of Sackville River there is not a single obstruction." Men-of-war commonly anchor off the naval yard, which a stranger will distinguish by the masting sheers; merchant-vessels discharge their cargoes, and load alongside the wharfs.

At Halifax dock-yard it is high water, full and change, at 8 o'clock; spring-tides rise from 6 to 9 feet.

Catch Harbour, fit only for small vessels, lies to the westward of Chebucto Head; it has a *bar* across, with breakers, and only 9 feet water; within it are 3 and $3\frac{1}{2}$ fathoms, Several families of fishermen are its inhabitants, who chiefly subsist by supplying Halifax markets with fish.

REMARKS.—Leaving Halifax, and sailing westward, you will find the shores to be steep, and appear from seaward broken and rocky, with whitish cliffs; the high lands of Aspotogon and Le Have, before mentioned, are conspicuous and remarkable; to the westward the rocks about the land appear black, with reddish banks of earth. Le Have appears bald or barren at the top, with red earthy hillocks under it, and between Cape Le Have and Port Medway, or Jackson, are some hummocks in land, the coast to seaward being level and low, and the shores marked with white rocks, with low barren points; from thence to Shelburne and Roseway it is woody. Near Port Latour are several barren places, and thence to Cape Sable the land is low, with white sandy cliffs, particularly visible at sea.

The following remarks, on sailing between Halifax and the Gut of Canso, are by Mr. H. Davy, Master of H.M. ship *Cornwallis*.

"H.M. ship *Cornwallis* left Halifax June 4th, 1838,—wind north with fine weather. Sailed for the Gut of Canso. Passed out between the Thrum Cap buoy, having 10 fathoms. This channel is quite safe. Being thus cleared, steered E.S.E., 27 miles, which led us to the northward of the Jedore Shoals, the east, for White Head; wind and weather looking favourable.

"Just to the eastward of Cold Harbour is a remarkable red cliff, making in a well-formed saddle; the red is bright, and the eastern coast rendered easily to be recognized,

from the circumstance of the coast, west of Halifax, having white cliffs. It is advisable for strangers running from Jedore to Canso, not to approach the coast nearer than 10 miles, until abreast of Torbay. This is a spacious bay, having Berry Head at its western point and Cape Martingo at its eastern, 5 miles apart. White Head Island, immediately to the eastward of Tor Bay, is the most remarkable land on the coast, and is set a beacon to the pilots; it stands well out, and from the westward terminates the eastern view. Being 10 miles south of it, steer N.E. by E. for Canso lighthouse, which is a tall white building, and makes well out to seaward, on a small, low island, called Cranberry Island. It exhibits a good fixed light, which must be brought to bear west before keeping away; then steer N.N.W., until George Island bears west, thence N.W. and N.N.W. for Cape Argos. Avoiding the *Cerberus Shoal*, which is very dangerous, and directly in the track, leave it on your port hand. Cape Argos makes like a round island, and is bold to approach; passing this, the distance across the gut becomes narrow: 1 to 1½ mile."—*Naut. Mag.*, vol. viii., p. 299.

SAMBRO HARBOUR is 1½ mile N.N.W. from the lighthouse; off its entrance is the *Bull Rock*, and there are also two other rocks between; the best channel into the harbour is between Pennant Point and the Bull, but vessels from the eastward may run up between Sambro Island and the Inner Rock: you are to leave the Isle of Man to the port in entering; the anchorage is within the island, on a muddy bottom, with 3 fathoms water. The strait which connects the harbour with Londy basin is exceedingly narrow, and has only 2 fathoms water. This place is generally the resort of coasters in bad weather.

The passage between the rocks and ledges that lie to the southward of Sambro Harbour, may oftentimes conduce to the safety of vessels that make the land by mistake so far to the westward of the light as to be unable to clear the dangers southward of it, but should be attempted only in cases of emergency; the depth of water is sufficient for the largest ships, but great prudence is required.

PENNANT HARBOUR, named by Des Barres, Port Affleck, is situated round the point to the westward of Port Sambro; it has a fair channel leading in between Pennant and Great Head Island, with good and secure anchorage in 6 or 8 fathoms; it is extensive, and safe in bad weather, and the dangers are all visible.

TENNANT'S, or BRISTOL BAY, is to the westward of Pennant Harbour; it is well sheltered above Macworth Point, and there is anchorage in 9 fathoms, on a bottom of tough clay. The passage in lies between the rocks of Point Macworth and the White Rocks. There is also a safe passage between Cape Pennant and Harvey Island, with anchorage in 5 to 8 fathoms. When entering, the land presents, to the eye of a stranger, the rudest features of nature; but it is extensive and safe, and in bad weather the dangers all show themselves. It is high water, full and change, at 7h. 45m., and the tides rise about 8 feet.

PROSPECT HARBOUR lies about 3 miles to the N.W. of Cape Prospect, which forms the west side of Bristol Bay, and its entrance is encumbered with a cluster of islands, which form the western side of Bristol Bay; at the back of these islands is a considerable inlet, called by Des Barres, Parker's River, but little frequented. Prospect Harbour wears, at its entrance, a rugged broken appearance; but it is safe, commodious, and extensive; and in rough weather the dangers mostly show themselves. Vessels coming from the eastward and rounding Cape Prospect, must beware of a rock, with 17 feet over it; it lies south, about ¼ of a mile from the cape; go not between it and the cape, but proceed on its southern side in 20 and 21 fathoms water, and by keeping more than ¼ a mile from the land you will steer quite clear of danger, and may sail boldly up its eastern channel between Prospect and Betsey's Islands; having passed these, the channel narrows; the western passage is between Hobson's Nose and Dorman's Rock; there is good anchorage for large ships above Pyramid Island, and also for small vessels, within Betsey's Island, in 4½ fathoms, blue stiff clay. At the entrance to this harbour the depths are very irregular; and there is a rock, over which the sea breaks, having 3 fathoms over it, and lying 2 cables' length to the eastward of Dorman's Rock. There are some residents on the western side of the bay.

LEITH HARBOUR.—This lies about 2½ miles to the north-westward of Prospect Harbour; and here are situated the inlets called Shag and Blind Bays, both possessing excellent anchorages. At its entrance lies the *Hog*, a *sunken rock*, having 6 feet water

over it, and bearing E.S.E., about $1\frac{1}{2}$ mile from Taylor's Island. In fair weather the Hog Rock may be readily perceived by a constant ripple over it, and in bad weather, with an on-shore wind, it will be distinguished by the breakers. There are good channels on both sides; but the eastern one is always to be preferred, on account of the *ledge* which extends E.S.E., about $\frac{1}{2}$ a mile towards it, from Taylor's Island.

DOVER PORT lies at the western side of the entrance to Blind Bay, and is chiefly formed by Taylor's and the adjacent islands; this is the Port Durham of former charts, and affords safe and good anchorage; the eastern passage is the best: and in sailing in, you must give the *reef* that stretches off the east end of Taylor's Island a sufficient berth, anchoring within the body of the largest island in 7, 8, 9, or 10 fathoms, muddy bottom. The western entrance has some *sunken rocks* in it, and is in some places but shallow.

Between the harbours of Halifax and Dover the shores are craggy, broken, and barren, steep-to, iron-bound, and destitute of trees; but the creeks and inlets abound with fish, and great quantities of cod, herrings, and mackarel, are caught and cured here for the markets.

MARGARET'S BAY.—The entrance to this bay is to the westward of Taylor's Island, about a league; the bay itself is full 25 miles in circumference, in length 9 miles, and in breadth, from Peggy's Point to Owl's Head, about 2 miles; here are harbours capable of receiving ships of the line, even against the sides of the shores. The high lands of Aspotogon, which appear to the westward, on the isthmus which separates Margaret's and Mahone Bays, are 438 feet above the level of the sea, and may be seen 7 or 8 leagues off.

OWL'S HEAD is very remarkable, being round and abrupt. The lands and islands in the neighbourhood are rugged and barren. The body of the flood-tide sets in from S.W., at the rate of a mile an hour.

Following the coast, which runs nearly 2 miles W.N.W. from Taylor's Island to East Point, there is a *rock* uncovered at low water, which lies near the land, having a passage between, with 4 and 5 fathoms water; the shore all the way is rugged and steep, against which the sea beats violently. N.N.W. from East Point, a mile, is Contact Point, and in the same direction, $1\frac{1}{2}$ mile farther, is Peggy's Point, beyond which, a short mile, is Shut-in Island, 200 feet high, and covered with trees; off the southern point of this island there is a *shoal* of 9 feet, with 6 and 7 fathoms between it and the island, and near to Peggy's Point there is another of 15 feet, with 6 fathoms to the northward of it. During southerly gales the water on the lee side of the islands becomes smooth, and the bottom holds well. Indian Harbour runs in here, and forms a place fit for small vessels, having a channel into it on either side of Shut-in Island. To the E.N.-eastward of Indian Harbour is Hagget's Cove, distant a mile, a cove or harbour of similar description. Luke's Island, Thrum Cap, Jolliman, and Wedge Islands, all lie off the eastern side of Margaret's Bay, and contribute to break off the force of the sea; so that under the lee of Luke's and Jolliman's Islands there is good anchorage at all times for ships of every description.

FRENCH COVE is easy of access, and may be considered as a natural dock, extensive, with plenty of water, and well sheltered; this place is chiefly inhabited by Germans, whose industry is equally conspicuous and commendable. There is a *shoal* of 10 feet water lying opposite to the entrance of this cove at the distance of 2 miles; but as the islands of the eastern shore are bold-to, no vessel need go out so far into the bay as to approach too near this danger.

HEAD HARBOUR, or DELAWARE RIVER, lies at the farther end, on the north-eastern extremity of the bay, and is an anchorage of most excellent description, forming so complete a place of safety that a fleet of ships might be securely moored side by side, and remain undisturbed by the most violent hurricane; the surrounding lands are high and broken. Mason's Point is in itself a good farm, well stocked with cattle, and excellently cultivated; and Moser Islands at its entrance are used as sheepfolds. The land on the port side of the entrance to the Head Harbour is 446 feet high.

INGRAM RIVER.—To the westward of Head Harbour is Ingram River, running in to the northward of Moser Islands; at its entrance it is $\frac{1}{2}$ of a mile wide, with 7, 6, and 5 fathoms water: it then gradually decreases to its head, which is shallow and sandy. To the westward is Gaspar's Indent, open, shallow, and seldom frequented. These indents or coves have rugged points projecting southward; and it is from these places

small craft are employed to take limestone, building sand, &c., the former of these being of a very superior quality. Cooper and Indian Rivers are both shallow, rocky nooks, but are the resorts of salmon; and in the lakes above, trout abound in great quantities, of delicate flavour, and commonly of a deeper red than the salmon.

HUBBERT'S COVE, the Fitzroy River of Des Barres, is situated at the N.W. corner of Margaret's Bay. Here, at the entrance, is a *ridge of rocks*, about 100 fathoms long, and covered at high water, so that when the sea is smooth it becomes invisible; in order to avoid this danger you have only to keep towards the western or eastern side of the harbour, for both sides are bold-to; the western channel is much the wider and better of the two: and by keeping the port shore on board, a stranger, or a ship dismasted, or in distress, or without anchors, may turn in and find shelter, running aground with perfect safety. In the neighbourhood is a saw-mill, and the inhabitants can furnish you with a carpenter and cooper, if wanted.

Long Cove is $2\frac{1}{2}$ miles to the southward of Hubbert's Cove, and affords good anchorage with a westerly wind. To the southward of Long Cove the coast is bold and rugged, without any danger, except a *small rock*, of 6 feet water, which lies close in to the land.

NORTH-WEST HARBOUR is about a league to the southward of Long Cove; at its entrance is Horse Island, which divides it into two channels. There is a good passage, with 10 fathoms water, on each side of the island; and small vessels may find good anchorage behind it, in from 6 to 9 fathoms, or farther up, in 5, 4, or 3 fathoms. Several families are settled at this place. Owl's Head is an abrupt precipice, and forms the south point of entrance to North-West Bay.

South-West, or *Holderness Island*, is a remarkable rocky island, full 50 feet high, and steep on all sides. Directly to the northward of the northern part of the South-West Isle is a *small spot*, of 3 fathoms water; and to the north-westward of the island is what is commonly called the South-West Harbour, formed between Owl's Head, which literally is a rocky island, separated from the main by a very narrow passage, not even navigable for boats. Here are 5, 6, and 7 fathoms water; but the place is seldom frequented. To the E.N.E. of South-West Island, distant nearly $\frac{1}{2}$ a mile, is a *rocky shoal*, of 4 fathoms: this the sea frequently breaks over in bad weather, but it cannot be considered dangerous, unless to vessels that draw very deep water.

The *Horse Shoe*, or *Dog Rock*, lies about south, distant $1\frac{1}{2}$ mile from South-West Island, directly west from East Point, distant $2\frac{1}{2}$ miles, and from Taylor's Island, W. by N., $4\frac{1}{2}$ miles: there are *several small sunken rocks* about it; part of it is constantly above the surface of the water, shelving on all sides, and the sea, in stormy weather, breaks violently over it. At a little distance from it, on the western side, are 6 fathoms; and on its eastern side, at a similar distance from it, are 8 fathoms; it then sinks into deep water: between the Horse Shoe and the South-West Island there are 12, 14, 26, 34, and 30 fathoms water.

Vessels from the eastward, bound for Margaret's Bay, commonly go in between the Horse Shoe and East Point. A northerly course will carry you midway between them, right up to the head of the bay, without encountering any danger, except those already described.

To the westward of South-West Island is Aspotogon Harbour, too shallow for shipping. At its entrance are *Black*, *Saddle*, and *Gravelly Islands and Shoals*; to the southward of these is *Seal Ledge*, shallow and dangerous, which lies W. $\frac{1}{2}$ N., distant $2\frac{1}{2}$ miles from the Horse Shoe, and W.S.W., nearly 3 miles from the southern part of South-West Island.

IRONBOUND ISLAND.—W.S.W. $\frac{1}{2}$ S. from the south point of South-West Island, distant 5 miles, is Ironbound Island, about a mile long, narrow, and steep-to; it lies S.S.E. $\frac{1}{2}$ S., $1\frac{1}{2}$ mile from the extremity of the peninsula which divides Margaret's and Mahone Bays, and is called New Harbour Point; between which is a good channel, with from 6 to 17 fathoms water, the ground being chiefly a black sand.

GREEN ISLAND.—S. $\frac{1}{2}$ E., distant a league from Ironbound Island, S.W. by S., 7 miles from South-West Island, W.S.W., 3 leagues from Taylor's Island, and W.N.W. $\frac{3}{4}$ W. from abreast of Sambro lighthouse, lies Green Island; it is small. Midway between Ironbound and Green Islands there is said to be a *shoal* of only 2 fathoms, but its exact position is not accurately known, and therefore it is omitted in the charts.

The mariner, in passing through the channel between these islands, will do well to look out for, and guard against, the probable existence of such a danger; there is otherwise water sufficiently deep for any vessel.

MAHONE BAY is separated from Margaret's Bay by the peninsula, upon which the high and conspicuous mountain of Aspotogon is situated; the appearance, in three regular risings, is a very remarkable object to seaward, being visible more than 20 miles off. The entrance of the bay is encumbered with several islands, between all of which are good passages, with plenty of water and few dangers; these lead to most excellent harbours, and places convenient and well adapted for the fisheries. We have already noticed Green and Ironbound Islands; these lie on the eastern side of the entrance to the Bay of Mahone. Adjacent to these, and on the same side, are the Tancook Islands, Flat Island, and the Knohme Rock; there are also the Bull Rock and the Outer Ledge. On the western side are the Duck and other islands.

Great Duck Island lies W. by S. from Green Island, distant $4\frac{1}{2}$ miles. *Little Duck Island* lies N.W. $\frac{1}{2}$ N., about $1\frac{1}{2}$ of a mile from *Great Duck Island*, and W. $\frac{1}{2}$ N., $5\frac{1}{2}$ miles from *Green Island*. Nearly midway between *Green Island* and *Little Duck Island* lies the *Outer Ledge*, over which the sea always breaks; this danger bears from the east end of the *Great Duck Island* N.E. $\frac{3}{4}$ N., distant $1\frac{1}{2}$ mile; and from *Green Island* W. $\frac{1}{2}$ N., a league; over it is 4 feet water, and round it are $4\frac{1}{2}$, 5, and 7 fathoms.

Flat Island lies due west from *Ironbound Island*, distant $1\frac{1}{2}$ mile; and, in a similar direction from *Flat Island*, somewhere about a mile off, lies the *Bull Rock*; but the exact situation of this danger is not correctly ascertained, for Mr. De Barres places it more to the southward, and Mr. Lockwood to the northward of this position: it is a *blind rock*, uncovered at $\frac{1}{2}$ ebb, with deep water all round it. The southern part of *Flat Island*, in a line with the southern points of *Ironbound Island*, will lead on the rock, as Mr. Des Barres has placed it; while the northern part of *Flat Island*, in a line with the northern shore of *Ironbound Island*, will lead to the northward of it; and *Chester Church* open of *Great Tancook Island*, will carry you clear to the westward of it in 7 and 10 fathoms water.

Great Tancook is $1\frac{1}{2}$ mile long, and about a mile broad; to the eastward, between it and the main land, is the *Little Tancook Island*, separated by a channel $\frac{1}{2}$ of a mile broad, in which are 7, 8, and 9 fathoms. A similar passage is between *Little Tancook* and *Indian Point* on the main, but there is a *middle ground* in it of 4 fathoms. *Knohme Rock* is above water, and *shoals* all round it; it lies to the eastward of the south-east part of *Great Tancook*; and at this part of the island is anchorage in 8 or 10 fathoms.

Westward of *Great Tancook*, $\frac{1}{2}$ of a mile, is a *rocky shoal*, of 6 feet, while between them the channel has 10 fathoms water. To the W. by N. of this shoal, a mile, is another, with from 6 to 12 feet over it. Between these shoals the passage is good, and has from 12 to 25 fathoms water in it. Off the north-west part of *Great Tancook* is *Star Island*; and a little to the eastward of it is a *rocky patch* of shallow ground, so that vessels should never attempt the passage between *Star* and *Tancook Islands*. There is yet another *danger*, called the *Coachman's Ledge*; it lies 2 miles to the northward of *Great Tancook*, and is only visible at low water. To lead clear to the eastward of this ledge, you should bring the eastern point of *Great Tancook* and the east side of *Flat Island* in one; to clear it to the southward, bring the west end of *Ironbound Island* open of the west part of *Little Tancook*, and *Frederick's Island* north point bearing W.S.W. $\frac{1}{2}$ S., will carry you safe to the northward of it.

Having passed the *Coachman*, the head of the bay lies open. On your starboard side is the high land and small river of *Aspotogon*, where small vessels occasionally run in and anchor; there is a *rocky shoal* at its entrance, which must be avoided. To the northward is *Cumberland Arm*, easy of access, and affording good anchorage, with 7 and 8 fathoms, observing to give a berth to the starboard shore, which shallows some distance out. There is also good riding on the port shore, behind an island which lies on the eastern side of the *Chester Peninsula*; here vessels can ride, well-sheltered, in 8 fathoms water.

Chester Town is situated at the northern part of *Mahone Bay*, and is surrounded by a fine and fertile country: its inhabitants are industrious people, and the adjacent islands are well stocked with sheep: wood and water is in abundance, and several vessels are

built here. The anchorages between the various islands and before the town are good, well sheltered, and secure, and the depth of water moderate. The only danger is a *shoal*, which partly dries at low water; this lies W. $\frac{1}{2}$ S. from the town of Chester, from which it is distant $1\frac{1}{2}$ mile.

On the port side of Mahone Bay, and directly west of Tancook Islands, is a large inlet or branch of a river, named by Des Barres, Prince's Sound; the passages into it are very safe, only giving a wide berth to the southern end of Edward's Island: steer mid-channel, and, when well in, anchor in 9 fathoms, or, within the innermost islands, in 5 or 6 fathoms; farther in it becomes flat and shallow.

To sail into Mahone Bay from the eastward, the first land visible will commonly be Green Island, which is round, bold, and moderately high: thence to Ironbound and Flat Islands (both steep-to) is 3 miles; you may proceed and pass between them towards the Tancook Islands, which are inhabited: the channels between them are bold, and the anchorages under their lee good, in from 7 to 12 fathoms water. But if you are proceeding for Chester, between Green and Duck Islands, you must beware of the *Outer Ledge*, which always shows itself by breakers. The mark to lead clear through this passage is, Chester Church well open of Great Tancook Island; this mark will also carry you safe to the westward of the Bull Rock, already described; and when you get near, or within $\frac{1}{2}$ a mile of Tancook Island, steer out westward, and bring the same church to bear about north, and this will lead you up to the town. It is high water, full and change, in Mahone Bay at 8h.; tides rise 7 feet.

LUNENBURG BAY, called also Malaguash, is now a place of great population, and considerable trade; vessels carrying wood, cattle, vegetables, &c., are constantly employed from here to Halifax. The harbour is very easy of access, and there is good anchorage to the very town. At its entrance lies Cross Island, about 30 feet high, and containing 253 acres of land. On the N.E. side of this island is a nook, where coasters ride in safety. Off this part lie the *Hounds Rocks*, which, in passing, must have a berth: the west and south sides of the island are bold; and 2 miles from its southern end is an excellent fishing-bank, with from 14 to 17 fathoms water. There are good channels on either side of Cross Island.

CROSS ISLAND LIGHTHOUSE, upon the S.E. point of Cross Island, in latitude $44^{\circ} 19'$ north, and longitude $64^{\circ} 9'$ west, at the entrance of Lunenburg Bay, is an octagon tower, painted red, with two lights placed vertically, and 30 feet apart. The lower light is fixed, and the upper one flashing; it shows a flash at intervals of a minute. The lantern is painted black. Cross Island is low, and thickly wooded.

Vessels sailing in or out, through the northern passage, should endeavour to keep about the middle of the channel, in order to avoid the *shoals* and *rocks* above mentioned, and also those adjacent to the opposite, or Colesworth Point; having passed these, you should keep the northern shore on board, bringing Battery Point to bear nearly N.W., by which you will also go clear of the *Sculpin*, or *Cat Rock*.

The *Sculpin*, or *Cat Rock*, lies nearly in the middle of the bay, bearing N.E., distant $\frac{2}{3}$ of a mile from Oven's Point. According to Des Barres, there are but 3 feet over this danger; but it will easily be discovered by the breakers over it at low water.

Sailing through the western channel, which is to be preferred, you should endeavour to steer N.N.W., between Cross Island and Rose Point, where you will have 10 and 12 fathoms water. Keep the town of Lunenburg in sight, over the low land to the eastward of Battery Point, and this will lead you clear of the *rocky reefs* about the Oven's Point; but beware how you lessen your water below 7 fathoms, for the soundings about the point are very irregular; bring the waggon-road at Lunenburg open of the westward of the Battery Point, and this will run you to the westward of the *Sculpin*, and between it and a *rocky knoll* of 4 fathoms water; having passed the *Sculpin*, haul up towards the northern shore, until you bring Moreau and Battery Points in one, this being the direct mark for the *Sculpin Rock*: steer on in the direction of Battery Point, approaching it no nearer than a cable's length; then round Battery Point, and bring the road well open of the Moreau Point; this will run you clear into the harbour, and between the Long Rock and the shoals of Battery Point, when you may direct your course for the town, where you will find 12 and 13 feet water alongside the wharfs; and near to them 20 and 24 feet, soft muddy ground, and perfectly secure.

Vessels having occasion to go to the southward of the Long Rock, which is the wider and safer passage, will observe that there is a reef runs out from Woody Point, called the *Shingles*, which must be carefully avoided: to do this, when you have so far entered the bay as to be equi-distant between the Ovens, (which are hollow cliffs) Battery, and Woody Points, then edge off a little to the westward, until you bring a farm-house, that stands over the middle of Sandy Bay, on with the end of a wood close to an opening, like an avenue, bearing N.W. $\frac{1}{2}$ N.: steer with this mark on, until the west end of Lunenburg Town comes over Moreau Point, then steer north-eastward a little, approach Battery Point, and proceed, as before directed.

The best anchorage in the Bay of Malaguash, or Lunenburg, is on its western side, about $\frac{1}{2}$ a mile from the shore, and nearly midway between Oven's and Woody Points; where, with good ground tackle, you may safely ride out a south-easterly gale; but the bottom is generally rocky and uneven. Wood, water, meat, and vegetables may easily be procured in abundance.

It is high water, full and change, at 8 o'clock; and the tides rise from 6 to 8 feet.

Dartmouth Bay.—This is situated between Oven and Rose Points; there are some settlements about the shores, and on an island at the bottom of the bay; it is easy of entrance, and you may anchor abreast of this island in 3, 4, 6, or 7 fathoms: in sailing into this bay, it will be always advisable to borrow somewhat towards the Rose Point shore, because of the *shoals* which lie to the southward of the Oven's Point; there is otherwise no danger whatever.

From Lunenburg to the Ironbound Island, at the entrance to Le Have River, the shores are bold, and much indented with irregular inlets or bays. Ironbound Island lies about W.S.W. $\frac{1}{2}$ S., distant nearly 2 leagues from Cross Island; it is inhabited, and some small *rocky islets* surround its northern shore: S.E. $\frac{1}{2}$ E., $1\frac{1}{2}$ mile from this island, is a *bank* of 20 and 25 fathoms, W.S.W., $\frac{3}{4}$ of a mile from that, is a small spot of 15 fathoms; these have from 30 to 40 fathoms about them.

LE HAVE RIVER.—Vessels coming from the south-eastward for Le Have River, will not fail to discover Cape Le Have, a steep abrupt cliff, 107 feet high, bearing W. $\frac{3}{4}$ S., about 12 leagues distant from Sambro lighthouse. S.E. by S., a mile from the cape, is the *Black Rock*, 10 feet high, and 100 feet long, with deep water all round it, and 9 to 11 fathoms between it and the shore, except on a small *knoll*, lying off and opposite to the cape, over which are only 4 fathoms. W. by S., distant $3\frac{1}{2}$ miles, is Indian Island; and to the northward of the cape lie several islands, with passages between them; but the best entrance to the River Le Have is to the northward of them all. There is also a channel to the northward of Ironbound Island, but it is narrow, and to navigate this you must give the Ironbound Island a good berth; you will then have from 12 to 4 fathoms water all through it; but the best passage is to the westward of the island, which is above $1\frac{1}{2}$ mile broad, and has from 10 to 14 fathoms water within it; about 3 miles to the north-westward of Ironbound Island, is a *bar* which runs across from shore to shore; over this are 12 and 15 feet, the deepest water being $\frac{1}{2}$ across from the eastern shore: the soundings from Ironbound Island towards the bar are 11, 14, 12, 9, 7, 6, 5, 4, and 3 fathoms, the latter depth being close to the edge of the bar; but when you are well over that, you drop into 4, 5, and 6 fathoms, the river continuing navigable 12 miles up, or so far as the falls; the general width of the river is $\frac{1}{2}$ a mile, and when you are 8 miles up it, you will meet with the road from Lunenburg to Liverpool, where a ferry is established. There are several settlements on the banks of this river; and the whole wear a face of improvement and cultivation.

Within and to the westward of Cape Le Have is Palmerston Bay; at the head of this is Petit Riviere, a settlement formed by the French, the farms belonging to which are in excellent condition. Off the eastern entrance of this bay lies Indian Island, bearing W. by S., distant $3\frac{1}{2}$ miles from Cape Le Have. At Cape Le Have it is high water, full and change, at 8 o'clock: the tides rise from 5 to 7 feet.

PORT METWAY, or MEDWAY, lies between Cape Le Have and Liverpool Bay, and is rising into considerable consequence, on account of its navigable capacity and convenience to the fisheries; it is, therefore, pretty numerously populated, and has several saw-mills; the inhabitants carrying on a good trade in timber, &c. The entrance to this port bears from Indian Island W.S.W., distant 7 miles, the land to the eastward of it being remarkably broken and hilly. On the starboard point of the entrance lies Frying Pan Island, which is connected, by a *sandy reef*, to numerous islets which

stretch along in a N.N.E. $\frac{1}{2}$ northerly direction, until they join the main land: that which is next to Frying Pan Island is commonly called Glover's Island, and lies $\frac{1}{2}$ a mile to the northward, and bears S.E. $\frac{1}{2}$ S., a good $1\frac{1}{2}$ mile from Metway Head. The entrance to this port may be known by the high land at Cape Metway, and the low ragged islands before mentioned; the width of the channel is about $\frac{1}{2}$ of a mile, and the depth of water from 5 to 14 fathoms. Directly in the way of your making for the entrance of the channel, lies the *South-West Ledge* and the *Stone Horse Rock*; the former bears from the Frying Pan Island S. $\frac{1}{2}$ E., $\frac{1}{2}$ of a mile. There is 19 feet water upon it, and the sea, in rough weather, breaks over it. The latter, or Stone Horse Rock, lies E. by S., distant $\frac{1}{2}$ of a mile from the S.W. Breaker, and dries at low water: there is 6, 7, and 8 fathoms between it and the Frying Pan Ledge; and should you pass this way, you must give the island a good berth, on account of a *spit* which runs out from it, in the direction of the Stone Horse Rock, a full $\frac{1}{2}$ of a mile; but the best course will be $\frac{1}{2}$ a mile outside of both these dangers: you will then pass in 12 and 14 fathoms water, and running on west, a little southerly, towards Kempenfelt Head, you will open the channel, and may steer in directly north. Or, you may avoid the S.W. Ledge and Stone Horse Rocks, in coming from the eastward, by bringing the Liverpool lighthouse, which stands on Coffin Island, open of the land to the eastward of it: and when Frying Pan Island comes on N.N.E., distant $1\frac{1}{2}$ mile, steer in N. $\frac{1}{2}$ E., which will carry you past Metway Point; and when opposite to Neil's Point you may anchor in 4 or $4\frac{1}{2}$ fathoms water; from hence mud banks considerably narrow the passage, and a pilot will be found necessary; but should you proceed farther without one, you will continue mid-channel from abreast of Neil's Point, N.N.W. $\frac{1}{2}$ N., until Collin's Island bears west, and until Alicia River is just opening of Point Lucy, then steer N.W. by N. and W.N.W. $\frac{1}{2}$ W., and anchor in 3 or 4 fathoms, muddy ground.

To run up Alicia River, you must sail between Grass Island and Point Lucy, keeping close to the southern and western shores, in order to avoid the *flat* which extends from the northward, leaving a deep but narrow channel. Barry's Bay, or Branch, which runs up to the westward, is shallow, and full of *rocky shoals*; and so is Brier Bay, which is situated on the N.E. side of the port. The tide runs commonly with great strength, and it is high water at 45 min. after 7.

LIVERPOOL BAY.—The entrance to this bay bears about W. by S., distant 17 or 18 leagues from Sambro lighthouse, Halifax; and W.S.W. $\frac{1}{2}$ W., 15 miles from Cape Le Have. Before it lies Coffin's Island, which is now distinguished by a lighthouse, 75 above the level of the sea; the light is on a revolving principle, and appears full at intervals of 2 minutes; between this island and the western land is the bay, affording good anchorage for large ships, especially with the wind off shore. In the bay there is sufficient room for turning to windward, and the deepest water will be found near the western coasts. The land in the vicinity of the harbour is broken, rocky, and of a barren appearance, yet the commerce of the town is very considerable. The channel to the northward of Coffin's Island is shallow, having a *sandy spit* running from it and joining the main land; therefore, none but small vessels ever attempt it; but the passage to the southward is full $1\frac{1}{2}$ mile wide, and has 15, 16, 17, and 18 fathoms water. Give the lighthouse point of the island a small berth, as a *flat* of 3 and 4 fathoms encompasses it, and there is no other danger. Bald Point, or Western Head, is bold-to, and rendered remarkable by its having no trees upon it. Having entered this bay, and passed between Coffin's and Moose Head, bringing the lighthouse to bear E. by N., distant $1\frac{1}{2}$ mile, steer west; this will bring you abreast of Herring, or Schooner's Cove, situated on the N.E. side of the bay, and affording good shelter from sea-winds in 3 fathoms water, on a bottom of mud: or, proceeding farther, vessels of 200 or 300 tons, with high water, may pass over the bar, which stretches from Fort Point to the opposite shore; but at low water this cannot be done, for then there is not more than 9 or 10 feet over it; when within the bar you will perceive the channel winds south-westerly, and you can anchor in not less than 2 fathoms, opposite the Town of Liverpool. Herring Bay is much exposed to the heavy south-easterly swells of the sea, and has not room for more than two sloops of war.

It is high water in Liverpool Bay, full and change, at 50 min. after 7, and the tides rise from 5 to 8 feet.

PORT MATOON, or MOUTON, called by De Barres, Gambier Harbour.—This port is formed by the Island Matoon, which lies across its entrances, dividing it into

two channels. In the eastern passage lies the *rocky ledge*, called the *Portsmouth*, or *Brazil Rocks*, partly dry; this is about a mile to the eastward of the island, and lies S.W. by W., distant 5 miles from Bald Point; the passage on either side of this ledge has deep water with, sufficient room to turn into the harbour. From the N.W. part of Mouton, a *shoal* runs off a full mile, having $2\frac{1}{2}$ fathoms near the outer extremity; over some parts of this shoal you will have 3, $3\frac{1}{2}$, and 4 fathoms; here also is a small *spot of foul ground*, with 20 feet over it; this lies N.N.W. $\frac{1}{2}$ W. from the N.W. end of Mouton Island, and N.E. $\frac{1}{2}$ E. from the Northern Spectacles Island, distant $\frac{1}{2}$ a mile. The Spectacles lie to W.N. Westward of Mouton Island, and are visible as you enter the port; to the northward and westward of them are 10, 11, and 12 fathoms water, muddy and sandy ground, with good anchorage, secure from all winds.

To sail into Port Mouton by the eastern channel, and with a leading wind, to the northward of the Brazil Rocks, you may steer in W. by N., passing at the distance of $\frac{1}{2}$ of a mile from White Point, until you bring the Spectacle Islands to bear S.S.W. $\frac{1}{2}$ W.; this will carry you clear to the northward and westward of Mouton Island N.W. Shoal; then haul up S.W. by W. for the anchorage before mentioned.

To sail in to the westward of the Brazil Rocks, you should steer in N.W., mid-channel, or nearly, $\frac{1}{2}$ a mile from Mouton Island; in this passage you will find from 8 to 16 fathoms water; always giving the southern part of the island a berth, on account of a *sandy flat* which runs off it. In adopting this channel, mariners must look out for a *small knoll*, of 6 feet, said to lie E.N.E. $\frac{1}{2}$ E., distant $1\frac{1}{2}$ mile from the southern extremity of Mouton Island. This appears to be a modern discovery, and is not noticed in Des Barres' charts.

The western passage to Port Mouton is between the island and the main, and only frequented by coasters and vessels of a small draught of water; it is encumbered with *shoals*, and too intricate for strangers; the channel is narrow, and close to the main land, passing between it and the Bull Rock; having passed which, you can proceed to the anchorages either off the N.W. shore of Mouton Island, or round the Spectacles.

The land now turns S.W. $\frac{1}{2}$ W. from Point Mouton towards Port Jolie: midway is a black craggy point, with *several rocks* about it. S. $\frac{1}{2}$ E., distant $2\frac{1}{2}$ miles from Black Point, and S.W., 14 miles from Liverpool lighthouse, lies Little Hope, an island 21 feet high, and 200 fathoms long; this is a *very great danger*, and should have a beacon to distinguish it; round the island is *shoal ground*, partly drying, and with 3 and 4 fathoms upon some parts; it lies direct E.S.E. from the eastern point of entrance to Port Jolie, from which it is distant 2 miles. Between the island and point, somewhat nearer to the latter, there is said to lie a *dangerous shoal*, not hitherto noticed in the charts.

Port Jolie is an inlet, more than 5 miles deep, but very shallow, and having scarcely water enough for large boats. The lands adjacent appear barren and stony, yet have some families of fishermen settled there. Nearly south from the eastern point of Port Jolie, distant a mile, is a *spot*, of 3 fathoms, over which the sea commonly breaks; and on the western entrance of the port are some *rocky ledges*, which show themselves by the breaking of the water over them. There is also a small island, lying to the south-westward, called the Little or Lesser Hope.

PORT L'EBERT.—This is the third inlet west of Liverpool, and may readily be known by the steep and abrupt appearance of its western head; and also by Green Island, which lies to the south-westward of its entrance. This island is somewhat remarkable, being destitute of trees. Port L'Ebert is divided from Port Jolie by a peninsula, which, at the head of the respective ports, is scarcely $\frac{1}{2}$ a mile across. The channel in runs nearly north, 6 or 7 miles; but, although small vessels may run a considerable way up, ships of larger size can only find anchorage at its entrance; the depth, $\frac{1}{2}$ a mile from the head, is from 9 to 12 feet; but at the mouth of the port are 6, 4, and 3 fathoms.

SABLE RIVER lies to the south-westward of Port L'Ebert, distant 5 miles; at its entrance, nearly midway of the channel, is a *rocky islet*, which lies S.W. by W. from Green Island, distant $3\frac{1}{2}$ miles; there is a passage on either side of the rock; that to the eastward has 12, 13, and 15 fathoms water, but that to the westward is somewhat shallower; the two points of entrance of the river are distant from each other $1\frac{1}{2}$ mile, with from 6 to 11 fathoms; but there is a *bar*, which renders this place totally unfit for affording

shelter to any but the smallest class of vessels; it is, however, not destitute of inhabitants, some of whom are settled in a small nook close to the westward of the river, which is called the Little Harbour.

RUGGED ISLAND HARBOUR lies W. by S., distant 15 miles from the Hope Island, and E.N.E., 9 miles from Shelburne light. It seems to have been so named from its craggy and rugged appearance, and the numerous *dangerous ledges* and *sunken rocks* at its entrance. This harbour is difficult of access, and seldom resorted to, unless by the fishermen, who are familiar with its navigation; yet the anchorages are good, with $4\frac{1}{2}$ and 4 fathoms. During gales of wind, the unevenness of the ground frequently causes the sea to put on a most formidable appearance, breaking violently from side to side. Off the western head, distant about a mile, is the *Gull*, a *bed of rocks*, over which the water always breaks: but between the head and the Gull are from 6 to 8 fathoms.

Vessels coming from the eastward, will perceive St. Thomas's, or Rugged Island, lying S.W. by W. from Green Island, distant $6\frac{1}{2}$ miles; this island, having high rocky cliffs on its eastern side, affords a good mark for the harbour. To the S.W. of Rugged Island are some *rocky ledges*; the outermost of these is called the *Bear Rocks*, being distant from the island $\frac{2}{3}$ of a mile; between Rugged Island and the Bear Rocks are other dangers; and a little westward of the Bear is a *sunken rock*: these three latter lying in a sort of a triangular form. W. by N. from the Bear Rocks, distant a mile, is the *Blow Breaker*, a *rock* with only 4 feet over it: this appears to be the *Tyger* of Des Barres, by whose description it should bear south from Rugg Point, which is the eastern boundary of the harbour.

To sail from the eastward for Rugged Harbour, you will see the eastern cliffs of Rugged Island, bearing north, distant $1\frac{1}{2}$ mile: keep a good look-out for the Blow, or Tyger Rock, and pass well to the outside of the foregoing dangers; and having cleared these, haul up N.N.W. for the islands on the left or port side of the harbour: in so doing you must be careful to avoid a *shoal* which stretches half-way over from the starboard shore, narrowing the channel very considerably, so that between the shoal and Muffatt Island, the passage is not above $\frac{1}{2}$ of a mile wide; pursuing this direction you will readily reach the anchorage in the Northern Arm. In the best of the channel, Centre Island will be just open of Muffatt Island. Small vessels may be well sheltered within Cubb Basin, which is to the northward of Muffatt Island; and vessels coming from the southward or westward will have deep water on either side of the Gull Rocks, or between the Bear and Blow Rocks. At Cape Negro and Rugged Island Harbour it is high water, full and change, at 8 o'clock; and the rise of the tide is about 7 feet.

GREEN HARBOUR.—This port is to the westward of Rugged Island Harbour, having an island on its western side of the entrance, and running in full 3 miles: this and the River Jordan, situated still farther to the westward, appear to be places where good anchorages may be obtained, but they are at present little frequented by shipping, although they have many inhabitants; they are open to southerly winds, which cause a heavy rolling sea.

SHELburne HARBOUR, or PORT ROSEWAY, is, according to Mr. Lockwood, justly esteemed the best in all Nova Scotia, from the ease of its access, and the perfect security of its anchorages. At the entrance of the harbour is the island of Rose-neath, or M'Nutts, which is nearly 3 miles in length, and $1\frac{1}{2}$ in its broadest part. On the S.E. point of this island stands an excellent lighthouse; this point is a high cliff of white rocks, the summit of which is without trees: the west side of the island is low. The lighthouse is painted black-and-white, in vertical stripes, and has a remarkable appearance in the day-time, on account of a dark wood that is behind it; while, at night, two lights are exhibited from it; the upper light is 150 feet above the level of the sea, and the lower about 36 feet below the lantern at the top of the building. This lighthouse bears from the lighthouse of Sambro W.S.W., distant 30 leagues, being in latitude $43^{\circ} 38'$ north, and longitude $65^{\circ} 18'$ west.

When coming in from sea, make for the lighthouse, bringing it to bear N.W., or N.W. by N.; then steer directly towards it. The dangers to be left to the eastward of you, are those adjacent to the Rugged Rocks, already mentioned. The *Bell Rock*, which is always visible, appearing black and bold-to, lying E.N.E. $\frac{1}{2}$ E., distant $2\frac{1}{2}$

miles from the lighthouse; and the *Jigg Rock*, which has only 6 feet water over it, and lies nearly S. $\frac{1}{2}$ W., $1\frac{1}{2}$ mile from the lighthouse.

In coming from the westward, you may steer for the entrance on either side of the *Jigg Rock*; and if from the eastward, on either side of the *Bell Rock*. When you are abreast of the lighthouse, you may sail into the northward of M'Nutt's Island, about N.W. by N., keeping nearly in mid-channel: the island's side is bold-to, and the anchorage is good, in 7, 8, or 10 fathoms, the bottom mud. Keep the western shore on board, for there is a *shallow spot*, somewhere about the eastern side, between *George's* and *Sandy Points*, on which H.M. ship *Aibar* struck. *Sandy Point* is about 2 miles beyond the N.W. part of M'Nutt's Island; give it a berth, for a *sandy spit* extends from it 300 yards. With M'Nutt's Island locked to this point, the anchorage is exceedingly good, and shipping may, with good ground tackle, ride in safety during the most violent storm.

In the channel, about S. by E., distant nearly a mile from *Carlton Point*, lies the *Adamantine Rock*, abreast of *Durfey's House*; this will easily be avoided by going into no less water than $4\frac{1}{2}$ or 5 fathoms; or by keeping *Petits's Island* open of *Surf Point*. The inlet which runs up to the N.W. has several *shoals* in it; but the eastern shore has regular soundings, from *Sandy Point* upwards, and is free from danger; while in the upper part of the harbour, above *Carlton Point*, vessels may ride in 5, 6, or 7 fathoms, the ground holding well. We have already stated, that your course, from the entrance towards *Sandy Point*, will be about N.W. by N., and having rounded *Sandy Point*, you can proceed N. by W. and north, according to your wind.

In coming from the eastward of this harbour, be careful to avoid, and give a good berth to, the *shoals* off *Rugged Island*; and do not haul up for the harbour until you get the lighthouse to bear W. by N. $\frac{1}{2}$ N., by which precaution you will go clear of every danger; or you may stop a tide at the entrance, in from 16 to 10 fathoms, sand and clay.

Shelburne affords excellent shelter for ships in distress, and is secure against any wind, except a violent storm at S.S.W.; abreast of the town, the wind from S. to E. does no harm, although from S. by W. to S.W. by S., if blowing hard for some considerable time, it will set the smaller vessels adrift at the wharfs; but in the stream, as has been observed before, with good cables and anchors, no winds can injure you. Here you may be supplied with cordage, duck, spars, provisions, and water. Carpenters, pump, block, and sail-makers can be obtained, if required; and the port charges for vessels, which put in for supplies only, is no more than 4*d.* per ton, light money, on foreign bottoms; but should you enter the custom-house, the duties become much higher. It is high water, full and change, at 8 o'clock; spring-tides rise 8 feet, and neaps 6, but a fresh breeze from the S.E. commonly brings on high water sooner, and causes an additional rise of 2 or 3 feet.

CAPE NEGRO HARBOUR is named from *Cape Negro*, the eastern limit of an island which lies before its entrance. This cape is remarkably high, rocky and barren, bearing S.W. $\frac{1}{2}$ S., distant 7 miles from *Shelburne lighthouse*. This island is very low midway, and has the appearance of being two islands. There are two passages into the harbour, one to the eastward of the island, and the other to the westward of it; the former is much the better of the two; but this is rendered dangerous, on account of two *sunken rocks* which lie off its entrance; these are called the *Gray Rocks* and the *Budget*: the *Gray Rock* lies N.N.E. from the cape, distant nearly a mile, and is situated nearly on the starboard side of the channel. Some parts of these rocks are always visible, and serve as a mark for the harbour.

The *Budget* is a *blind rock*, of 6 feet, lying nearly mid-channel, and only $\frac{1}{2}$ of a mile from the island, having deep water round it. In the channel to the eastward of the *Budget* you will have 10, 12, and 14 fathoms; and the best direction to enter the harbour, will be to steer $\frac{1}{2}$ from the rocks off the eastern point, until *Shelburne lighthouse* is shut in, when you will be within the danger. There is excellent anchorage off the N.E. part of *Negro Island*, in from 6 to 4 fathoms, on a bottom of stiff mud. The northern part of the island presents a low shingly beach, from which a *bar* extends quite across to the eastern shore; over which are 15 feet at low water; above this bar it is navigable full 6 miles, having a smooth clayey bottom, with 3, 4, and 5 fathoms water.

The passage to the westward of Negro Island is somewhat intricate, encumbered with rocks and dangers, and should not be attempted, except in cases of extreme emergency; in such circumstances, indecision or timidity might produce certain destruction; then the commander's post should be aloft, and, if not possessing confidence himself, he should affect it. Captain Des Barres says, "If coming from the westward, in hauling round Point Jeffery, to avoid the ledges, blind rocks, and shoals extending easterly from the western shore, you should shape your course N.N.E. $\frac{1}{2}$ N. towards the cape, giving the *Savage Rocks* a berth of 3 cables' length, until you open Davis's Island, a sail's breadth off Point William. Davis's Island is the largest, and westernmost at the head of the harbour; run up in that direction, observing to keep clear of a *sunken rock*, which lies E.S.E. from Point William, about 300 fathoms from the shore. Fishery Beach is bold-to."

To sail through the N.E. passage, which is not so difficult, keep Gray's Rocks on board, and steer N.W. for Point John, until you see across the isthmus in the middle of Cape Negro, or until Shelburne lighthouse is shut in, and having passed the Budget, from thence haul over to the westward, keeping along the shore about 2 cables' lengths from the island, to avoid the shoal, which extends half the distance over from Point John towards the island; and when you have opened the small islands at the head of the bay, shape your course N.N.W. to the anchoring ground; the bottom is mud and clay; along the N.E. side of Cape Negro Island, the anchorage is good stiff clay.

The *River Clyde*, which descends from a chain of lakes that extend E.N.E. and W.S.W. a considerable distance in the interior, falls into the head of Negro Harbour, after a run of 28 miles; and the adjoining lands are well cultivated, and have an increasing population, who combine fishing and farming with considerable success.

PORT LATOUR, or HALDIMAND, is situated a little to the westward of Negro Harbour, being separated from it by a narrow peninsula; the extreme points which bound the entrance to the southward, are Point Jeffery, or Blanche Point, to the eastward, and Point Baccaro to the west: between and within there are several clusters of rocks, rendering the harbour unfit for any but small craft; and the tide leaves the head of the inlet dry in many places; the adjacent lands are barren, and the settlers are but few: nevertheless, as some vessels may be driven to seek shelter here, the following directions of Mr. De Barres may prove acceptable. "To sail into this port, coming from the westward, continue your course easterly, until you have Braham Isle a ship's length open to the eastward of North Rocks: thence you may steer northerly for Isle George, and when you come up within the distance of 2 cables' length from its south end, incline to the westward in a direction with the western extremity of Pond Beach, until you open Prospect House on the north side of the northernmost Mohawk Ledges, and then haul into anchorage in 3 fathoms, muddy bottom.

"Nearly midway between Baccaro Point and the South Ledge lies the *Folly*, a *sunken rock*, within which and the western shore is a channel of 6 fathoms. The *Vulture*, a *dangerous breaker*, lies S.W. by W., nearly 2 miles from Baccaro Point."

BARRINGTON BAY.—This is a spacious inlet, situated to the westward of Port Latour, and formed by Cape Sable Island, which lies in front of its entrance; there are two passages into it: that to the eastward is between Baccaro Point and Sable Island, being at its entrance 3 miles wide; that to the westward is not more than a mile broad; both are encumbered with numerous and *extensive flats*, narrowing the passage, and rendering the navigation dangerous; for although the channels may generally be discovered, by the waters appearing dark, yet it will require a leading wind to wind through to the anchorage, which is towards the head of the bay, and about $1\frac{1}{2}$ mile below the town; here there are from 18 to 26 feet water. The passage to the northward and westward is used by small vessels only, and is not safe without a commanding breeze, as the tide of ebb is forced unnaturally through to the eastward, by the Bay of Fundy tide, at the rapidity of 3, 4, and sometimes 5 knots an hour; setting immediately upon the rocks which lie within it.

The town of Barrington is situated at the north-eastern extremity of the bay; the land is somewhat stony, but affords excellent pasturage, and the stock of cattle is very considerable, the inhabitants being generally in good circumstances. Vessels venturing into this bay by the eastern passage, must be very careful to avoid Baccaro Point, giving

it a wide berth of full 2 miles, on account of the *Bantan*, *Shot Pouch*, the *Vulture*, and other rocks which lie off it. The *Vulture Rock* is very dangerous, and lies S.W. by W. from Baccaro Point, distant nearly 2 miles; the *Bantan* bears S.S.W. from the point about a similar distance, and from the *Vulture* S.E., almost a mile; they are both exceedingly dangerous.

CAPE SABLE is the south-eastern extremity of a small narrow island, which is separated and distinct from Cape Sable Island; it lies in latitude $44^{\circ} 23' 30''$ north, and longitude $65^{\circ} 36'$ west; it is low and woody, but the cape itself is a broken white cliff, apparently in a state of decomposition, and visible 4 or 5 leagues off; from this island *spits of sand* extend outward, both to the south-east and south-westward; the *Eastern Ledge* is called the *Horse Shoe*, and runs out $2\frac{1}{2}$ miles S.E. by S.; the *Western*, or *Cape Ledge*, stretches to the S.W., about 3 miles. The tides, both flood and ebb, set directly across these ledges at the rate of 3 and sometimes 4 knots an hour, causing a strong break to a considerable distance, particularly when the wind is fresh; it will then often extend full 3 leagues out, shifting its direction with the tide, the flood carrying it to the westward, and the ebb to the eastward, the former running a considerable time longer than the latter. This rippling, or breaking of the water, may be considered hazardous to pass through in a gale of wind; but there are not less than 8, 10, 12, and 20 fathoms, rocky ground.

It is high water at Cape Sable, full and change, at $\frac{3}{4}$ after 7 o'clock, and the spring-tides rise 12 feet, neaps 6 feet.

BONNETTA COVE.—To the north-westward of Cape Sable is a small island, called Green Island, to the north-east of which an inlet runs in to Cape Sable Island, forming Bonnetta Cove, where good anchorage may be found in 3 fathoms water; the entrance to it is narrow, and runs in between a *spit* and the island; this will be too difficult for a stranger to discover, but it is frequented by the coasters and fishermen.

FAVOURITE COVE is situated in the Western Channel, and about the middle of Cape Sable Island; here also small vessels may run in and anchor in 2 fathoms, behind a small islet which lies mid-channel, at its entrance, affording a passage on either side, but that to the eastward is the best, and has the deepest water. With S.W. gales there is always good anchorage off the N.E. side of Cape Sable Island; but Shag Harbour, which lies on the opposite side of the Western Channel, and bears N.N.W. from Bonnetta Cove, is full of *shoals*, and must not be attempted unless you are well acquainted with it.

It is here high water, full and change, at 9 o'clock; spring-tides rise 11 feet, neaps 8 feet.

THE BRAZIL ROCK.—This is a *flat rock*, covering a space of 10 yards, over which are only 8 and 9 feet at low water; a tail extends 90 or 100 yards from its base, having 6 to 8 fathoms water; the tide running strong over this, causes a ripple, and makes the rock appear larger than it really is. Southward of the rock, at the distance of about a mile, you will have 35 and 34 fathoms, then 30 and 22 as you approach nearer to it; but towards the Cape Sable shore the soundings are regular, from 19 to 15 fathoms; you will then lessen your water to 10 and 7 fathoms, when you will be at the edge of the *Race Horse Shoal*. To the northward of the *Brazil Rock*, in the direction of the *Bantan Rock*, you will have 16, 19, 15, 17, 16, 15, and 10 fathoms; with this latter depth you will be near the *Bantan*, and must tack to the westward. The exact position of this rock has been much disputed, but the place assigned to it, by the recent surveys, is in latitude $43^{\circ} 21' 30''$ north, and longitude $65^{\circ} 26'$ west; but Mr. Des Barres gives it in latitude $43^{\circ} 24' 15''$ north, and longitude $65^{\circ} 22'$ west. The variation is about 14° west.

Magnetic bearings and distances between Halifax and Cape Sable.

From Sambro lighthouse to Cross Island, Lunenburg

.....	Nearly west	8 $\frac{1}{2}$ leagues.
..... Cape Le Have.....	W. $\frac{1}{2}$ S.	12 ditto
..... Liverpool lighthouse.....	W. by S.	17 $\frac{1}{2}$ ditto
..... Hope Island, near Port Jolie	W.S.W. $\frac{1}{2}$ W.	21 ditto
..... Entrance of Port Shelburne	W.S.W.	29 ditto
..... Cape Negro.....	W.S.W., a little westerly	31 $\frac{1}{2}$ ditto

From Sambro lighthouse to Cape Sable	W.S.W. $\frac{1}{4}$ W.*	36 leagues.
..... Brazil Rock	Nearly W.S.W.	34 $\frac{1}{2}$ ditto
Shelburne lighthouse to Cape Negro.....	S.W. $\frac{1}{2}$ S.	7 miles
Cape Negro to the Brazil Rock.....	S.W. $\frac{3}{4}$ S.	10 ditto
Cape Sable to the Brazil Rock	S.E. by E.	8 $\frac{1}{2}$ ditto

Vessels from Europe, when bound to the Bay of Fundy, should endeavour to keep in the parallel of about 43° or 43° 5' north; and after obtaining soundings on the western part of Sable Island Bank, should not fail to keep the deep-sea lead going as she proceeds to the westward, sounding progressively on the Le Have and Cape Sable Banks; the former may be known by the hard rocky bottom, and the latter by being generally black gravel. These precautions become more necessary, as a fair wind is frequently accompanied by a thick fog, often for several days together. The neglect of the lead has been the greatest cause of the fatal disasters which have occurred on this coast.†

In thick weather, by a careful attention to the soundings on your approach towards Cape Sable, and keeping your vessel under commanding canvas for getting soundings, you may round the cape with safety in 35 or 40 fathoms; the soundings will inform you when off the cape, being small black stones, sand, and gravel. When across this bank you fall into deep water in the bay, and may shape a course for the American shore, and endeavour to make the land about Moose Peck Head, or Machias. Mount Desert and the Shuttock Hills may be seen at a great distance; sometimes they may be seen clearly from the mast-head over the fog.

X.—THE ISLE OF SABLE AND BANKS OF NOVA SCOTIA.

THE southernmost part of Sable Island lies in latitude 44° 0'; the west end lies in longitude 60° 32' 30'', according to Des Barres; but late surveys have placed it in 43° 55' north, and the west end in longitude 60° 14'; and the east end of the island in 43° 59' north, and longitude 59° 48' west. This island should always be approached with great caution, and the lead strictly attended to.

On the days of the new and full moon, it is high water along the south shore of the island at $\frac{1}{2}$ an hour after 8 o'clock, and it flows till $\frac{1}{2}$ an hour past 10 o'clock on the north side, and till near 11 o'clock in the pond. Common spring-tides rise 7 feet perpendicular, and neap-tides 4. The flood sets in from the S.S.W. at the rate of $\frac{1}{2}$ a mile an hour; but it alters its course, and increases its velocity, near the ends of the island. At half-flood it streams north, and south at half-ebb, with great swiftness, across the north-east and north-west bars; it is therefore dangerous to approach them without a commanding breeze.

The north-east bar runs out E.N.E., about 4 $\frac{1}{2}$ leagues from the eastern extremity of the island, all which is very shoal, having in few places more than 2 fathoms water, whence it continues east and E. by S., deepening gradually to 12, 15, and 18 fathoms water, at the distance of 8 leagues, and shapes to the south and S.E., sloping gently to 60 and 70 fathoms water. To the northward and eastward it is very steep, and, in a run of 3 miles, the water will deepen to 130 fathoms. Abreast of the body of the island the soundings are more gradual. The shoal ground of the north-west bar shapes to the westward, and deepens gradually to 70 fathoms water, at the distance of 20 or 25 leagues from the isle; and winds easterly and southerly, until it meets the soundings off the north-east bar. The quality of the bottom, in general, is very fine sand, with a few small transparent stones; to the northward, and close to the

* This course cannot be sailed upon, on account of the intervention of the land.

† A ship from Scotland, bound to St. John's, N.B., ran on shore on the Rugged Island, eastward of Shelburne, during a dark night and thick fog, going 8 and 9 knots, with a fair wind. The lead had never been hove, and she was soon a total wreck. Another ship, from London to St. John's, after leaving the west end of Sable Island Bank, thinking they were in the bay, hauled to the northward, and found themselves next day off Sambro lighthouse, (near Halifax,) instead of being off Bryer's Island, as they expected; by speaking a small coaster, they were apprised of their situation. These are but two instances out of many.

north-east bar, the sand is mixed with many black specks; but near the north-west bar, the sand has a greenish colour. The north-east bar breaks in bad weather, at the distance of 7 or 8 leagues from the island; but, in moderate weather, a ship may cross it, at 6 leagues distance, with great safety, in no less than 8 or 9 fathoms water; and if the weather be clear, the island may be seen very distinctly from a boat at the distance of 5 leagues. The north-west bar breaks in bad weather at 8 miles from the island.

These bars are thus described by Mr. Des Barres; but repeated storms, and the violence of the sea, have very much altered the form and extent within the last 30 years.

*The following extract of a letter from CAPTAIN JOSEPH DARRY, Superintendent of Sable Island, is from that valuable work, the "American Coast Pilot," fifteenth edition.**

"I have known the island for the last 28 years, in which time the west end has decreased in length about 7 miles, although the outer breakers of the north-west bar have the same bearing from the west end of the island that they had then, (about N.W., by compass, distant about 8 miles,) which clearly shows that the whole bank and the bar travels to the eastward. The ground is high, and the water shoal outside of these breakers, 7 or 8 miles, in a N.W. direction. The flood-tide sets across the bar to the northward and eastward, very strong, and the ebb-tide to the opposite point, changing alternately at half-flood and half-ebb. The ground to the southward and westward of the bar is very regular, deepening very slowly to a considerable distance; but to the northward and eastward the ground is very steep, and from breakers, or from very shoal ground outside the breakers, you fall into deep water all at once. The bank to the N.W. is very uneven, and curves round to the northward in a steep ridge; and at the distance of about 35 miles from the island, in a N.W. direction, are 10 fathoms water, and W.N.W. and E.S.E. from that, the ground falls very suddenly into deep water. This ridge joins the middle ground, and extends, in an easterly and N.E. direction, to a considerable distance, with shoal water, the bottom in small ridges, with 11, 12, 11, and 13 fathoms of water, and so on over it; and between this bank and the bar, or the island, the water is very deep, 80 or 90 fathoms. The bank extends to the eastward abreast of the island; the southernmost edge of the bank, from 20 to 25 miles, to the northward of the island.

"The east end has altered very little since my knowledge of it, (except in height,) which is much greater than it was; and the whole island seems to increase in height every year, but grows narrower. There is a low *bar of dry sand* running from the high land off the east end, in a N.E. direction, about 3 miles, from whence shoal water, that always breaks, extends about 2 miles farther, in an E.N.E. direction; outside of which, for a distance of about 6 miles, is a passage across the bar, with from 2½ to 3 fathoms water upon it. Outside of that again is a piece high ground that always breaks, and is sometimes dry, and extends in an E.N.E. direction between 2 and 3 miles, from which the shoal ground continues, in the same direction, some miles farther. The flood-tide across this bar sets very strongly to the northward, and the ebb-tide in the opposite direction, but not so strong. The soundings to the southward and eastward of the bar are flat and regular for a considerable distance, but to the northward and westward the ground is very steep; close to the breakers are 10 fathoms, and goes down suddenly to 70 or 80 fathoms to 100, or upwards. I believe, in general, there is a strong current setting to the W.S.W. between the Sable Bank and the Gulf of Mexico stream; and there is a strong current sets down the western side of the Gulf of St. Lawrence stream in a S.S.W. direction. The current along the south side of the island is in very shoal water, runs both east and west, and is influenced by the winds. The most of the wrecks that happen here are in error of their longitude: for instance, vessels bound to the eastward, they think themselves past the island when they get on shore upon it; and vessels bound to the westward (say from Europe), do not think themselves so far to the westward when they get on shore upon it. I have known several cases of vessels from Europe that have not made an error in their longitude exceeding ½ a degree, until they came to the Banks of Newfoundland, and from thence, in moderate weather and light winds, have made errors of from 60 to 100 miles, which, I think, goes far to prove the existence of a westerly and southerly current between the Grand Bank and here; and also of the existence of a westerly current be-

* By E. & G. W. Blunt, New York.

tween the Sable Bank and Gulf of Mexico stream, which will be stronger or weaker according to the distance between the stream and the banks.

"When a casualty has occurred, and you find you are on the body of the island, I would recommend that nothing of masts or rigging be cut away, without the vessel should be very tender, and then you may do it to ease her a little; but a vessel of ordinary strength will bear her spars until she heaves up on the beach, or settles in the sand, and lays quiet; as lives and property have often been saved by a vessel having her spars standing, as from the heads of which you may often send a line ashore, when it is not possible to work a boat; and by sending a good hawser after that, and securing it well to the shore, a chair, or other more efficient article, may be rigged for conveying passengers, or others, or valuable property, over the breakers in safety; as from the nature of the soft sandy bottom, a vessel will not go to pieces so soon as if she was on the rocks; and, by the rigging being left standing, it may afterwards be saved; whereas, if the masts are cut away, the whole of the rigging goes with them, and all get tangled and buried in the sand, and are generally totally lost.

"If you are on either of the bars, the first consideration should be to secure the boats, and lighten the ship, and leave her as soon as ever you have to abandon the hopes of getting her off; endeavour to get to the leeward of the breakers, and land on the island, according to circumstances. Endeavour to land on the north side, if possible, as vessels that get on to the bars very soon disappear altogether, either by going to pieces in the irregular sea and strong currents, or by rolling over the steep bank to the northward, and sinking in deep water.

"When property can be saved on the island, it is proper for the master and his crew to do the utmost in their power to save it; they can get the assistance of the people on the island, and a boat and team of horses, not for hire, for they are employed by government, and the island draws a salvage of whatever may be saved on it, which is apportioned by the magistrates at Halifax. The more there is saved by the master and crew, the less salvage will be taken; but it is very often the case, the crews will not assist to save property; and whatever is saved is done exclusively by the establishment, in which case the salvage is pretty high. There are buildings on the island for the shelter of persons cast away on it, with provisions for those who may have none; also some buildings for the reception of perishable goods: these buildings, and whatever is put into them, are under the charge of the superintendent. All property saved must be sent to Halifax by the first opportunity. The master can keep inventories, and continue with the goods if he likes, but has no control over their destination; but, I believe, by petitioning the Governor of Halifax, he might get permission to take them where he pleases, by paying the duty and salvage.

"When any property is saved on the island, it is sent to Halifax, where it is advertised, and sold by order of the Commissioners, and the proceeds paid into their hands, out of which they pay the King's dues, the salvage apportioned by the magistrates, the expenses of freight, and other small charges; and the residue is paid over to the master, or other authorized agent, for the benefit of the underwriters, and all concerned. The superintendent is under the control of the Governor and the Commissioners, and can take no new step without orders from them. The above and before-mentioned custom is an old and long-established rule, and supported by many acts of provincial legislature, and more particularly by an act passed the 4th day of April, 1836, and in the sixth year of his Majesty's reign (William IV.), which does more fully explain and set forth the rules for the guidance of the establishment.

"The north side is very safe, and a vessel may approach any part of it within a mile; and vessels in distress might, by standing in on the north side, and near the west end, where the principal establishment is, get a supply of fresh water or fuel, or a partial supply of provisions and fresh meat, except in cases of a strong breeze and heavy sea on shore. There is no difficulty in working boats on this side of the island. The south side is also very safe to approach in clear weather; but from the heavy sea that constantly breaks on it, the communication with a vessel, by boats, is extremely difficult, except after a spell of northerly winds for 3 or 4 days, when the sea becomes smooth, and boats may work."

As when a vessel is on shore in a fog, it is of the utmost importance to ascertain her true position, in order to save the ship, or the lives of those on board, the following directions should be attended to:—

If breakers are seen to extend in a direction N.W. and S.E., you are on the N.W. bar.

If breakers are seen to extend W.S.W. and E.N.E., you are on the N.E. bar.

If breakers are seen to the northward, a head, and extending from east to west, you are on the south side of the island.

If breakers are seen to the southward, a head, and extending from east to west, you are on the north side of the island.

Ice.—H.M. packet-brig, *Express*, fell in with two islands of ice on Sable Island Bank, on the 7th of July, 1836, in 45 fathoms water; estimated heights 180 and 150 feet; latitude $43^{\circ} 13'$ north, air 46° , water 42° .

The *Nova Scotia Banks* extend nearly 70 leagues, in a westerly direction. From the isle of Sable they are from 20 to 25 leagues wide, and their inner edges are from 14 to 18 leagues off shore; they are intersected by narrow, winding channels (the bottom of which is mud), running N.W. and S.E. Between these banks and the shore are several small inner banks, with deep water and muddy bottom. The water deepens regularly from the isle of Sable, to the distance of 22 leagues, in 50 fathoms, fine gravel; thence proceeding westward, the gravel becomes coarser; continuing westward to the western extremity of the banks, the soundings are rocky; but off Cape Sable, gravel, with small black stones, will be found. The form and extent of these banks will be best understood by a reference to the new charts.

The S.W. extremity of *Banquereau*, or *Bank Quero*, lies 8 leagues N.N.E. from the east end of the isle of Sable. The southern edge of this bank extends in an E.S.E. direction, 112 miles, or from longitude $59^{\circ} 48'$ to $57^{\circ} 10'$ west, and in the parallel of $44^{\circ} 20'$ north, the soundings sand, shells, and sea eggs, the depths from 30 to 35 and 40 fathoms. This edge is steep-to, and its S.W. part approaches to within 4 leagues of the N.E. bar, having a deep gully between of 70 to 90 fathoms, and about 3 leagues in width; and the west point of Banquereau reaches within 10 miles of the middle ground which runs eastward from the N.W. bar, and on it is a patch of 10 fathoms. Between this patch and the west point of the Banquereau is another deep gully, 8 miles wide, with 70 to 95 fathoms (sand) in it. Great attention should be paid to the lead when near the S.W. point of this bank, in hazy weather, lest you should cross either of these gullies without sounding in them, and get upon either of the bars without knowing you had left the bank. This bank is steep-to on all sides, and on the body of the bank are from 20 to 40 fathoms, the latter depth being near its edges.

About the year 1803, the legislature of Nova Scotia passed a liberal vote of money for the purpose of commencing an establishment on Sable Island, in order to prevent shipwreck, and to protect all persons and property which might happen to be cast ashore there. Commissioners were subsequently appointed for executing this important trust, and a superintendent was to reside on the island, empowered as a justice of peace, surveyor, and searcher of impost and excise, and authorised by a warrant to take charge of the island, shores, and fisheries, and of all wrecks found there, in cases where persons saved are not competent to the care of such property. Instructions were given to him, that persons saved with property are to have the full care, charge, and possession of it, and be allowed to export it in any manner they may think proper.* Every aid and assistance is to be afforded, and a receipt given specifying the property saved, the aid received, and referring the salvage or reward to be ascertained by the Commissioners at Halifax; but neither fee or reward is to be taken, or property disposed of, upon the island. There were also ordered, four able men and proper boats, with materials completely fitted to erect a house, and good store; also cattle, sheep, goats, and poultry were sent, with clothing, provisions, &c. A gun is placed on the island, to answer such as may be heard from vessels at sea. Signals are to be hoisted on the island, and buildings have been erected, particularly on the west side. The

* Since 1804, when this establishment first commenced, the Provincial Government have found it necessary to amend this act at different times (see page 195). There are now several houses on the island, and the supply of stores and provisions abundant; so that 300 to 400 persons have been supplied with necessaries at one time on the island. The superintendent's house stands on the north side of the island, about 8 miles from the west end. The uninhabited houses contain certain provisions, matches, &c. There are several fresh-water ponds; but fresh water may be had generally by digging from 1 to 3 feet deep.

greatest care has been taken to extend aid as much as possible, to prevent misfortune, and to relieve it; to secure property from loss, and from extortion for saving it, by referring it, in all cases, to the Commissioners in Halifax, from whose respectability we are assured that equity and charity will be united in directing and deciding. The superintendent and boatmen are paid and subsisted, and all necessaries furnished, by government, that no claims or demands may be made by them upon the unfortunate. But, as extraordinary risk, enterprise, and exertion in so good a cause deserve recompense, such cases are to be exactly stated to the Commissioners, who are to adjust the measure and mode of extra reward to be allowed and paid.

REMARKS.—It may be observed, generally, that the soundings all along the Nova Scotia Coast, between Cape Canso on the E.N.E. and Cape Sable to the W.S.W., are very irregular, from 25 to 40 and 50 fathoms; therefore, in foggy weather, do not stand nearer in-shore than 35 fathoms, lest you fall upon some of the ledges. By no means make too bold with the shore in such weather, unless you are sure of the part of the coast you are on; for you may, otherwise, when bound for Halifax, fall unexpectedly into Mahone, or Mecklenburgh Bays, and thus be caught and endangered by a S.E. wind.

The weather on the coast is frequently foggy in the spring and some part of the summer, in particular at the distance of 4 or 5 leagues from the shores; but on approaching nearer, the weather is found more clear, and, with the wind from the land, it is perfectly clear and pleasant.

XI.—THE WEST AND NORTHERN COASTS OF NOVA SCOTIA,
AND THE COAST OF NEW BRUNSWICK, INCLUDING THE
BAY OF FUNDY, WITH THE MANAN ISLANDS, &c.

Variation allowed $1\frac{1}{4}$ point West.

REMARKS.—Whoever examines and well considers the situation of the southwestern shores of Nova Scotia, the Bay of Fundy, and Manan Islands, will readily perceive the dangers attendant upon the navigation of its harbours, its natural exposure to the Atlantic Ocean, the variability of its tides and winds, and the many rocks with which it is environed. These, therefore, must be expected to involve the mariner in occasional difficulties, which will call forth his utmost energies, and require no common share of attention to surmount; yet, although the loss of vessels in these parts fully justify a perilous apprehension, there are few obstacles which a moderate exercise of skill and resolution would not have been able to overcome; and, we fear, it is more to the want of these qualifications in the navigators, than to the dangers of the navigation, that such losses have ever occurred.

It is essential (says Mr. Lockwood) to the safety of those who are navigating the Bay of Fundy, that it should be clearly understood; and in cases of necessity, many are the places of safety to which vessels might resort, even without the advantage of a pilot; although no man would attempt to justify the economy of saving the expense of pilotage on a coast like this, where currents, fogs, and changes of weather may confound the best judgment.

In order to lessen these accidents, if not totally to prevent such fatal occurrences in future, let the mariner be fully convinced of the necessity of frequently sounding with the deep-sea lead, and see the expediency of having his anchors and cables fit for immediate use; this cannot be too strongly impressed upon his mind, for vessels well equipped and perfect in gear, with their anchors stowed as in the middle of the Atlantic Ocean, have been here wrecked, in moderate weather, and so frequently, that such gross neglect cannot be too much reprobated; such serious losses will, we trust, be hereafter prevented, more especially as it is so dependant upon the mariner himself, and may be, in most cases, remedied by only sounding in time, and keeping the lead in continual action.

TIDES.—Another subject most particularly essential to the mariner, is a knowledge of the tides; this we recommend seriously to his attention, as he will find them explained at the end of this section.

CAPE SABLE TO BRIER'S ISLAND.

THE COASTS, ISLANDS, &c.—Before we give a description of the main land from Cape Sable to the entrance of the Bay of Fundy, it may be proper to notice the islands and rocks which lie adjacent and to the westward of Cape Sable; these are the *Blonde Rock*, the *Seal*, and *Mud Islands*; the *Tusket Islands*, the *Gannet Rock*, and *Green Island*, &c.

SEAL ISLAND LIGHT.—This lighthouse stands on the central and highest part of Seal Island: it is of an octagon shape, built of wood, and painted white; it shows a conspicuous fixed light with Argand burners and reflectors, 170 feet above high water mark, which may be seen, when approaching, from every point of the compass.

THE SEAL ISLAND'S southernmost point bears from Cape Sable nearly W.N.W. $\frac{1}{2}$ W., distant 16 miles, and lies in latitude $43^{\circ} 23'$ north, and longitude 66° west, being somewhat more than 2 miles in length from north to south. Its southern part is covered with scrubby trees, elevated about 30 feet above the sea. A *dangerous reef* extends a mile south from the south end of the island. To the S.S.W. of this part, distant 2 miles, is a *rock*, uncovered at low water, called the *Blonde*, from a vessel that in 1777 was wrecked upon it; round this rock are 7, 9, and 10 fathoms water. About a mile to the westward of the Blonde are very heavy and dangerous overfalls, having a very alarming appearance. At $4\frac{1}{2}$ miles north of these is a *bed of shoal ground*, of only 16 feet, causing a violent ripple. The ship *Waterloo*, in passing between the Blonde Rock and Seal Island, struck twice upon a *rocky shoal*, with only 18 feet water over it, and thereby knocked off her rudder; this was supposed to be a part of the ledge which runs off to the southward of the Seal Island; however, large vessels ought not to pass between them if it can be avoided. The Blonde Rock is *particularly dangerous*, as the ebb-tide sets so strongly towards it; and from the lowness of the Seal Islands you are so likely to be deceived, even in fine weather.

A *rock* was discovered by the ship *Zetland*, in November, 1848, on which were only 3 fathoms water; from it Seal Island lighthouse bore N.E. by N., $2\frac{1}{4}$ miles.

The tide also runs with great rapidity past the Seal and Mud Islands, which occasions the sea to break over the shoals in their vicinity, making them appear more extensive than perhaps they really are. In sailing therefore between the Seal Island and the Mud Islands, large vessels should always keep a mile off the latter, by which they will avoid the overfalls in 3 fathoms. Off the western part of the Seal Island, distant a mile, lie *two small rocky islets*, called the *Devil's Limb** and the *Limb's Limb*; the Devil's Limb is visible at all times, and the Limb's Limb is only seen at half-tide. The smoothest anchorage is midway between these and Seal Island, in $3\frac{1}{2}$ or 4 fathoms, clear sand. Wild fowl and fish are here in abundance. The fishermen resort to this island for wood and water; the former they obtain from wrecks, the latter from a pond near the centre of the island. It is high water off the Seal Islands at 8h.; spring-tides rise 12 feet.

The Mud Islands, called also the North Seals, are 5 or 6 low ragged islands, the southernmost of which lies N.E., $2\frac{1}{2}$ miles from the Northern Seal Island. To the southward of the Mud Islands are overfalls of 18 feet; large vessels, in passing between Seal and Mud Island, should be careful to borrow within a mile of Seal Island, for these overfalls extend full $\frac{3}{4}$ of a mile from the southernmost Mud Islet. To this islet the petrels, or Mother Carey's chickens, annually resort in great quantities to hatch their young, flitting about in astonishing numbers. Nearly N.W. by N., distant 2 miles from the largest Mud Island, is a *ridge of rocks*, called the *Soldier's Ledge*; it is commonly uncovered at half-ebb. The course from abreast of Cape Sable to pass between Seal and Mud Islands, is N.W. by W.; you will meet with some overfalls in this direction, but no danger. The north end of the Seal Island is bold-to; within a cable's length there are 5 to 7 fathoms.

* In July 1843, the *Columbia* steam-vessel, on her passage from Boston to Halifax, ran on shore on this rock during a dense fog. The vessel became a total wreck; but the crew and passengers were fortunately saved.

Tusket Bald Islands are a cluster of islands lying to the northward of the Mud Islands, and to the south-westward of the entrance of the Tusket River; some of them are of considerable dimensions, and there are many shoals and dangers among them, so that although there may be navigable channels between, no stranger should attempt these passages. In the channel which separates the Tusket and Mud Islands is a rocky shoal, called by Des Barres the *Acteon*: it lies N.N.W., distant 4 miles from the largest Mud Island, and $1\frac{1}{2}$ mile N. by W. of the Soldier's Ledge; but Mr. Lockwood places it $1\frac{1}{2}$ mile farther off; nevertheless, these are generally supposed to be the same dangerous shoal, although its position does not seem to have been exactly determined; it appears to have from 2 to 4 fathoms over it, and therefore must be carefully watched for and guarded against by those who should venture through this channel.

TUSKET RIVER runs in to the north-eastward of the Tusket Islands, and is one of several inlets that are navigable on this part of the coast: it has several settlements on its banks, but at present it is little known or frequented.

PUBNICO HARBOUR is, according to Mr. Lockwood's account, an excellent ship-harbour, easy of access, and well situated for vessels bound for the Bay of Fundy, and distressed for either shelter or supplies. Its entrance is distant from the south end of Seal Island 14 miles, from which it bears N.E. $\frac{1}{2}$ E., the depths of water between them being from 16 to 20 fathoms, and from thence to 12 and 7 fathoms up so far as the beach, which is the proper place for strangers to anchor. Above this beach, on the western side, is a ledge, which becomes partly dry at low water. About 2 or 3 miles, on the starboard shore, before you arrive at the entrance to Pubnico, is St. John's Island, under the northern side of which is good shelter in south-easterly gales; and small vessels frequently lie round the beach which forms its eastern part; but coasters commonly pass through the inner channel, within St. John's, Mutton, and Bonne Portage Islands, by Cockewit, and thence towards Barrington Bay by Shag Harbour; but these places are partly shoal, and totally unfitted for large vessels.

From the entrance to Pubnico, a W. by N. course for 4 leagues will lead clear to the southward of the Tusket Islands; but in this route you must be very careful to avoid the Soldier's Ledge and the Acteon, both of which have been already described. Having passed to the westward of the Mud and Tusket Islands, you will encounter, in your passage to the northward, the *Gannet Rock*, which lies N.W. by W., nearly 6 miles distant from the Southern Bald Island, and S. $\frac{1}{2}$ W., 10 miles from Cape Fourchu; it is 36 feet above the surface of the water, and always appears whitened by the dung of birds. About 2 miles to the south-westward of the Gannet is the *Opossum's Ledge*, which is visible at half-tide, and appears to have endangered the lives of many, having been formerly represented to lie 4 miles W. by N. from the Gannet.

GREEN ISLAND lies N.N.E. $\frac{3}{4}$ N., distant 3 miles from the Gannet Rock. There is a reef runs out from this island to the south-westward almost $\frac{3}{4}$ of a mile. Round this reef are 6 and 5 fathoms water, and between it and the Gannet Rock from 12 to 17 fathoms. East of Green Island, about $1\frac{1}{2}$ mile, is also a *sunken ledge*; it lies directly in the fairway of the channel to the little harbour of Jebogue, which is shoal and intricate, being the common resort of fishermen and coasters. The lands adjacent are moderately high, and are both well cultivated and settled. Should a stranger venture for this harbour, he must not only avoid the dangers already described, but also a rocky shoal, called the *Dragon*, which is situated S.W., southerly, a full mile from Jebogue Head, and N.N.E., $1\frac{1}{2}$ mile from Green Island. There are 8, 10, and 12 fathoms between the Dragon and Green Island, and 5, 6, and 7 fathoms between it and Jebogue Head. There is also a *knoll* of 3 fathoms at the entrance of the harbour, and shoal water off its eastern side.

CAPE FOURCHU, or the Forked Cape, so called from the island which forms it, having two narrow prongs running out to the southward; but the inlet formed between these must not be mistaken for Yarmouth Harbour, which lies to the eastward of them both. This cape, according to the best authorities, lies in latitude $43^{\circ} 47'$ north, and longitude $66^{\circ} 10'$ west, and forms a remarkable object in these parts, being rocky, high, and barren; it bears from Jebogue Head N.N.W. $\frac{3}{4}$ N., distant $4\frac{1}{2}$ miles.

CAPE FOURCHU LIGHT.—This lighthouse, which is on the island of Cape Fourchu, exhibits a bright revolving light, at 145 feet above the level of the sea; it is visible

1½ minute, and invisible ¼ a minute. The building is painted red-and-white, in vertical stripes. This light has been reported as one of the best on the coast.

YARMOUTH.—Vessels intending to run for Fourchu, or Yarmouth Harbour, will find it the safest way to proceed to the westward of Seal Island, the Gannet Rock, and Green Island, giving the Gannet a berth of about 2 miles; they will then have no danger to encounter, but from 20 to 30 fathoms water all the way. Having passed Green Island, their course towards Yarmouth Harbour will be about N.N.E. ¼ N.; in this passage they will meet with the *Bagshot Rock*, which dries at low water, and is dangerous, running out shoal full ¼ a mile to the southward; it bears from Cape Jebogue nearly N.W., from which it is distant almost 2½ miles, and bears from Cape Fourchu S.S.W. ¼ W., almost 2½ miles; you may pass on either side of this rock, and run on N. by E. ¼ E. for the harbour's mouth; this is considered a safe but small harbour; the fairway is, to follow the eastern shore until you reach the eastern point, which you are to give a berth, and proceed mid-channel: you will readily perceive the isthmus, with a battery upon it, and under its lee; to the northward is the anchorage; the ground is good, and the depth of water from 5 to 6 fathoms.

About a mile above the anchorage is the town of Yarmouth, which is numerously peopled, the houses large, though straggling, the grounds adjacent well cultivated, and the circumstances of the inhabitants generally good. This has latterly become a port of considerable trade; and there are several fine vessels belonging to it, which indicates its rising in importance.

From Cape Fourchu to Cape Mary the main land extends N. ¾ E., 6 leagues, and from Cape Mary to the lighthouse on Brier's Island is N.N.W. ¼ W., 13 miles. Almost opposite to Cape Fourchu is the *Lurcher Rocky Shoal*, and between that and Cape Mary is the *Trinity Ledge*; these are the only dangers in the passage.

THE LURCHER ROCK lies nearly W.N.W. from Cape Fourchu, distant 14 miles; it covers a *spot* of about 3 acres of shoal ground, said to have 2½ fathoms on its shoalest part: around the edge of the shallow water are 10, 11, and 12 fathoms, and a little farther of from 20 to 30 fathoms. From Cape St. Mary's the Lurcher bears S.W. ¼ W., distant 6 leagues.

THE TRINITY LEDGE comprehends a smaller space than the Lurcher, about ¾ of an acre, having the tops of *three small rocks* showing themselves at low tides; this danger bears from Cape Fourchu N. by W., distant 14 miles, and from Cape St. Mary S.W. ¾ W., 6 miles; the depth of water to a mile round it is from 12 to 15 fathoms. The stream runs very strongly over these two dangers, but the anchorages in their vicinity are tolerably good for a tide.

Vessels coming round Cape Sable, and intending to take the Tusket Passages, may steer N.W. by N., and proceed through either of the channels which have been described before, as best suits their convenience, or else proceed to the southward of Seal Island for about 35 miles. This latter route is the safest, and passing at the distance of 20 miles to the westward of Seal Island; thus the Bay of Fundy will be open, and their course up N.N.W. This will carry them outside of the Lurcher, but the tide will make one point difference in this course, as it sets S.E. and N.W. through the channels of the Mud and Tusket Islands, and near the Manan Ledges, the ebb running W.S.W. and the flood E.N.E., at the rate of 4 knots an hour.

From the Seal Islands up to Cape St. Mary the soundings, under 60 fathoms, extend full 25 and 30 miles off the land westward of Brier's Island; and near the Manan Ledges are 60, 80, and 100 fathoms at 3 and 4 miles distance, therefore the lead should always be kept going.

BRIER'S ISLAND, AT THE ENTRANCE TO THE BAY OF FUNDY, TO CHIGNECTO BAY.

BRIER'S ISLAND lies at the S.W. entrance of St. Mary's Bay; it is 3½ miles long and 1½ broad; on its western side stands a lighthouse, painted white, 92 feet high; it is of an octagon shape, and exhibits a fixed light, with argand burners. In advancing from the westward towards the island, the tide ripples strongly, even in 33 and 45 fathoms, when you are at the distance of 8 or 10 miles off the island. There is a *long and narrow reef* runs out S.W. from the south-eastern part of the island, full 2 miles,

some parts of which are visible, and lies near its extremity; the *Black Rock* is in the same direction; to the S.W. is a *small spot* of 3 fathoms, lying about $1\frac{1}{2}$ mile from the extremity of the reefs; between the knoll and reef, and also around the knoll, there are from 15 to 34 fathoms; vessels, therefore, going round to the southward of Brier's Island, must always give it a wide berth. About 3 miles S.W. $\frac{1}{2}$ W. from the northern end of the island, lies the *N.W. Ledge*, of 10 feet; it is *small* and *dangerous*. Nearly S.W., $\frac{3}{4}$ of a mile from this, is *Betson's Ledge*; and between these two ledges and the island are *two others*, said also to be dangerous, with deep channels between them; but the exact situations of these are not clearly known; it will, therefore, be particularly dangerous for the mariner to approach nearer to the northern side of this island than 4 or 5 miles. Brier's Island is inhabited, and contains nearly 2,000 acres.

THE NEW LIGHTHOUSE, lantern, and lamps, have been completed on the site of the old lighthouse on Brier's Island. "The complaints against the old light were universal; and when the old lighthouse was taken down, it was discovered that eight large posts, which supported the roof, passing up by the lantern, had interrupted the light about 25 per cent., and acting as so many screens, made the light appear, as a vessel altered her position, like a bad or blinking light, and did not arise from the fault of the keeper altogether."*

Vessels standing to the northward, should not go so near to the Nova Scotia shore as to shut in this light, for then they might be in danger of running upon some of the ledges about the Gull Rock.

LONG ISLAND is separated from Brier's Island by a narrow channel, called the Grand Passage, in which are from 5 to 15 fathoms water; the island runs in a N.E. and S.W. direction, being nearly 10 miles long, and about $1\frac{1}{2}$ mile broad; its coasts are almost straight, and at its farther end is the Petit Passage, dividing it from a narrow neck of land which continues so far as the Gut of Annapolis; thus Brier's Island, Long Island, and this peninsula form the northern shores of St. Mary's Bay.

ST. MARY'S BAY.—While from Cape St. Mary, upwards into the bay, the southern shore is low, and runs out, with *sandy flats*, in some places almost so far as $1\frac{1}{2}$ mile, the opposite, or northern shore, is constituted of high cliffs, having deep water close under them. Nearly mid-channel, and full $\frac{3}{4}$ up the bay, is a *rocky bank*, with 4, 5, and 6 fathoms over it; whilst on each side of it are channels of 12 and 15 fathoms, muddy ground.

Far up the bay, and on the southern shores, is the River Sissibou, the entrance to which is shoal. The River Sissibou has a *hard bar* at the entrance, which nearly dries across at low water, spring-tides; but at high water there are 14 or 15 feet on this bar, sometimes 1 or 2 feet more. Ships of 300 tons sometimes go here to load timber and deals; as there are two saw-mills, one near the entrance, the other about 2 miles up the river. At low water the channel of the river is narrow, so that it is necessary to moor head and stern; but there is sufficient water for a vessel to load afloat at low water. In the summer a vessel may, after loading to about 14 feet inside, take a part of her cargo in without the bar, where there is good riding, in 6 or 7 fathoms.

Both sides of the river are well settled, and there are several good farms. The village on the east side of the river is called Weymouth; here is an English Church and parsonage-house. On the west side of the river stands the village of New Edinburgh; here the collector of the Customs resides.

At the farther end of St. Mary's Bay is an extensive *sandy beach*, on entering which you will lessen your depth from 4, 5, and 6 fathoms to 12 feet, and should you advance, it will become more shallow. On the north side, and nearly opposite to Sissibou River, is Sandy Cove, where vessels, when it comes on to blow hard, may run aground on a bottom of soft mud, and lie sheltered from all winds.

GRAND PASSAGE.—We have already stated, that this channel runs in between Brier's and Long Islands, its southern entrance bearing north, distant 29 miles from Cape Fouchu, and N. by W., 12 miles from Cape St. Mary. In running for it, from

* We are indebted for this, and other valuable information, to Mr. William Reynolds, Book and Chart-seller, St. John's, New Brunswick. We have also been informed by this gentleman, "That all the lighthouses in the Bay of Fundy have the best constructed wrought-iron lanterns, with copper lamps, and the improved reflectors, and are fully to be depended upon."

abreast of Cape St. Mary, you will have no impediment whatever, but a depth of from 14 to 30 fathoms. At the entrance of the passage is 18 fathoms mid-channel; and having advanced within, you will perceive Billy Islet, which may be left on either side, although Mr. Des Barres says the western channel is the best and widest; here, a little to the northward of the island, is one of the best and safest harbours in the vicinity; from hence to the northward are 4, 5, 6, and 7 fathoms; following the shore of the Brier's Island, opposite its northern point the water deepens to 13 and 14 fathoms; you are then clear of the Grand Passage, and may borrow towards Long Island, steering north-easterly or N.E. by N. into the Bay of Fundy.

PETIT PASSAGE lies at the farther extremity of Long Island, and is the channel which separates that island from the main. It is situated about 3 leagues to the north-eastward of the Grand Passage, and is 280 fathoms wide in its narrowest part: its shores are bold-to, and there are from 20 to 30 fathoms of water within it; a N.N.E. $\frac{1}{2}$ northerly course, from abreast of Cape St. Mary, will carry you right through it. Near its northern entrance, on the western side, is Eddy Cove, a convenient place for vessels to anchor in, for here they may ride out of the stream of tide, which commonly runs so rapidly, that, without a fresh leading wind, no ship could possibly stem it. Long Island is inhabited, and is computed to contain 7,000 acres of land.

ANNAPOLIS GUT.—Pursuing the coast along shore from Brier's Island to Annapolis Gut, it has very few curvatures; the shore is bound with high rocky cliffs, above which a range of hills rises gradually to a considerable height; their summits appear unbroken, except at the Grand and Petit Passages, at Sandy Cove, and Gulliver's Hole, where they sink down in valleys, and near the Gut, where they terminate by an abrupt and steep declivity. The mariner, in navigating this coast, will, by keeping about a mile or $1\frac{1}{2}$ mile from the land, have 50, 40, and not less than 30 fathoms water all the way; and when at the entrance of the Gut, $1\frac{1}{2}$ mile distant from the lighthouse on Point Prim, he will find the latter depth. The Gut of Annapolis lies in latitude $44^{\circ} 42'$ north, and longitude $65^{\circ} 46' 30''$ west. The shore on both sides of the Gut is iron-bound for several leagues; the stream of ebb and flood sets through the Gut with the velocity of 5 knots an hour, causing various eddies and whirlpools; but the truest tide will be found off the eastern side, which is so bold to approach, that a ship may rub her jib-boom against the cliffs, and yet be in 10 fathoms water.

Point Prim runs off shoal about 30 fathoms, and off the southern entrance is the *Man-of-War Rock*; it lies about a cable's length from the land, and has no channel within it. The entrance to the Gut is very narrow, but keep mid-channel, and after you get within it the harbour widens; and ships can anchor on the east or west side of the basin, or run up to Goat's Island; if the latter, they should observe that when they get within $\frac{1}{2}$ a mile of the island, they must stretch $\frac{3}{4}$ of the way towards the port shore, until they are past the island, which is shoal all round, and from thence they can steer up mid-channel towards the shore, in 4 and 5 fathoms.

There is a lighthouse on Point Prim, at the entrance of the Gut of Annapolis, on the right hand side on entering the harbour, 76 feet above the sea; it is of a square shape, built of wood, painted red-and-white vertically, and is a fixed light with argand burners. Caution is requisite in approaching the Gut, as Gulliver's Hole, $2\frac{1}{2}$ leagues to the westward, has a similar appearance, and a mistake would be dangerous; but the lighthouse on Prim Point, if attended to, will be sufficient to distinguish them.

In addition to the above, Mr. Lockwood observes, that "The abrupt precipices of the high lands which form the Gut, cause those gusts of wind which rush down so suddenly and so violently from the mountains. The tide also hurries your vessel through with great force. At the entrance there is no anchorage, except close in shore, near the outer western point; in some places the depth is from 40 to 80 fathoms, and the scenery, in entering the basin, is exceedingly beautiful; the farms are increasing, becoming more valuable and extensive; and the herring-fishery has risen to such consequence, that the merchants of Halifax and St. John's give to them a decided preference for foreign markets. There is also a regular packet established from hence across the Bay of Fundy to St. John's, in New Brunswick, which is well regulated, and generally makes the passage in a few hours."

ANNAPOLIS TO THE BASIN OF MINES.—From the Gut of Annapolis up the bay to Cape Split, the coast continues straight, and nearly in the same direction, with a

few rocky cliffs near the Gut, or narrows, and many banks of red earth under high lands, which appear very even.

On Black Rock Point, on the southern shore of the Mines Channel, a lighthouse has been erected, exhibiting a fixed light. The lighthouse, which is a square building, and painted white, stands on Black Rock Point, in about latitude $45^{\circ} 11'$ north, and $\frac{1}{2}$ of a mile to the westward of Kennedy's Breakwater, and $2\frac{1}{2}$ miles to the eastward of Grian's Breakwater. Small vessels resort to both those places, and the light will therefore be a useful guide to vessels bound to them, as well as to Spicer Island anchorage, or into the Basin of Mines. The light is elevated 45 feet above the level of high water. Spring-tides rise here about 50 feet.

In the channel, or narrows, leading into the Basin of Mines, from Cape Split to Cape Blownedown, and from Cape D'Or, on the north side, to Partridge Island, the land rises almost perpendicularly from the shore to a very great height. Between Cape Blownedown and Partridge Island there is a great depth of water; and the stream of the current, even at the time of neap-tides, does not run less than 5 or 6 fathoms. Having passed Cape Blownedown, a wide space opens to the southward, leading to the settlements of Cornwallis, Horton, Falmouth, and Windsor, &c.; these are now rising into great mercantile consequence, and abound in mines of coal, plaster, limestone, and other valuable minerals. While to the eastward the river extends to Cobequid Bay, having on its banks the towns of Londonderry, Truro, and Onslow, this latter forming a direct communication with the Bay of Tatamagouche in the Gulf of St. Lawrence.

Off Cape Split there are considerable whirlpools, which, with spring-tides, are *very dangerous*, and frequently run 9 knots an hour. Should a vessel be at anchor between Cape Sharp and Partridge Island, and be desirous of proceeding to Windsor River, it will be necessary to get under-way 2 hours before low water, in order to get into the stream of the Windsor tide on the southern shore; otherwise, without a commanding breeze, a vessel would run the hazard of being carried up with the Cobequid tide, which is the main stream, and runs very strong, both with flood and ebb; while the Windsor tide turns off round Cape Blownedown to the southward, and is then divided again, one part continuing its course up to Windsor, and the other forming the Cornwallis tide, running up the river of that name.

TIDES.—It is high water at Cape Chignecto and Cape D'Or, on the full and change days of the moon, at 11h.; spring-tides rise from 30 to 40 feet. Off Cape Split, at 10 $\frac{1}{2}$ h.; springs rise 40 feet; and on the south side of the Basin of Mines, at 11 $\frac{1}{2}$ h.; spring-tides rise about 38 feet.

In sailing up Windsor River, the house on Horton Bluff should be kept in a south bearing, and the gap in the Parsborough River north: this will carry you through the channel between the flats, which cannot be passed at low water by a vessel drawing 15 feet much before half tide. Off Horton Bluff the ground is loose and slaty, and a ship will be likely to drag her anchors with a strong breeze, particularly at full and change; therefore it might, perhaps, be better for men-of-war to moor across the stream, and full $\frac{1}{2}$ from the Bluff.

The banks and flats appear to be composed of a soft and crumbling sand-stone, which is washed down from the adjacent country during the spring, in great quantities; and by continual accumulation, increases their height and extent, and, consequently, lessens the depth of water over them.

HAUTE ISLAND.—This island is situated at the entrance of the Mine's Channel, and is not $1\frac{1}{2}$ mile in length, and about $\frac{1}{2}$ a mile broad; it bears from Cape Chignecto S.W., distant 4 miles; the channel on either side is good: that between it and the cape has 14, 20, and 22 fathoms water in it, and that between Haute and Joluffe Head from 20 to 40 fathoms: it forms a prominent and very remarkable object, from the height and steepness of its rocky cliffs, which, in a most singular manner, seem to overhang its western side; there is, however, a fair landing at its eastern end, and anchorage $\frac{1}{2}$ a mile off in 18 fathoms, with the low point bearing about N.E. by N.; here is also a stream of fresh water running into the sea.

Cape D'Or and Cape Chignecto are high lands, with very steep cliffs of rocks and red earth, and deep water close under them. You have nearly the same kind of shore to the head of Chignecto Bay, where very *extensive flats of mud and quicksand* are left

dry at low water. The tides come in a bore, rushing in with great rapidity, and are known to rise, at the equinoxes, 60 feet perpendicular.

APPLE RIVER LIGHT.—This lighthouse exhibits two fixed horizontal lights; it stands on Hetty Point, on the north side of the Apple River, in Cumberland Bay, and about 3 leagues to the eastward of Cape Chignecto, in about latitude $45^{\circ} 28'$ north. It is a square white building, showing, to vessels approaching it from the westward, two fixed lights, placed horizontally. These lights are 40 feet above the level of the sea at high water. The tides rise and fall, at springs, 53 feet.

CHIGNECTO BAY runs up E.N.E., and may be considered to be the north-eastern branch of the Bay of Fundy; it is divided from the Mines Channel by the peninsula, of which Cape Chignecto is the western extremity. Having advanced about 12 or 13 miles within it, you will see a point on the port or northern shore, running out to seaward; this is called Cape Enragé, or Enraged Cape.

The lighthouse on Cape Enragé is a square building, painted white, and shows a brilliant fixed light, 120 feet above the sea; and is nearly opposite to Apple River lights on the south shore.

At about 11 miles beyond Cape Enragé it divides into two branches, the one leading to Cumberland Basin, and by the river Missequash to Verte Bay, in the Gulf of St. Lawrence, and now becoming a place of very considerable commerce; the other running northerly, and taking the name of the Petcutiac River. These parts, like the Basin of Mines, are fast rising into consequence, and becoming the seat of numerous settlements.

The Cumberland Branch is navigable to within 13 miles of Verte Bay; and it is remarkable that when the rise of the tide in Cumberland Basin is 60 feet, that in Verte Bay will only rise 8 feet. The river of Missequash, which runs across the isthmus, is the present boundary between the provinces of Nova Scotia and New Brunswick.

CHIGNECTO BAY TO THE MANAN ISLANDS, AND PASSAMAQUODDY BAY.

THE NORTH COAST OF THE BAY OF FUNDY, from Cape Enragé towards Quaco, in the township of St. Martin's, is, at present, but thinly inhabited, and it continues to be so as far as St. John's. The land is good, but much broken with steep valleys; the weather is generally humid, the winds boisterous and changeable, and the intervals of sunshine limited and evanescent; but from Quaco to St. John's, the interior hills rise in easy inequalities; the ravines of the cliffs are deep and gloomy, and the indentations frequently have beaches. At Black River, which is about 12 miles west of Quaco, is a safe inlet for a small vessel, although it is dry from half tide.

A lighthouse is erected on a small rock lying off Quaco Head; it is painted red-and-white, in horizontal stripes; the light is revolving, and elevated about 40 feet above high water mark; the light shows twice full and twice dark in a minute, and can be seen from any quarter where a vessel can approach.

QUACO LEDGE.—This is a *dangerous gravelly shoal*, situated about 12 miles S.E. $\frac{1}{2}$ E. from Quaco, and W. by N., distant 11 miles from Haute Island; it extends N.W. by N. and S.E. by S., about $3\frac{1}{2}$ miles, and is a mile broad; vessels have frequently grounded upon this bank; there are several irregular *patches of rocks* lying off its N.E. side; the *ledge* shows itself at half tide, and dries for about 100 yards, having but 12 feet water over it with common tides; $\frac{1}{2}$ a mile to the N.E. the eddies, with the flood-tides, are strong and numerous, the ship's head going nearly round the compass in the space of $\frac{1}{2}$ an hour; the ebb is a true tide, and sets in a W.S.W. direction towards the ledge. The soundings are from 7 to 14 fathoms, at about 2 cables' length all the way round, but they shoal more gradually from the N.E.

The night tides here, and generally throughout the bay, are highest. At St. John's they are so during the summer, but the contrary during the winter months, or between the equinoxes. The mark to go clear to the southward of the Quaco Ledge, is Cape D'Or on with the south side of the Island Haute.

ST. JOHN'S HARBOUR.—The entrance to this harbour bears from the Gut of Annapolis about N. $\frac{1}{2}$ W., distant 11 leagues; it is distinguished by a lighthouse which stands on Partridge Island. This lighthouse has been rebuilt, and exhibits a fixed white light, 110 feet from high water mark to lowest reflectors; the lighthouse is painted red-and-white, in vertical stripes, and is furnished with a bell, to be invariably tolled in thick weather.

Vessels coming from seaward, and making for this harbour, should, so soon as ever they can well discern the lighthouse, make their signal for a pilot; but if unable to succeed in reaching the harbour that tide, then endeavour to run in between Meogenes Island and the main, going either on the south or on the north side of this island; in doing which, you will no where have less than 4, 6, and 6 fathoms water, with a bottom of sand and mud. Here you will obtain the best anchorage, by bringing the three hills in the country to the N.E., in a line over Rocky Point Island, and the house on Meogenes Island S.E. by S.

THE BEACON LIGHT.—Within Partridge Island; and upon a *spit or bar*, which extends about $\frac{1}{2}$ a mile S.S.E. off Sand Point, and which dries at $\frac{3}{4}$ ebb, stands the beacon tower; upon this tower a light is established, which is eminently useful to the coasting-trade of St. John's; and to all other vessels having pilots on board, as it enables them to enter the harbour all hours of the night. The house is painted white-and-black, in vertical stripes, and exhibits a fixed white light, 35 feet from high water mark to reflectors.

THE CITY OF ST. JOHN stands on an irregular descent, having a southern aspect, and, on entering the river, has an imposing appearance. Partridge Island is about 2 miles to the southward of the city, answering the double purpose of protecting the harbour, and, by its lighthouse, guiding and directing the mariner to its entrance; the lantern is 120 feet above the sea, and the light is good. The ground, for several miles to the southward of Partridge Island, is muddy, and the depths gradual, from 7 to 20 fathoms, affording excellent anchorage; the passage westward of this island has in it 10 feet; that to the eastward has 16 feet, and abreast of the city are from 7 to 22 fathoms. At $\frac{1}{2}$ of a mile to the northward of the lighthouse is the beacon light, fixed on the edge of a *rocky ledge*, forming the west side of the channel, and having deep water close to it.

A breakwater is erected farther on, at the eastern side of the channel, and below the town; this greatly intercepts the violence of the waves, which southerly gales usually occasion. Every possible assistance is here given to ships wanting repair; they lie upon blocks, and undergo a thorough examination, without incurring the expense, injury, and loss of time occasioned by heaving them down.

The population and commerce of St. John's are rapidly increasing; and within the harbour is a valuable fishery, where large quantities of salmon, herrings, and chad are cured for exportation; and ship-building has long been carried on here to a great extent. Ships of 1,000 tons have been built here. In 1824, upwards of 80 new vessels were registered at St. John's, amounting to about 20,000 tons; and it is, in fact, a thriving place, and annually improving. There are also several vessels in the South Sea whale fishery belonging to the port.

Vessels having made the harbour, and finding themselves able to enter, may, when they have passed Meogenes island, edge in shore towards Rocky Point, until they perceive Meogenes Point is in a line with, or over the N.W. corner of Meogenes Island; then, sailing in between Rocky Point and Partridge Island, with these marks on, will lead them in the deepest water, over the bar, until they open Point Maspeck to the northward of the low point of Partridge Island; when, putting the helm starboard, they should edge over towards Thompson's Point, until they get the red store at the south end of St. John's in a line over the beacon; keep them in one, until they have passed the beacon at the distance of a ship's breadth: then haul up N.N.W. for the harbour, keeping the blockhouse, at the upper part of the harbour, open to the westward of the king's store, situated by the water side; which mark will lead them, mid-channel, up to the wharfs, where they may lie aground, dry at half-tide, and clean the ship's bottom; or ride afloat in the stream at single anchor, with a hawser fastened to the posts of the wharfs on shore. The flood-tide is weak here, but the ebb runs down rapidly past Meogenes Island into the Bay of Fundy.

Should the tide of ebb have taken place at the beacon, then it would be highly improper to attempt gaining the harbour that tide, but wait for the next half-flood to go over the bar, as both sides of the entrance to the harbour are composed of sharp rocks, which dry at low water; and the tide of ebb, especially in the spring of the year, when the ice and snow is dissolving, is so exceedingly rapid and strong, that all the anchors you possess will not be sufficient to prevent the ship from driving.

"The River St. John," says Mr. Des Barres, "has sufficient depth of water for large ships to the falls; whence it continues navigable 80 miles up the country, for vessels of 100 tons. At Fort Frederick the rise of the tide is 18 feet, and at equinoctial spring-tides 25 feet; above the falls it seldom rises more than 4 feet. When the tide has risen 12 feet at the fort, the falls become smooth, after which, during the space of 20 minutes, they are passable. At times great freshes, which generally happen between the beginning of April and the end of May, from the melting of the snow, the falls are absolutely impassable for vessels going up the river, for then the tide does not rise to their level."

The falls are situated nearly 2 miles beyond the City of St. John; it is a narrow channel, 80 yards wide, and 400 long; this channel is straight, and has a *ridge of rocks* stretching in such a manner across it, as to hold and retain the river water from running out into the sea. After passing the falls, you enter a gullet, which is $\frac{1}{4}$ of a mile wide, and 2 miles long; winding in different courses, and having 16 fathoms in the channel. Next to this gullet is a fine extensive basin, $1\frac{1}{2}$ mile wide, and 8 miles long, which enters the main river. The river branches some hundreds of miles up, in a serpentine *zig-zag* manner, and runs through a country which abounds with timber, coal, limestone, and many other minerals; and the surrounding lands are now becoming highly cultivated. There is water sufficient to navigate vessels of 50 tons as high as Frederickton, and in all the branches of the lakes adjacent, except in dry seasons.

A regular steam-packet communication is kept up between St. John's and Frederickton; the passengers embark and disembark at Indian Town, a little village about a mile above the falls. A steam-boat also runs once a week to Boston in the United States.*

In the middle of May, or earlier in favourable seasons, the snow and ice in the country dissolving, occasion a general overflow in the river, which, in some years, rises so high as to inundate all the low lands.

SIGNALS MADE AT PARTRIDGE ISLAND.—On the approach of vessels to the harbour, when the weather is foggy, a gun will be fired from the island, in answer to each heard at sea. The tower of the fog-bell is similar to the lighthouse.

A flagstaff and yard are erected near the N.E. side of the lighthouse.

For 1 square-rigged vessel	a ball close up.
" 2 ditto ditto	a ball half hoisted.
" 3 ditto ditto	two balls close.
" 4 ditto ditto	two balls separated.
" 5 ditto ditto	a pendant of any colour.
" 6 ditto ditto	a pendant under a ball.
" 7 ditto ditto	a pendant over a ball, half hoisted.
" 8 ditto ditto	a pendant under two balls.
" 9 ditto ditto	a pendant under two balls separated.
" 10 ditto ditto	a flag of any colour.

The above signals are made at the east or west yard-arm, according to the direction in which the vessels are at first observed; as soon as their rig can be distinguished, descriptive colours will be hoisted at the mast-head, as follows:—

- For a small armed vessel union jack, with a white pendant over.
- For a merchant-ship a blue pendant.
- For a brig a red pendant.
- For a foreign vessel a white-and-blue pendant.
- For a top-sail schooner, or sloop, a white pendant (without a ball).

* A marine hospital has been established at St. John's, and is supported by a small tonnage duty on every vessel which enters the port. There is also a similar establishment at the Port of St. Andrews.

For the east port, or St. Andrew's } steamer	} a red flag, pierced white.
For a vessel on shore, in distress, } should immediate aid be necessary, } guns to be fired	

To enter St. John's Harbour on the east side of Partridge Island, you should bring the stone-barracks in one with the Wesleyan Chapel; this mark will lead you clear of the foul ground off Partridge Island N.W. point, and as soon as you get Carlton Church on with the end of the cliff, starboard your helm, and keep this mark on for about $\frac{1}{4}$ of a mile, or until you bring the stone church (which stands at the north part of the city of St. John's,) in one with the outer end of the breakwater, then immediately change your course, and run in by this latter mark past the Spit beacon lighthouse, leaving it on your port hand; passing this, run up the middle of the harbour, and anchor off the wharfs.

TIDES.—The tides of the River St. John, at full and change, flow until 11h. 44m.; equinoctial spring-tides rise 23 to 25 feet, neaps 21 to 23 feet. After the first quarter-flood, the tide below the surface runs into the harbour. During the summer and the depth of winter the tide generally flows in at half-flood.

In autumn the river is swollen by rains, and between the middle of April and the beginning of May, by the melting of the ice and the great quantity of snow that accumulates on the banks of this vast navigable river. From these causes, the water streams out to seaward continually; therefore vessels at that time seldom enter the harbour without a fresh leading wind. The falls are then impassable, as the tides do not rise to their level.

The body of the river is $17\frac{1}{2}$ feet above low water mark; consequently, after the tide has risen to that height, the water descends, or literally falls up into the river. When the tide has flowed 12 feet, the falls are smooth and passable for 20 minutes. Above the falls the water rises 4 feet, and at Majorfield, which is 60 miles in the interior, it rises only $1\frac{1}{2}$ foot.

Captain Napier, of H.M. ship *Jason*, says, "The great volume of fresh water which constantly flows down the harbour of St. John, in April and May, causes a continual ebb-tide during that period, sometimes to the depth of nearly 5 fathoms, under which the flood and ebb-tides flow regularly; the maximum of its velocity was found to be $4\frac{1}{2}$ knots, and the minimum at 2 knots; but as the log floated very deep in the fresh water, and ultimately sank into the salt water underneath, it will not be too much to estimate the maximum at 5 knots, and the minimum $2\frac{1}{2}$ knots. The fact of the under-tide beginning at the depth of 5 fathoms, was ascertained by the sinking a lead down to that depth, when it was carried the same way as the current on the surface; but when lowered below that, it was drifted in a contrary direction."

To the W.S.-westward of Meogenes Island is Flat Bay, called also Visarinkum; it is a small harbour, with 5 and 4 fathoms water, used sometimes by the coasters. From hence the land runs nearly W.S.W., passing Negro Head, to Cape Musquash; off the point of which is *Split Rock*, lying close to the cape, with 8 fathoms water very near it, being distant from Partridge Island $8\frac{1}{2}$ miles; the shore is iron-bound all the way, and has deep water close in to the land.

MUSQUASH HARBOUR lies about a mile to the westward of the Split Rock; its entrance is about $\frac{1}{2}$ a mile wide; and there is good anchorage a little way in, with 4 fathoms water; but farther on a *bar* runs across the harbour, over which is only $1\frac{1}{2}$ fathom. Small vessels sometimes pass to the westward of the islands, and run up the river, which, when past the bar, has 2, $2\frac{1}{2}$, and 3 fathoms water; but this harbour is open to the southward.

H.M. sloop *Argus*, Captain Arabin, sailed from Musquash Harbour at high water, and made the following courses and distances:—first, S. by W. $\frac{1}{2}$ W., 30 miles; then S.W. $\frac{1}{2}$ W., 30 miles; afterwards S. by W., 30 miles, and S.S.E., 30 miles; this latter course and distance took her in sight of the Seal Islands, and clear of the bay.

From the entrance to Musquash the coast runs W.S.W., westerly, nearly 10 miles, to Point Lepreau; in this space are 4 or 5 inlets, but only calculated for small craft; the first of these is about $1\frac{1}{2}$ mile to the westward of Musquash western point, and is of no

note whatever; in your way to it, a berth must be given to the shore, particularly about Musquash Point, on account of some *rocks* lying off that part; there are channels between these rocks, but few vessels will venture through them.

About a mile farther is Chance Harbour, which is a mere shallow cove, of 2 fathoms water. Little Dipper is more westerly still, and situated $3\frac{1}{2}$ miles from Musquash Point; this also has only 18 feet water in it, and scarcely fit for any thing but boats. Great Dipper is divided from Little Dipper by a flat point of land, round which are several *scattered rocks*; this harbour can accommodate small craft, which sometimes run in there for shelter; but it is by no means to be recommended, unless in cases of necessity; there is a creek of fresh water runs into it, called Moose Creek. Farther westward, and about 2 miles from Point Lepreau, is Carriage Harbour; this is open to the eastward, and affords anchorage at its entrance, in from 7 to 3 fathoms; the land all the way from Musquash to Point Lepreau, is high, broken, and a many *scattered rocks* lie off it, therefore vessels, in passing, should carefully give it a good berth.

POINT LEPREAU LIGHTS.—A lighthouse has been erected upon this projecting headland, on which two fixed lights are exhibited, one above the other, distant 18 feet. The lower lantern is fixed to the outside of the building, and throws its light quite inshore, both to the eastward and westward, into Macces Bay. The lighthouse is painted red-and-white, in horizontal stripes 5 feet broad, and bears from the easternmost Wolves E. by N., 11 miles.

MACES, or MASON'S BAY, is formed to the westward of Point Lepreau, between it and Red Head; these bear from each other N.W. and S.E., distant full 5 miles; there are numerous *rocks, shoals,* and *small islets* within it, but its navigation seems insecure, for Mr. Lockwood emphatically observes, "This point ought to be classed as one of the dangers of the Bay of Fundy, for many serious accidents have lately happened in the neighbourhood of this promontory." Mason's Bay he calls "a deep and ugly indent, so much so, that ships bound to the river St. John, dreading to pass its entrance, get frequently embayed there, and some valuable vessels have thus been lost. Yet, at the head of this bay," he observes, "is a place called Pok Logan, where there is good shelter. Several rivers appear to fall into this bay; and, perhaps, a better knowledge would tend much to strip it of its fancied dangers."

In the River Lepreau is good anchorage within the entrance, in 3 to 4 fathoms. Here are saw-mills; and vessels sometimes load their cargoes of deals here; and shelter may be found from a S.E. gale. In running for it from Point Lepreau, leave all the cluster of *islets*, called the *Brothers*, on your starboard hand; but Macces River is not so good to get out of as Beaver Harbour when the wind shifts to the westward.

W. by S. from Point Lepreau, distant $3\frac{1}{2}$ or 4 miles, there is supposed to be a *dangerous shoal*, but its actual situation is not known; if such should exist, it must be surrounded with very deep water, for a small distance from this imagined situation, are 26, 28, and 31 fathoms, mud, mud and sand, and gravel.

BEAVER HARBOUR lies 7 miles to the westward of Red Head; this is an excellent place to run for when caught by an easterly wind in the bay, and unable to fetch St. John's Harbour. It is above a mile wide at the entrance, with 10 fathoms water on each side, and 20 fathoms mid-channel. In entering, keep the western shore aboard, until you bring the Goal Rock to bear east, distant about $\frac{1}{2}$ a mile, where you may anchor in 4 or 5 fathoms, good holding-ground. There are no regular pilots, but the fishermen on the coast are well qualified for the task; although, in clear weather, they are not absolutely necessary. Bring the easternmost Wolf Island to bear south, and steer north for the entrance; keep on the west side, and anchor just before you come to the houses, which you will see as soon as you get well in. Wood, provisions, and water, to a limited extent, may be procured here. High water, full and change, at 10h. 45m.; common tides rise 17 feet, springs 26 feet.

ETANG HARBOUR lies to the westward of Beaver Harbour, and runs in to the north-eastward from Campobello; before it lie several islands. There are three entrances to this harbour, so that vessels may go in or out at any time; the western entrance leads to La Tête Harbour, where anchorage may be obtained, in 10 to 5 fathoms; but there is no passage for ships round the northern end of Payne's Island. The channels between Payne's and Bliss Islands are considered the best, as they will admit vessels working through them; but the eastern passage requires a leading wind. A pilot will

be necessary, on account of the intricacies of the channel, but one can easily be obtained any where on the coast. The bay is extensive, secure, and well sheltered. The tides the same as at Beaver Harbour.

WOLF ISLANDS.—The Wolves may be passed on either side, having deep water close to them; but they afford no sheltered anchorage, except for small vessels in summer time; they are from 60 to 100 feet high. With light winds, a lee-tide, or thick weather, you may let go an anchor any where between the Wolves and Beaver Harbour, in good holding ground, with a depth of 20 to 25 fathoms.

The MANAN ISLANDS.—Grand Manan is an island situated at the north-western entrance of the Bay of Fundy; it is in the province of New Brunswick, and forms a part of Charlotte County, being $11\frac{1}{2}$ miles in length, and 6 in breadth, grossly estimated 37,000 acres. Its northern point is in latitude $44^{\circ} 47'$. The north-western part of the island is distant from Passamaquoddy Head about 6 miles; its north-eastern point, or Bishop's Head, bears from Cape Malpeck W.S.W. $\frac{1}{2}$ S., nearly $14\frac{1}{2}$ leagues, and W.N.W. $\frac{1}{2}$ W. from the entrance to the Gut of Annapolis, about 14 leagues; and from Petit Passage N.W. by N., 32 miles. Its S.W. end, or head, bears from the lighthouse on Brier's Island N.W. by N., nearly, from which it is distant 30 miles; and N.W. by W. from the northern entrance to Petit Passage, distant 31 miles. Thus situated, it commands an uninterrupted view of every vessel that passes to or from the Bay of Fundy; it is naturally strong, and possesses harbours where the largest ships may ride in perfect security: its fisheries are in great estimation, its soil is generally good, and its trees are the firs, birch, beech, and maple, which, in size and quality, are equal to all the purposes for which those woods are commonly used.

On its western side the cliffs are nearly perpendicular, rising 600 feet above the level of the sea; but on this side there is only one little inlet along the whole range that can even shelter boats; it is commonly called Dark Cove, being situated about 4 miles from the northern part of the island: there is, indeed, a place, called Bradford's Cove, about 5 or 6 miles more to the southward, but this is of no note whatever. There are soundings all along the shore, from Bishop's Head to the S.W. Head, 3, 4, 5, and 6 fathoms close to the land, deepening to 13, 20, 21, and 22, $\frac{1}{2}$ a mile off, to 30, 40, and 50 fathoms at a mile distance, and still deeper as you increase your distance from the island.

The Northern, or Bishop's Head, is abrupt and bold; but on its eastern side there is anchorage in a place called Whale Cove; this is situated between Swallow's Tail and the North Point; here vessels frequently ride during southerly winds, to wait the turn of tide; the soundings are from 15 to 25 fathoms; but it must not be resorted to in northerly gales.

Long Island Bay.—This lies to the south-eastward of Whale Cove, and is formed by the Swallow's Tail, which is a bold, high, ragged, and barren-looking point; and Long Island, which bears nearly south from it, distant $1\frac{1}{2}$ mile. This bay is easy of access, and possesses all the advantages of a harbour; the bottom of the bay is generally mud, excepting a *ridge of rocks and gravel*, which extends from the *ledge* that shows itself within the Swallow's Tail, and the *cluster of sunken rocks* that lie $\frac{1}{2}$ a mile N.N.E. from Long Island Point, and these are 5 feet under water at low spring-tides.

In the northern part of the bay the bottom is a stiff clay, and vessels ill provided with gear have often rode out the severest gales there; and under Long Island, opposite the beach, is good anchorage, even locking in the northern end of Long Island with Swallow's Tail; the ground here is a strong mud, and you will ride safe and unaffected by sea or wind from any quarter.

Farther to the southward, and on the eastern coast of Great Manan, are the Duck Islands; here a pilot will be necessary; for though the ground is good about Great Duck Island, yet there are dangers which, when the tide becomes high, are completely hidden. To the south-westward of Duck Islands are the islands of Ross, the northern point of which is scarcely separated from Manan, Cheney's Island, and White Head Island; these are connected together by a *sandy and rocky reef of foul ground*, which extends S. $\frac{1}{2}$ W. to the Diamond Rocks, of which we will speak hereafter.

On White Head Island resides an able and active pilot, and the cove opposite to his house is commonly a great resort for vessels employed in the fisheries; but with easterly winds this is no desirable place. At the western side of Ross Island is part of what is

called Grand Harbour; it is a shallow, muddy basin; but vessels may enter and lie securely in it, on the mud—a convenience somewhat desirable, should you have lost your anchors and cables on any of the outer ledges. The entrance to this place has 4, 5, 6, and 7 fathoms water, with a clayey bottom; the channel is narrow, but secure from the sea.

A little to the westward of White Head Island are the Green Islands; and to the southward of the Green Islands, about a mile, are the Three (Kent's) Islands: these latter are low and ledgy; the eastern, or largest one, is bold to the rocks, which are at all times to be seen; and to the north-westward of these rocks is a *ledge*, called the *Constable*, which dries at low water. Under the lee of these and the Green Islands, occasional anchorage may be obtained in from 14 to 7 fathoms.

WOOD ISLAND lies off the southern part of Grand Manan, and is $1\frac{1}{2}$ mile long; it runs parallel to the south-west head of Manan, and forms an excellent harbour between. The upper part of this inlet and the head of it afford most secure anchorage; and the inhabitants about Seal Cove and Red Head will furnish you with all necessary supplies you may stand in need of, for these place are all well settled.

THE MANAN LEDGES are those more distant *islets*, *rocks*, and *dangers* which lie to the southward of Grand Manan; the outer and *most dangerous* of these is the *Old Proprietor*, covering a space of $\frac{1}{2}$ an acre at low water, and drying at half-ebb; but when covered, the tide sets directly over it, at the rate of 4 miles an hour. It lies S. $\frac{1}{2}$ E., distant $9\frac{1}{2}$ miles from Great Duck Island; S. by E., nearly 7 miles from the north-eastern part of White Head Island; E. $\frac{1}{2}$ S., $6\frac{1}{2}$ miles from the Gannet Rock; S.E. by E., 4 leagues from the S.W. head of Manan; N.N.W. $\frac{1}{2}$ N., 18 $\frac{1}{2}$ miles from Brier Island lighthouse; N.N.W. $\frac{1}{2}$ W., 18 miles from the northern entrance to the Grand Passage; N.W. $\frac{3}{4}$ W., 18 $\frac{1}{2}$ miles from the Petit Passage; west, 35 miles from the Gut of Annapolis; and S.W., 15 leagues from the lighthouse on Partridge Island.

About $2\frac{1}{2}$ miles N.E. $\frac{1}{2}$ N. from the Old Proprietor is the *Clerk's Ground*, a *rocky shoal*, of $4\frac{1}{2}$ fathoms. N.W. by N., $1\frac{1}{2}$ mile from the Old Proprietor, is *Crawley's Shoal*, of 7 feet only; and west of the Crawley, $1\frac{1}{2}$ mile, is the *Rans*, of 5 feet. The *Roaring Bull* bears N. $\frac{1}{2}$ E. from the Old Proprietor, distant 4 miles; and, although it has 6 fathoms over it, it usually has a heavy dangerous ripple. The mark to go clear to the eastward of all these dangers is, the north-easternmost high land of Manan well open of the Long and Duck Islands; the mark to lead to the southward of them is, the south-west head of Manan open of Kent's Three Islands. In easterly winds the tide-rips are impassable.

There are also other rocks within these: a range of which lie south of the south-west point of White Head Island; some of these have deep water between them, and occasion a continual ripple 3 miles from the shore, quite home to the long point; these are called the *Tinker*, *Three Diamonds*, *Rans*, and many others without names; some of these show themselves, others have only 3 and 4 feet water over them.*

S.S.E. $\frac{1}{2}$ S., about $\frac{3}{4}$ of a mile from the southern point of the Three Islands, is a *knoll*, called the *Kent*, which is *dangerous*, and has only 7 feet water over it; it bears about W.N.W. $\frac{1}{2}$ W. from the Rans, and is not included within the confines of the mark given to avoid the dangers to the southward, viz., the S.W. head open of all the islands. There is also a danger said to lie S.E. $\frac{1}{2}$ S. from the Kent Knoll, distant 2 miles, and W.S.W. $\frac{3}{4}$ S., $1\frac{1}{4}$ mile from the Rans; but this is doubtful.

THE GANNET ROCK is 40 feet above water, and has now a lighthouse upon it, painted black-and-white, in vertical stripes, exhibiting a flashing light; this is a bright light, visible 40 seconds, and dark 20 seconds in each minute. It lies S.W. by S., distant $3\frac{1}{2}$ miles from the southern point of the Three Islands, and S.S.E., $6\frac{1}{2}$ miles from

* H.M. ship *Alert* is said to have discovered an additional *rock*, upon which that vessel struck in 1810, not noticed in any chart. By that ship's account it is said to lie S.S.E. $\frac{1}{2}$ S., distant 6 or 7 miles from the S.W. end of White Head Island; N. by W., distant 17 miles from Brier's Island lighthouse, and distant 14 miles from the west end of the Grand Manan; and named by the fisherman, *Shand's Rock*. We cannot help noticing the discordancy of the above bearings and distances, and are apprehensive there is some error in the account; at any rate, if this danger is not the Old Proprietor, it must be situated somewhere not far distant from it; and forms an additional stimulus for the vigilance of the mariner.

the S.W. head of the Grand Manan, and from the Machias Seal Islands W. by N. $\frac{1}{4}$ N., about 13 miles. It has a number of *small ledges* and *sunken rocks* about it, which are always breaking; this stands conspicuous, and, as Mr. Lockwood observed, several years ago, would be an admirable situation for a lighthouse, being in the immediate vicinity of all the sunken rocks and dangers. Nearly W.S.W. from the Gannet, distant $1\frac{1}{2}$ mile, is *St. Mary's Ledge*, part of which is always above water; and to the northward of St. Mary's Ledge, a mile, is the *Long Ledge*, equally visible; between and around these are *numerous rocky shoals*, with deep water between them, rendering this part *particularly dangerous*. Other reefs are supposed to exist to the westward, and between the Gannet Ledges and the Machias Seal Islands; their imaginary situations are marked on the chart, but no further particulars of them are known.

Between the northernmost and southernmost of the *Murr Ledges* there is range of *dangerous rocks* and *shoals*, many of them always above water, and which extend westward from the lighthouse about 4 miles; from this range, farther westerly, about 8 miles, lies a *dangerous breaker*, called the *Roaring Bull*. This may be avoided by keeping three remarkable headlands, near the S.W. end of Grand Manan, open.

THE THREE MACHIAS SEAL ISLANDS lie W.S.W. from the S.W. head of Manan, distant about 9 or 10 miles; they have channels between them with 10, 12, 20, and 30 fathoms round them. A *sunken rock* is said to lie to the north-eastward, and between them and Manan, but its exact position is not ascertained. Mariners navigating this part should keep a good look-out, for report places many dangers hereabout, some of which probably have existence, and might otherwise be attended with consequences the most fatal.

Machias Seal Island Lights.—These are two fixed white lights, elevated about 45 feet above high water, and bear from each other E.S.E. and W.N.W., distant about 200 feet, by which circumstance (the two lighthouses at the same station) they will be immediately distinguished from all other lights upon the coast. Both the buildings are white. The following are the bearings from them, viz.:—

To the southernmost Murr Ledge (St. Mary's) E.S.E., easterly; Gannet Rock light E. by S. $\frac{1}{4}$ S., 13 miles; southern head of Grand Manan E. by N. $\frac{1}{4}$ N.; northern head of Grand Manan N.E. $\frac{1}{4}$ E.; N.E. Rock, distant 2 miles, N.E. by N.; Little River Head N. by W.; Libee Island lighthouse (American) N.W. by W.

Vessels standing to the northward, between these lights and the Gannet Rock, should tack or haul off the moment they bring these lights in one, as they will then not be more than $\frac{3}{4}$ of a mile from the Murr Ledges, if more than 5 miles to the east of the lights.

At $3\frac{1}{2}$ miles west from the Seal Islands is a *rock*, on which several vessels have struck. It was seen by Captain Johnson, of the ship *Liverpool*, trading to St. John's, in 1834, and is acknowledged to exist by the regular traders and pilots.

PASSAMAQUODDY BAY.—This bay, with the Chapeneticook, or River St. Croix, divides the British American territories from those of the United States, as settled by the respective Commissioners in 1817, by which Moose, Dudley, and Frederick Islands were ceded to the United States, and all the other islands, with Grand Manan, settled to Great Britain; but the citizens of the former are to enjoy the privilege of navigating through the Ship Channel, between Deer Island Campo Bello.

The entrances to Passamaquoddy Bay comprehend a space of nearly 12 miles. There are three principal channels or passages into it, namely, the Western Passage, Head Harbour Passage, or Ship Channel, and La Tête, or Eastern Passage. The first of these, or the Western Passage, is formed by the land round Quoddy Head and the opposite island of Campo Bello; Head Harbour Passage, or Ship Channel, lies between Campo Bello and Deer Island; and La Tête, or the Eastern Passage, runs in to the eastward and northward of both Deer and Campo Bello Islands: this is the passage most commonly adopted by British ships.

Off the N.E. end of Campo Bello is a remarkable large *rock*, called the *White Horse Rock*; and here also lies Head Harbour, a secure and safe place, small, but of easy access, and with 6, 7, and 8 fathoms water, muddy bottom. A fixed light is now exhibited at the N.E. end of Campo Bello, which enables vessels to enter Head Harbour at all times. It is a fixed white light, 60 feet above the sea. The building is painted

white, with a red cross. It is also a guide to vessels entering the main channel, to West Isles, Moose Island, and the inner bay to Passamaquoddy.

Harbour Delute lies on the western side of Campo Bello, and at its S.W. end is Snug Cove, a good harbour, with an English custom-house. Moose Island is on the opposite side of the channel, and belongs to the United States; but British vessels are not allowed to ride there above 6 hours at any one time.

If bound into the Western Passage, you will make for the lighthouse situated upon Quoddy Head. This stands on a low point, being the north-eastern extremity of the district of Maine: it exhibits a fixed light, which, in clear weather, is visible 7 leagues off, the lantern being 90 feet above the sea; attached to it is an alarm-bell, used in foggy weather, when it strikes 10 times in a minute, and may be heard in calm weather 5 miles off. About $\frac{1}{2}$ a mile from the head are two remarkable *rocks*, named the *Seals*, which, seen at a distance, very much resemble a ship. To the eastward of these is a whirlpool; therefore, in making for the entrance, you must be careful to give them a berth of $\frac{1}{2}$ of a mile before you haul in; and after passing them, steer to the westward, keeping nearer to the south shore for $2\frac{1}{2}$ or 3 miles, where you may come to anchor in 4 or 5 fathoms, well sheltered, either by day or night; but do not proceed higher, as a *bar* stretches across, which dries at low water. Here a pilot may be obtained, on firing a gun, and making the usual signal, who will take the ship to Snug Cove, or Moose Island, whence another pilot may be obtained for St. Andrew's, or the River St. Croix.

Large ships bound into the bay should pass to the eastward of Campo Bello, steering nearly N.E. by E. towards the Wolves, which lie about 6 miles to the eastward of Campo Bello; and so soon as the passage between Campo Bello and the White Horse bears W.N.W., steer for it, leaving the White Horse on your starboard side, and keeping Campo Bello nearest on board. You will now see harbour Delute, before mentioned, and will leave several islands on your starboard side when you have passed the White Horse. In sailing down you will open a large bay to the W.S.W., capable of containing 100 sail of the line. The channel here, formed on the south by Campo Bello, and to the northward by the Spruce and White Islands, is 3 miles wide, and in it are 75 fathoms water. The tide of flood strikes across from the S.E. land to the White Islands with great strength, and in light winds must be particularly guarded against. The water is deep, and inside of White Islands you may anchor in 45 fathoms, mud. The ledge, which bears N.W., distant a mile from the White Horse, is 12 feet below the surface at low water.

Between the Wolves and the island of Campo Bello there is a depth of from 60 to 100 fathoms. With the latter bearing S.S.E. or S.E. there is a depth of 19 and 20 fathoms, where ships may anchor safe from all winds. The course thence to Moose Island is W.S.W., $1\frac{1}{2}$ league.

If bound from Moose Island up the river St. Croix, as you pass Bald Head give it a berth of $\frac{1}{2}$ a mile, for a *ledge of rocks* lies off it. Having passed this point, the course and distance to Oak Point, or Devil's Head, will be N. by W., 4 leagues. The latter may be seen from the distance of 10 or 12 miles.

ST. ANDREW'S.—The town and harbour of St. Andrew's lie on the eastern side of the entrance of the Scodick, or St. Croix. The town is pleasant, and the harbour good. Many ships load timber here, which is generally much longer than that of Nova Scotia. The merchants of this town load timber also at other places, viz.—at Oak Bay, in the St. Croix, and at Rushabec, Didiquash, and Magagadawee, on the N.E. side of Passamaquoddy Bay, all these being excellent and very convenient harbours.

The harbour of St. Andrew's has two entrances; the eastern one is narrow and intricate, with the deepest water. The dangers in entering this passage are a *reef of rocks*, with a beacon upon it, running out nearly $\frac{3}{4}$ of a mile from Navy Island, and a *reef of sand and large stones*, with a beacon upon it, extending nearly $1\frac{1}{2}$ mile from the Blockhouse on the main-land. The narrowest part of the channel is not a cable's length broad. The mark for entering at high water, is to keep the town of St. Andrew's open, and steer directly in.

The western entrance is not so difficult, but with less depth of water, the bar becoming dry at the last quarter-ebb. There is a *dangerous reef of stones* running off the west end of Navy Island, on which a beacon is placed. In entering, you must keep close to the northward of the two poles on the bar, where at high water you will find

18 to 24 feet. It is high water, full and change, at 10h. 50m.; spring-tides rise 24 to 26 feet, neap-tides 20 to 22 feet.

There is a fixed harbour-light at the eastern entrance to St. Andrew's Harbour: it is near the Block-house at the east end of the town, and to be left on the starboard hand on entering the harbour.

GENERAL DIRECTIONS AND REMARKS FOR SAILING TO AND WITHIN THE BAY OF FUNDY.

Ships navigating the Bay of Fundy have to encounter an atmosphere almost constantly enveloped in dense fogs, the tides setting with great rapidity over the rocks and shoals with which it abounds, and a difficulty of obtaining anchorage, on account of the depth; so that, under these circumstances, the most unremitting attention is requisite to prevent the disastrous consequences which must necessarily attend a want of knowledge and caution.

When you are off Cape Sable with a westerly wind, and destined for the Bay of Fundy, it will be advisable to make for the coast of the United States, somewhere about the Skuttock Hills, or Petit Manan lighthouse, as you can pass with greater safety to the westward of Grand Manan than to the eastward, having also, if necessary, shelter in Petit River, Machias, Passamaquoddy, Etang, or Beaver Harbour, &c.

Between Grand Manan and the district of Maine the passage is free from danger; vessels beating through generally stand from side to side, particularly during fogs, the depth being from 12 to 70 fathoms, with a bold shore on each side, and the tide through strong and regular. The Wolves may be passed on either side, having deep water close to them; but they afford no sheltered anchorage, except for small fishing vessels in summer time; they are from 60 to 100 feet high. With light winds, a lee tide, or thick weather, you may let go an anchor any where between the Wolves and Beaver Harbour, in good holding ground, with a depth of 20 or 25 fathoms. Point Lepreau is bold-to, but dangerous in dark weather, as it projects so far out to the seaward; but from thence to St. John's the course is free from danger, except those which lie near the land, and which have been already described.

When steering between Grand Manan and Brier's Islands the utmost caution is requisite during thick weather, as vessels are frequently drawn in among the islands and ledges to the southward of Manan, by the flood setting directly upon them; the most dangerous of them is the *Old Proprietor*, which, at low water, dries for the space of $\frac{1}{2}$ an acre. When the wind therefore veers at all to the southward, make the best of your way to St. John's Harbour, or you may secure an anchorage in Grand Passage, or St. Mary's Bay, as it seldom blows in that direction above 18 hours without bringing on a fog.

There is no difficulty in going through Annapolis Gut, if you have but a commanding breeze, although the tide is very rapid, the flood and ebb running 5 knots an hour, and the eddies strong. About $\frac{1}{4}$ through lies the *Man-of-War Rock*, about a cable's length from the eastern shore; therefore, if you keep mid-channel, you will be sure to clear it.

The prevailing winds here, and throughout the whole coast of Nova Scotia, are from W.S.W. to S.W., nearly as steady as trade winds, except during the summer months, when they become rather more southerly, accompanied with but little intermission of fog, which requires a north-westerly wind to disperse. It is therefore recommended not to leave an anchorage without making proper arrangements for reaching another before dark, or the appearance of a fog coming on, which, with a S.W. wind, is so sudden, that you become enveloped within it unawares; neither should you keep the sea at night if you can possibly avoid it; but you will observe, that whenever the wind blows directly off the land, the fog will soon disperse.

TIDES.—The tides at the entrance, and within the Bay of Fundy, are very rapid, but regular, and although the wind against them alters the direction of the rippings, and sometimes makes them dangerous, yet it has little or no effect upon their courses. The flood-tide sets from Cape Sable to the north-westward, through the Seal, Mud, and Tusket Bald Islands, at the rate of 2 or 3 miles an hour; and in the channels among the

islands it increases to 4 and 5 miles; from thence, taking the direction of the main land, it flows past Cape St. Mary, and then N.N.W. towards Brier's Island; it runs up St. Mary's Bay but slowly, which adds to its strength along the eastern shore; then increasing its rapidity as the bay contracts, it rushes in a bore into the Basin of Mines, and up Chignecto Bay; so that here the water sometimes rises to the extraordinary height of 75 feet.

To the above may be added the additional observations on this bay by Captain Napier, of H.M. ship *Jaseur*.

"Between Brier's Island and the opposite northern coast, and for some distance up the bay to the eastward, the first of the flood sets strongly nearly north, so that it will be extremely dangerous for a vessel to run in the night, or during thick weather, from any part of the southern towards any part of the northern coast, without making a large allowance for the set of the tides, and keeping the lead constantly going. The *Jaseur*, Captain Napier, was nearly run on shore, having been drifted by this tide in a fog $8\frac{1}{2}$ miles in 3 hours and 10 minutes."

TIDES.—It is high water at the Seal Islands, at 8h. 30m., full and change, and spring-tides rise 12 feet; at the Tusket Island, at 9h., springs rise 14 feet; at Cape Fourchu, 8h. 45m., springs rise 13 feet; at Cape St. Mary, 9h., springs rise 14 feet; at Brier's Island, at 9h. 30m., springs rise 16 feet; at Annapolis Gut, at 10h., springs rise 18 feet; at Haute Island, at 10h. 45m., springs rise 28 feet; at Cape Chignecto, at 11h., springs rise 30 feet; at Cape D'Ore, at 11h., springs rise 41 feet; at Greville Bay, at 11h., springs rise 36 feet; at Cape Split, at 10h. 45m., springs rise 40 feet; at Kilkenny River, in the Basin of Mines, at 11h. 30m., springs rise 38 feet; at Apple River, Chignecto Bay, at 11h., springs rise 40 feet; at Cape Enraged, at 11h. 30m., springs rise 38 feet; at Cape Marangouin, at 11h., springs rise 50 feet; at Cumberland Basin, at 12h., springs rise 60 feet; at the River Petodiac, at 11h. 30m., springs rise 48 feet; at St. John's Harbour, at 11h. 30m., springs rise 24 feet; at the eastern side of Manan Island, at 10h., springs rise 25 feet, neaps 20 feet; and in Passamaquoddy Bay, 10h. 45m., springs rise 30 feet, neaps 24 feet.

XII.—COAST OF THE UNITED STATES.

FROM PASSAMAQUODDY BAY TO CAPE ELIZABETH.

Variation one point West on the Northern Coast, but decreasing to $8\frac{1}{2}^\circ$ at Cape Cod.

GENERAL REMARKS.—The most prominent elevations of land situated between the Bay of Passamaquoddy and Cape Elizabeth are, the Skuttock Hills, Mount Desert Hills, and the Hills of Penobscot. The Skuttock Hills are five in number, and at a distance appear round; they lie to the northward of the Port of Goldsborough, and are readily distinguishable from any hills to the eastward. Mount Desert Hills may, in clear weather, be seen from a distance of 15 to 20 leagues. The Penobscot Hills are visible to the N.W. and N.N.W. over the Fox Islands; and when you are within 4 or 5 leagues of Mount Desert Hills, the Skuttock Hills will bear about N.N.E.

SAILING DIRECTIONS.—In sailing towards this coast, care must be taken to avoid the *Mount Desert Rock*, which lies $7\frac{1}{2}$ leagues to the southward of Mount Desert Island, in latitude $43^\circ 54'$, and longitude $68^\circ 3' 30''$; observing also to make a proper allowance for the tide, &c.: for at Mount Desert Rock the stream of flood divides, to run eastward and westward. When the Skuttock Hills bear N.N.E., and you are within 4 or 5 leagues of those of Mount Desert Island, the tide of flood will set E.N.E. and the ebb W.S.W.; but at the distance of 9 or 10 leagues from the land, the current in general sets to the S.W. and more westerly. From Mount Desert Rock to the Fox Islands, the flood stream sets W.S.W. along the shore; but it still runs up to the northward into Blue Hill Sound, Isle Haute, Penobscot Bay, &c.

On Mount Desert Rock is a conspicuous lighthouse, exhibiting a fixed light, tinged red, 56 feet above the sea. If you are bound to the eastward, to Machias or Passamaquoddy, your course from Mount Desert Rock will be N.E., 11 or 12 leagues, up to Moose-a-Peck light, which is a revolving light; then N.E. by E., 3 leagues, will bring you to the Libee fixed light; continuing on about N.E. by E. $\frac{1}{2}$ E., 8 leagues farther, brings you near to West Quoddy Head light, at the western entrance to Passamaquoddy Bay. In clear weather, Great Manan will be seen a long while before you come to the Western Seal Islands, which are low; and when it bears N.E. by E. from you, these islands will range in a line with you and the island.

Proceeding along shore from West Quoddy Head, in a south-westerly direction, about 5 miles, you will open Bayle's Mistake, a place of little note; farther on is Moose Cove, fit only for boats; and beyond that is Little River, a good harbour for small vessels; you will be able to see it before its entrance comes N.W. or N.N.W. As you enter you will observe a bluff point of rocky land to the starboard, and near the entrance of the harbour an island. In passing this island you are to leave it to the port, and when you are $\frac{1}{2}$ a mile beyond it, you may anchor in 4 or 5 fathoms, safe from all winds. Your direct course from West Quoddy Head to this harbour is S.W. by W., 4 leagues; and 2 miles farther is the entrance to Little Machias Bay.

LITTLE MACHIAS BAY has several *rocky islets* lying before it; these are nearly in the centre as you enter, and have 8 and 12 fathoms close to them, being always visible, and therefore less dangerous. The bay runs in N.N.W. $\frac{1}{2}$ N., and has anchorage on the port side, in 5, 4, 3, and 2 fathoms, but open to the south-eastward.

At 2 miles farther to the S.W. is Cross Island, the eastern boundary of Great Machias Bay. There is also a lighthouse erected on the Little Isle of Libee, which exhibits a fixed light, 65 feet high; this is to the south-westward of Cross Island, from which it is distant about 3 miles.

GREAT MACHIAS BAY.—In sailing into this bay from the eastward, you will observe the three low islands, called the Machias Seal Islands, which have been mentioned before, and lie to the W.S.W. from the S.W. head of the Grand Manan, and 3 leagues to the south-eastward of Cross Island. Great caution must be observed when passing them in the night, if the two lights on them cannot be seen. From these islands you may shape your course to the N.W., or steer W. by N. for Machias. Leave Cross Island on the starboard hand, and having passed Libee light, steer north; but in passing Cross Island you must be careful of some *dangerous ledges* lying off it $1\frac{1}{2}$ mile, in a S.W. direction. On this course you leave a large *white rock*, called the *Channel Rock*, on your port side; and if not bound into Machias Harbour, you may haul to the westward. When you have advanced $\frac{1}{2}$ a mile above the rock, bring a high round island, which is covered with trees, to bear north, and anchor in 4 or 5 fathoms, muddy bottom; this is called Jones's Harbour; but if you mean to go up to the town of Machias, keep on a northerly course until you have passed the high round island on your port hand; then steer W.S.W. or W. by S. for a point covered with birch-trees, having a house upon it. On the starboard hand are several *flats* and *shoals*. You may keep on the port side after you pass this house, until the river opens to the northward, then run up to Cross River, and anchor in 4 fathoms. Machias is the chief town of Washington County, in the district of Maine.

MOOSE-A-PECK HEAD LIGHT is on Mistake Island, 54 feet above the level of the sea, and contains a revolving light; its time of revolution is 4 minutes, showing in that time two bright faces.

MOOSE-A-PECK HEAD TO MACHIAS.—Give the light a berth of a mile, leaving it on the port hand, and steer N.E. by E., $2\frac{1}{2}$ leagues, when you will be up with Libee Island light on your starboard hand; then run N.N.E., 2 leagues, which will bring you up with Stones Island on your port hand, having a *rock* lying east, $\frac{1}{2}$ of a mile from the centre of the island; from this steer north for Round Island, from which follow the eastern directions for Machias.

MOOSE-A-PECK REACH.—When coming from the westward, and past Ladle Island on your port hand, steer N.E. by E. for Tibbet's Island, which you leave on your port hand; when you come to the east end of this island, give it a good berth, for at low water there is a *ledge of rocks* that lies a cable's length to the S.E. of the said islands; when you pass it, and bring Moose-a-Peck Reach open, you may steer east for

Mr. Beal's house; but you must keep the starboard hand best on board, for there is a rock that lies about the middle of the sound, which has not above 2 feet water on it at low water. You may anchor to the westward of Mr. Beal's house.

When bound to the eastward over Moose-a-Peck bar, which you must not cross before 2 hours' flood, you steer for Kelly's coffee-house, which lies on the port hand as you go to the eastward, on the N.E. point of Moose-a-Peck Reach; when you are entering on the bar, you will bring a bushy tree right against Kelly's house, which stands on the point. Your course over the bar is east; you leave the Virgin's Breasts, one on your starboard, the other on your port hand. But if you are bound to Chandler's River, you will leave the Virgin's Breasts on your starboard hand, and Rogue's Island on the same hand. There is a *muddy bar* which lies between Rogue's Island and the main land, but water enough on it at 2 hours' flood. Rogue's Island has a good harbour at the N.W. of it, safe from easterly winds, and a small distance from Chandler's River.

When you go over Moose-a-Peck bar, bound to Machias, you leave the Virgin's Breasts, as before mentioned, keeping your course east, and a *bare rock*, called *Pulpit Rock*, on your starboard hand; you must keep Libee Island light open to the southward of this bare rock. (N.B. This bare rock, which you leave on your starboard, may also be left on your port, and steer E.S.E. for Libee Island light.)

MACHIAS to GOLDSBOROUGH.—The shores from hence to the westward are so studded with islands, and encumbered with rocks, forming such a complicated and intricate variety of channels, that no description can adequately elucidate them; we must therefore refer the mariner to the inspection of his charts, by a reference to which he will best be enabled to estimate the course and distance of the objects of his search. There are numerous good harbours and inlets where vessels may be placed in safety, but these commonly are too winding and intricate for strangers.

GOLDSBOROUGH HARBOUR.—The Skuttock Hills, before mentioned, form a good land-mark for Goldsborough, as they lie to the northward or N.N.E. of the harbour. Hence, by bringing them in that direction, and steering on that course, you will, on approaching the harbour, see three islands, which lie in its mouth. In proceeding through the eastern passages, these are to be left on the port hand; the small island without, called the *Petit Manan*, is of course to be left to the starboard. The latter, which is about a league from the land, has a few bushes, and also a lighthouse upon it; this is a stone building, 25 feet high, and exhibiting a fixed light, 53 feet above the level of the sea. From this lighthouse *Moulton's Ledge*, which dries at low tides, bears W. by N., distant 4 miles; *Jackson's Ledge*, or *Eastern Rock*, on which there are 12 feet at low water, bears east, 4 miles; the *S.E. Rock*, on which are 7 feet, bears S.E. by S., 4 miles; and a *ledge*, of 16 feet, bears from it S.S.E., 2 miles. *Petit Manan* is almost connected with the shore by a *bar*, which dries with the ebb. Within the entrance the harbour is a mile wide, and you may anchor, in from 4 to 6 fathoms, where you please.

On Nash Island, at the entrance of Pleasant River, there is a lighthouse, 47 feet above the level of the sea, containing a fixed light of a deep-red colour, which you leave on your starboard hand going in.

The following are the bearings and distances from Nash Island light of the following rocks and ledges, viz.:—Black Rock (always above water,) S.E. by S. $\frac{1}{2}$ S., $3\frac{1}{2}$ miles; Jourdan's Outer Ledge, which is covered at high water, S.W. by W. $\frac{1}{2}$ W., 4 miles.

PLEASANT BAY lies to the north-eastward of *Petit Manan* Island, and leads to Columbia, Addison, and Harrington. The light on *Petit Manan* will be very useful both for this and Goldsborough Harbours; but the navigation here is so intricate, that a pilot is indispensably necessary.

When coming from the westward, and bound for Pleasant River, in passing *Petit Manan* lighthouse, bring it to bear S.W. by S., and steer N.E. by N., 3 leagues distant. In steering this course, if it is clear weather, you will see Captain Wass's house open between the island and main land; but this passage will not do at low water. You must leave this island (and a high dry *ledge of rocks* that lies to the westward of it,) on your starboard hand: when you pass the bare ledge, you will see a bare isle, which you leave on your starboard hand; then you may haul up for Captain Wass's house, and anchor, and take a pilot for Pleasant River.

BOWBEAR HARBOUR.—In coming from the westward, and bound for Pigeon Hill or Bowbear Harbour, bring Petit Manan light to bear N.E., and run for it, giving it a berth of $\frac{1}{2}$ of a mile, and then steer N. $\frac{1}{2}$ W., 4 miles: in steering this course you will leave the Egg Rock on your starboard hand, when you will make the westerly shore, giving it a berth of $\frac{1}{2}$ a mile; then steer N.N.E., a mile, when you will be opposite Dyer's house, where you may anchor, in 3 fathoms, safe from all winds.

DYER'S BAY.—In coming from the eastward, and bound for Dyer's Bay, you should give Petit Manan lighthouse a berth, as before; leave it on your starboard hand, and bring the light to bear N.E., $\frac{3}{4}$ of a mile, then steer N. by W., which will carry you into the mouth of the bay, leaving a large *dry ledge* on your port hand; when abreast of this ledge, which is bold-to, give it a berth of 14 or 15 fathoms; then steer N. $\frac{1}{2}$ E., 4 or 5 miles, where you may anchor, safe from all winds, in 4 or 5 fathoms, muddy bottom.

GOLDSBOROUGH HARBOUR lies N.N.W. from Petit Manan lighthouse, distant 2 leagues. When entering, you leave an island covered with trees, on the starboard, and two islands on your port hand; then steer N.N.W., $1\frac{1}{2}$ mile, then N. $\frac{1}{2}$ E., 4 miles, will bring you up to Goldsborough Point, where you may anchor, safe from all winds, in 3 or 4 fathoms, muddy bottom.

In going from Mount Desert to Goldsborough, you must steer E. $\frac{1}{2}$ N., for Skuttock Point, about 4 leagues, where there is an island, which you may pass on either side; but it is best to leave it on the port side, and then steer N.E., about 3 leagues, which will carry you up with Goldsborough Harbour. You will see three islands, which lie in the mouth of the harbour; you must leave them on your port hand, and go in the eastern passage. In standing in for this place, you will see Petit Manan lighthouse, which you leave on your starboard hand. North from Petit Manan, $\frac{1}{2}$ of a mile distant, lies a *ledge*, bare at half-tide, which you keep within $\frac{1}{2}$ a cable's length of when going over the bar, which you pass on your starboard hand when bound eastward; at which, as you pass the bar, Skuttock Island will be a handspike's length open to the southward of Skuttock Point; but to go over this bar requires a pilot. When near the bar, and up with Petit Manan Island, keep E.S.E., $\frac{1}{2}$ a mile distant, which will clear a *ledge*, having 9 feet water at low water, that lies east of the channel going over the bar, $\frac{1}{2}$ of a mile distant. There is a bar, which runs from the shore to this little island, which is about a league from the land. This bar has $3\frac{1}{2}$ fathoms at high water, and 9 feet at low water.

MOUNT DESERT ISLAND forms the northern side of the passage to Bear Island, and may be known by several high hills upon it. This island is about 12 miles long from north to south, and 10 broad; it is nearly divided by a stream of water, called Soame's Sound, at the head of which is Eden: at the entrance of Soame's Sound are two good harbours—N.E. and S.W. Harbours.

BEAR ISLAND lies near the centre of the passage between Sutton's Island and Mount Desert; it is a small island, covered with spruce-trees. The light stands upon its western end, elevated 65 feet above the level of the sea, exhibiting a fixed light, which may be seen, in clear weather, from 12 to 15 miles.

BAKER'S ISLAND and Cranberry Island form the western side of the entrance of the passage to Bear Island, and are covered with spruce-trees. Baker's Island light is situated near the centre of the island, elevated 70 feet above the level of the sea, exhibiting a fixed light, visible, in clear weather, at the distance of 15 miles.

MOUNT DESERT'S EASTERN HARBOUR.—In coming from the westward, and intending to go into Mount Desert, bring Baker's Island light to bear north, and run for it, leaving it on your left hand; after passing it, steer N.N.W., until the light on Bear Island bears W.N.W., and run direct for it. In running this course, you will leave Sutton's Island on your port hand. The shores around this island are very bold, and you may near it within a cable's length; it lies near the centre of the passage, but the best water is to the northward of it. If you wish to go to the westward of it, when between Bunker's Ledge and Cranberry Island, steer W. by S., until Sutton's Island eastern point bears N.E.; you can then anchor, or run farther in, into Hadlock's Harbour, to the south of you, or steer W.N.W., about 3 miles, for S.W. Harbour.

Bunker's Ledge, on which is built a stone-beacon, with a cask placed on a staff in its centre, bears from the eastern end of Sutton's Island E. $\frac{1}{2}$ N. about a mile, which you

leave on your starboard hand; you may near the ledge within 2 cables' lengths. When the light on Baker's Island is entirely obscured behind the eastern point of Cranberry Island, you are then to the westward of Bunker's Ledge; and should you have a head wind, you may stand to the northward until the light on Bear Island bears W. by N.

In running for Bear Island light, you may near Bunker's Ledge within a cable's length, leaving it on your starboard hand; after passing the light $\frac{1}{4}$ of a mile, you may anchor, in 12 fathoms water, with the light bearing from east to E.N.E., good holding ground; or you may run for N.E. Harbour, about a mile to the northward of the light. N.W. by W., $\frac{1}{2}$ a mile from Bear Island light, lies a *ledge*, bare at low water, having on its western edge a spar-buoy, painted black, which you leave on your starboard hand. This ledge bears from the centre of N.E. Harbour S. $\frac{1}{2}$ W.

Baker's Island and Cranberry Island form the western side of the entrance of the passage to Bear Island, and are covered with spruce-trees. A *bar* extends from Baker's to Cranberry Islands, covered at high water, which is often mistaken by strangers for the passage into Cranberry Island Harbour. You must always recollect, that before entering Cranberry Island Harbour, the light on Baker's Island will be entirely obscured behind the eastern point of Cranberry Island. You may go in on either side of Bunker's Ledge, but strangers should leave it on the starboard hand. Between Her-ring Cove and Bear Island light, near the north shore, are several *rocks* and *ledges*, covered at high water.

The S.W. HARBOUR of MOUNT DESERT.—This is one of the best harbours on the coast; as many as 400 vessels have been at anchor at one time here. To run in, if coming from the westward, when up with Long Island, steer N.N.E., 6 miles, (leaving the Two Duck Islands on your starboard, and the Three Calf Islands on your port hand); this will bring you up midway between the Great Cranberry Island and Mount Desert: steer up midway, until you open S.W. Harbour, when you may haul in (keeping nearest the starboard hand, on account of a *ledge* on the port hand, which runs off $\frac{1}{2}$ a mile,) N.W. or W.N.W., and anchor, in 5 or 6 fathoms, muddy bottom, safe from all winds. It is high water at 12 o'clock; tides rise 12 feet.

Off the S.W. point of Cranberry Island there is a *rock*, bearing west, distant $\frac{1}{4}$ of a mile. The eastern passage into S.W. Harbour is between Bear Island (on which there is a fixed light,) and Sutton's Island; after you have passed these, run until you get the harbour open, then follow the above directions.

FRENCHMAN'S BAY, N.E. of MOUNT DESERT, lies to the westward of Gouldsbrough, and with its three islands is the western opening between Skuttock Point and Mount Desert Island; its entrance is wide, and within are Mosquito Harbour, Flander's Bay, Taunton and Skilling Rivers, and the town of Sullivan. On the port side is Egg Rock, near which are several islets; but of the particulars of this extensive bay, we possess no accurate information. On the opposite side of the entrance to Frenchman's Bay, are the Cranberry Islands; these are situated on the south-eastern side of Mount Desert Island; and to the S.S.E. of these are the Duck Islands.

BLUE HILL SOUND is to the S.W. of Mount Desert, running up to Union River. If you are bound here, as soon as you are past Long Island, you will open a large sound to the N.N.W., which course you are to steer 6 or 7 leagues, when you will be up with Robertson's Island, leaving the ship and barge on your port hand. Robertson's Island is the only island near that place that has a house upon it. The south part of that island is clear of trees, on which the house stands. When you come near the south part of the island, give it a berth of $\frac{1}{4}$ of a mile, as there are several *sunken rocks* off the point. When you bring this island from S.W. to N.W., you may anchor in 6 or 7 fathoms water, muddy bottom; but if you are bound to Blue Hill Bay, you may stand to the northward direct for the Blue Hills, which you may see 10 or 15 leagues distant. If bound to Union River, you should take a pilot at Robertson's Island; a stranger should not go farther without one.

ISLE AU HAUTE.—The Isle au Haute is remarkable land, composed of high, steep cliffs, and makes with a large bay on each side of it; has good landing on its eastern end, and anchorage $\frac{1}{2}$ a mile off, in 18 fathoms, with the low point bearing N.E. by N., where is also a stream of water running into the sea. The highest part of the island is in the middle, and represents a saddle.

SADDLE BACK LEDGE is a high black rock, formed somewhat like a saddle, on the S.E. end of which is erected a lighthouse, built of hewn granite, and of that colour; it is elevated 40 feet above the level of the sea, exhibiting a fixed light, and may be seen, in clear weather, a distance of 15 miles; you may near it on all sides within a cable's length.

About 2 miles N.W. by W. from the light lies a *small sunken ledge*, which breaks at low tides, with a little motion of the sea.

The southern head of Isle au Haute bears from Saddle Back light S.E. by E. $\frac{1}{2}$ E., $2\frac{1}{2}$ miles distant; Seal Island S. by W., about 10 miles; Wooden Ball Island S.W. by S.; Martinicus Island S.W. $\frac{1}{2}$ W., 12 miles; Brimstone Island W. $\frac{1}{2}$ N., 2 miles; Little Isle au Haute harbour N.E. by E. $\frac{1}{2}$ E., 6 miles distant; Eagle Island light, north, distant about 15 miles; Fox Island Thoroughfare N. by W., distant about 8 miles.

Isle au Haute and Deer Island form the eastern side of Isle au Haute Bay; Brimstone and Fox Island the western side. The bay is about 5 miles in width, and Saddle Back lies near its centre.

In making Saddle Back light coming from sea, bring it to bear N.W. by N. to N. by W., and run it close on board, leaving it on your port hand. If you are bound up the bay, bring the light to bear south, and steer north for Eagle Island light, which you may, to within a cable's length, by leaving it on your port hand. After passing Eagle Island light, steer N.N.W., about 5 miles, which course and distance will bring you up to Channel Rock, which you leave on your starboard hand; give it a berth of $\frac{1}{2}$ of a mile, and steer N. by E., about 6 miles, for Dices Head light; in running this course you will pass Cape Rosier, a high bluff, which you leave on your starboard hand; when up to Dices Head light, you may either go into Castine, or up to Penobscot, by the directions given.

Channel Rock may be known by its being a small rock of a yellowish cast, lying to the westward of a small group of islands, and may be seen at all times above water.

N.B.—In coming from sea, and bound for Isle au Haute Bay, you leave the Wooden Ball and Seal Islands on your port hand. The Seal Island is the easternmost island, and you may near it within $\frac{1}{2}$ of a mile.

In coming from the northward and intending to go northward of Martinicus Island, and bound for Saddle Rock light, bring it to bear E.N.E., and run for it, following the directions before given.

Wooden Ball Island bears from Seal Island W.S.W., 2 miles distant; Wooden Ball from Martinicus Rock light N.N.E., $2\frac{1}{2}$ miles; Seal Island from Martinicus Rock light N.E. by N., about 6 miles; and from Martinicus Island, north, 4 miles.

MARTINICUS ISLAND is at the mouth of Penobscot Bay. On the rock south of this island, there are two fixed lights, 82 feet above the level of the sea, attached to a dwelling-house, 40 feet apart, bearing N.N.W. and S.S.E. from each other.

PENOBSCOT BAY AND RIVER.—This extensive bay is included between Point Naskeag or Sedgwick Point on the east, and White Head on the west; the distance between these points is about 10 leagues, and it therefore includes the Isle au Haute, Deer Island, the Fox Island, Long Island, and a number of small isles, rocks, and ledges. Through the bay, to the mouth of the river of its name, the western channel is by the headland on the west, called Owl's Head, on which there is a lighthouse, containing a fixed light, 147 feet above the level of the sea; thence to Camden on the west, and Cape Rosiere on the east, to Bagaduce Point, or Castine River.

The eastern channel is between Isle au Haute on the west, and the smaller isles on the east, through a channel called Long Reach, formed by the shore of Sedgwick on one side, and Deer Island on the other, until it unites with the main channel between Cape Rosiere and Long Island. Above this, on the east, stands Fort Castine, near to which is the town of Castine, opposite to Penobscot. Castine is the port of entry. Strangers bound up Penobscot Bay should always take a pilot.

The noble river, which empties its waters into the bay, and which is now decorated with numerous townships, is the most considerable in the district of Maine, and has its sources about 130 miles above the inlet of Castine. The head of tide and navigation

is, however, at Bangor, about 30 miles from the same: but vessels of 30 tons may approach within a mile of this place. At the entrance of the river is a depth of 10 fathoms.

From Mount Desert Rock to White Head, which now has a lighthouse, 50 feet above the level of the sea, and visible 4 or 5 leagues off, having a fixed light, the bearing and distance are W.N.W., $13\frac{1}{2}$ leagues. On coming in this way, the best passage is outside of the Two-Bush Isle and the Muscle Ledges, leaving the island on the port side, and steering E.N.E. or N.E. by E., about 2 leagues, when the river will be open. You may then bear away for either side of Iseboroug, or Long Island, proceeding past Belfast Bay and Brigadier Island, keeping the port shore on board. When you pass Brigadier Island for Old Fort Point, (Fort Pownall,) observe, before you come to it, that an *extensive ledge of rocks* lies about $\frac{2}{3}$ of a mile to the E.S.E. of it, which is uncovered at half-tide. These rocks are readily discoverable when the wind blows, by the breakers. You may pass within a cable's length of Fort Point, in smooth water.

If bound up the river from Old Fort Point, with the wind a-head and an ebb-tide, you may make a good harbour in the East River, at about a league E.N.E. from that point. The entrance of this river is on the south side of Orphan Island; here you may lie safe from all winds, and anchor in 6 or 7 fathoms, good holding ground. You leave Orphan Island, and *several rocks* which are above water, on the port hand. If requisite, you may anchor to the N.W. of the island, on the starboard hand, before you pass through; but with the wind and tide favourable, you may proceed up to Marsh Bay, keeping towards the port shore. Marsh Bay is $1\frac{1}{2}$ league above Orphan Island. When passing it, keep nearly in the middle of the river, and you will have neither rocks nor shoals until you arrive at the falls.

Castine lighthouse is on Dices Head, at the entrance of Castine Harbour, and is a fixed light, 116 feet above the level of the sea; it bears N.W. $\frac{1}{2}$ W. from Fort Point Ledges, and from the eastern end of Long Island, S.E. by E. $\frac{1}{2}$ E. The shore, near the lighthouse, is bold.

To sail up to Castine, &c. by the S.E. and eastern side of Long Island, bring the light of Dices Head to bear N.E. by N., and run for it, until you are within $\frac{1}{4}$ a mile of it; then steer E. by N. for the beacon on Hormar's Ledge, leaving Otter Rock beacon on your port hand a cable's length distant, and Bull's Head, Noddle's Point, and the beacon on Hormar's Ledge on the starboard hand. You may near the starboard shore off the entrance of Castine Harbour within a cable's length, and steer E.N.E., which will carry you up the Ship Channel. You may anchor off the town, near the wharfs, in from 8 to 10 fathoms water. This harbour is easy of access. The tide here rises, on the full and change, 10 or 11 feet; and it is high water at 10h. 45m.

To enter Penobscot Bay from the S.W.—On approaching White Head, or its lighthouse, be careful not to haul in for it until it bears N.E., as you will thus avoid the *ledges of rocks* lying without the head. Within these ledges, at about a pistol-shot from shore, there is a safe passage. In passing the head to the eastward, you will see a good harbour to the port hand, called Seal Harbour, in which a vessel may lie safely with any wind. In going into this harbour, give the port shore a berth, in order to avoid a *sunken ledge*, extending about $\frac{2}{3}$ over, and which always breaks, except at high water.

From White Head to Birch Island and Point, the course and distance are N.E., 4 miles. This island has a *rock*, about $\frac{1}{4}$ a mile to the south-westward of it, which must be left on the port hand. When hauling round the island, give it a small berth, and steer N.N.E. for the Owl's Head, leaving the Two Owl's Islands on the starboard side.

OWL'S HEAD HARBOUR makes with a deep cove; to sail in, bring a rocky point, which will be on your starboard side, to bear N.E.; and a *ledge of rocks* that lie outside of that point, to bear E.N.E., and anchor in 4 fathoms, muddy bottom. You will lie open to the wind at E. by N. and E.N.E., but safely with all other winds. The tide of flood here sets to the eastward, and the tide of ebb S.W., through the Muscle Ledges.

OWL'S HEAD LIGHT lies at the eastern point of the head, at the western side of the entrance to Penobscot Bay, and N. by E. from White Head lighthouse; it exhibits a fixed light, 147 feet above the level of the sea.

CAMDEN LIGHTHOUSE is situated on the S.E. part of Negro Island, 8 miles to the N. $\frac{1}{2}$ E. of Owl's Head; it contains a fixed light, 49 feet above the level of the sea, on Brown's Head, on the north Fox Island; and at the western entrance of Fox Island Passage is a fixed light, 20 feet above the ground, and 80 feet above the level of the sea.

The Fox Islands divide Penobscot Bay from Isle au Haute Bay; there is a passage from one to the other round the north end of the island.

CAMDEN HARBOUR.—In coming from the westward, and bound for Camden Harbour, bring Owl's Head light to bear south, and steer N. $\frac{1}{2}$ E. for Camden light, leaving the Graves and N.E. Rocks on the starboard hand. The *Graves* is a *small black rock*, and is above the surface of the water at all times, and you may near it within a cable's length on all sides. When up with the lighthouse, leave it on the port hand a cable's length, and steer N.W. by N. $\frac{1}{2}$ N. or N.N.W., about $\frac{1}{2}$ a mile, and anchor near the north shore, in 4 or 5 fathoms, good holding-ground. If you are to the eastward, and bound for Camden Harbour, bring the light to bear W.S.W. or S.W. by W., to clear the N.E. Ledges, which bear from Camden light N.E. $\frac{3}{4}$ N., about $\frac{3}{4}$ of a mile.

South of the Fox Islands, and directly before the entrance to Penobscot Bay, lie the Matinicus Islands; the northern island is distant from the southern point of the Southern Fox, full 8 miles; and in the channel between are 30 and 36 fathoms.

The Matinicus Islands form a cluster; from off them to the eastward is the *Seal Rock*, distant about 5 miles; and about midway between is another *rock*; to the south-eastward, near 4 miles from the Matinicus Islands, is the *Wooden Ball Rock*, being the outermost of the group: there are channels with deep water between them all; and the mariner will, by inspecting his chart, better comprehend their respective positions. To the westward are several detached islands, principally named the Green Islands, Matinick Island, St. George's Islands, and Manheigan Island. Between Green Islands and Matinick is a *reef of rocks* under water; but there are deep-water channels between all the other islands.

MANHEIGAN LIGHT.—On Manheigan Island, south of the entrance to St. George's River, is a revolving light. It has ten lamps and reflectors; these are so fitted on two sides of an oblong square, that one side produces a blood-red light, and the other a common white light. The time of revolution is 2 minutes 15 seconds, elevation 170 feet above the level of the sea. You can close to the island on either side, taking care to go between some *dry ledges* on the northern side of it. In the island is a small harbour, open to the S.W.

From the high light on Cape Cod, Manheigan Isle bears N.N.E. $\frac{1}{4}$ N. (true), distant 35 leagues.

GEORGE'S RIVER.—Broad Bay, leading to George's and Museongus Rivers and the town of Walloborough, is too intricate for description, being filled with *rocks* and small islands; its situation is between Mosquito Island and Penmanquid Point. There is a lighthouse now built upon Franklin Island, to the northward of Manheigan Island; it stands on the northern side of the island, near the entrance to George's River, and has a steady fixed light, 50 feet above the level of the sea.

DIRECTIONS.—Bring the north Danniscove Island, or White Island, to bear W.S.W., then steer E.N.E. for Franklin's lighthouse, which stands at the entrance; leave that on the starboard side, and you may sail past within a cable's length of it. When you get abreast of Franklin Island light (which is on your starboard hand), steer N.E. for Otter Island, distant 4 miles, and continue on until within $\frac{1}{4}$ of a mile of it, leaving it on your port hand, and steer E.N.E. for Cauldwell's Island, at the S.W. end of which is a high round *rock*, called *Goose Island Rock*. When abreast of this rock, pass it at the distance of a cable's length, leaving it on your starboard side, and steer N.E. by E. and N.E.; but you should keep Cauldwell's Island best on board, to avoid a *sunken ledge* lying in the middle of the river. In beating into George's River, be careful of a *sunken rock* which bears E.N.E. from Franklin's lighthouse, distant 2 leagues; also of another *ledge* lying off the S.E. end of Gay's Island, which extends $\frac{1}{2}$ of the way across towards the Goose Rock.

Should you fall in with Manheigan light, and bound to George's River, steer N.N.W., leaving Manheigan Island to the starboard, until you get Franklin's light-

house to bear N.E. by E., when you may run for it, and sail as before directed. Franklin's light may safely be run for when bearing from N.E. by N. to E.N.E.

In running from White Islands for George's River, be careful to avoid the *New Harbour Ledges*, which lie E.N.E., distant 3 miles from Penmanquid light, and have only 5 feet water over them. When beyond these ledges, you will see the western Egg Rock, which is large and dry, and bears about E.N.E. from Penmanquid Point, distant 2 leagues, and W. by S. from Franklin's lighthouse, 3 miles, which you leave on your port hand; and you will then discover the eastern Egg Rock, lying nearly south from Franklin's light, 3 miles; this must be left to the starboard. These Egg Rocks bear from each other E.S.E. and W.N.W., distant about a league: their appearance is very similar; but you will pass between them both, and have an excellent clear and open channel. They will be easily distinguished one from the other by their bearings from the lighthouse.

Should you have the wind ahead, and be compelled to turn to windward, you can stand on to the northward, until Franklin's light comes E.N.E., and to the southward until it bears N.N.E., without danger. To the northward of the range of McCobb's Island and the western Egg Island, the ground is foul and rocky; and so it is to the eastward of the range of Franklin's Island light and the eastern Egg Island. McCobb's Island is that which forms the western entrance to George's River, and bears N.W., distant $1\frac{1}{2}$ mile from from Franklin Island light.

Penmanquid Light.—On Penmanquid Point, on the western side of the entrance to George's River, a lighthouse, containing a fixed light, is erected, 30 feet high, and 75 feet above the level of the sea. It is a light to Bristol and Waldoborough Rivers, and bears N.W. $\frac{1}{2}$ W. from Manheigan light, distant 12 miles.

JOHN'S BAY HARBOUR.—Penmanquid Point forms the eastern side of the bay, and is a low bare point, but the shores are bold on all sides. The lighthouse is situated on the S.E. side of Penmanquid, and bears from the western point E.N.E., about $\frac{1}{2}$ a mile.

The *Coast Pilot* says, "Vessels westward bound, and falling in with Manheigan Island, and wishing to make a harbour in a strong S.W. wind, must observe the following directions:—Bring Manheigan light to bear S.E., and steer N.W., distant about 11 miles, for Penmanquid Point; and when the light on the said point bears E.N.E., distant $\frac{1}{2}$ a mile, you are then up with the western point of Penmanquid: leave it on your starboard hand, and give it a berth of $\frac{1}{2}$ of a mile; then steer for John's Harbour, leaving John's Island (which is small and high, covered with spruce-trees, located near the centre of the bay), McCunn's Point, on your starboard; Bulford's Island, Stuart's Island, and McFarling's Point on the port hand. If from the westward, and bound into this harbour, bring John's Island to bear N. by E., and run until you are within a cable's length of it; then steer north for High Island Head, which leave on your port hand; and when abreast of the said head, steer N. $\frac{1}{2}$ E., about $\frac{3}{4}$ of a mile, and anchor in from 4 to 5 fathoms water, good holding ground. John's Bay lies about 5 miles to the eastward of Townsend Harbour, and is a fair, open bay, having neither rocks or shoals at its entrance; and vessels may run in without fear, by following the above directions."

TOWNSEND HARBOUR lies about 5 miles to the eastward of John's Bay Harbour; and on the port side of the entrance is a lighthouse on Burnt Island, showing a fixed light, 56 feet above the level of the sea. To enter this harbour, a pilot is necessary.

To the westward of George's River are several other inlets leading up the Damariscott River to Nobleborough. Booth Bay is also situated to the westward; here stands a lighthouse, erected in 1822, on Burnt Island, to the northward of the Bantam Ledges. To the southward lie the Bantam Ledges, stretching into the sea 4 or 5 miles; these are a *string of rocks*, some above and some under water, lying on the starboard side of the entrance into Sheepsct River.

SHEEPSCT RIVER.—In coming for Sheepsct River from the westward, and making the island of Seguin, or Seaguin, upon which a lighthouse is now erected, having a fixed light of the first magnitude; the lantern is 200 feet above the level of the sea, and the light may be seen 9 or 10 miles off. From this lighthouse Pond Island light, at the entrance of Kennebeck River, bears N. $\frac{1}{2}$ E.; you will leave the light on the starboard side, giving the island a berth of $\frac{1}{2}$ a mile; and, passing to the eastward, bring it to bear S.W., and steer N.E. and N.E. by N., 3 leagues, which will

bring you to Ebinicook Harbour; its entrance is narrow, but becomes broader when you get into it. The entrance lies E. by N. Observe, you cannot get in with a N.E. or easterly wind, but must have it south or westerly. After you are within the harbour, haul up N.E. or N.E. by N., there being several *sunken rocks* on the starboard side as you go in; there you will have 4 fathoms, muddy bottom, and lie safe from all winds.

But if bound up Sheepscut River in a large vessel, and coming from the westward, you must go to the southward of Seguine Island, steering N.E. or N.E. by E., a league; and when the river bears north, or north, a little westerly, run north, and keep the starboard hand on board. Many *rocks* and *ledges*, some above and some under water, lie to the north-eastward of Seguine; when you get up as high as Ebenicook, leave the Mark Islands on your port, and keep your course north, a little easterly. Here it is requisite to have a pilot. The port of Wiscasset is about 5 leagues up from the entrance of the river.

KENNEBECK RIVER.—Pond Island lighthouse bears N. $\frac{1}{4}$ W., $2\frac{1}{4}$ miles from Seguine lighthouse, and both show fixed lights. These lights are intended to facilitate the entrance to the Kennebeck River, which is one of the most considerable in the State of Maine. In coming from the westward for Kennebeck River, you should keep $\frac{1}{4}$ of a mile from Seguine light, to avoid *Jack's Knife Ledge*, which bears from the light N.W., distant $\frac{1}{4}$ of a mile, and *Ellingswood Rock*, lying north, about the same distance; after passing the latter, you should bring Seguine light to bear south, and then steer north for Pond Island light; leaving this a cable's length on your port hand, care should be taken to haul quickly round Pond Island Point, in order to avoid the Two Sugar Loaves, two small islets, bearing north, distant $\frac{1}{4}$ a mile from Pond Island, upon which the flood sets strongly. Your course, after passing Pond Island, will be about N.W. to the fort on Hunnewell's Point, which you must give a berth to, and steer on north for Cox's Head, about a mile; here also is another fort. Steer thence N.E. to Perkin's Island, which leave about a mile to the starboard, and give it a berth of a cable's length, to avoid *two ledges* that lie nearly abreast of Perkin's Island, and near the middle of the river; then proceed north for a mile farther, and you will find good anchorage at Perkin's Flats, in 4, 5, or 6 fathoms water. This is as far as a vessel, conducted by a stranger to the place, should ever venture to advance, especially with a heavy ship.

There is good anchorage any where between Seguine and Pond Island, when the weather is moderate, in from 5 to 8 fathoms, within $\frac{1}{4}$ a mile of Pond Island; but should the wind blow with any violence, and you are far enough to windward to weather Ellingswood Rock and Seguine Ledges, then it will sometimes be advisable to run for Townsend Harbour; or, with the wind at N.W. and a flood-tide, you may, by fetching within a cable's length of the Lower Sugar Loaf, and leaving it on the port side, run into good and safe anchorage, in from 6 to 3 fathoms, in Heald's Eddy.

If bound into Kennebeck, and falling to the eastward of Seguine, bring the light on Pond Island to bear N.W. by W., and run for it till within a cable's length, then follow the preceding directions. There is safe anchorage, with an off-shore wind, any where between Small Point and Seguine, only taking care to avoid Jack's Knife Ledge.

Safe anchorage may be found from Cox's Head to Perkin's Island, nearest the eastern shore. The usual rapidity of the tide between the Seguine and the entrance to the Kennebeck is 3 to 4 knots. There is also a passage into the Kennebeck River, leaving Pond Island on the starboard hand; but that is not recommended, for only 16 feet can be obtained at high water. To the eastward of Seguine you will have deep water. At the westward, the tide of flood sets strongly into New Meadows, and W.N.W. into Broad Sound, and up to Portland; the ebb-tide is the reverse.

SEGUINE ISLAND AND LIGHTHOUSE.—This island is remarkable when bearing east or west, being 2 miles from land; and when it bears north, shuts in with it. From this lighthouse Portland light bears W. $\frac{1}{4}$ S., 20 miles; the two lighthouses on Cape Elizabeth W.S.W. $\frac{3}{4}$ W., 20 miles; and Alder's Ledge S.W. by W. $\frac{3}{4}$ W., 18 miles.

There are several *rocky ledges* near Seguine, which bear from the light as follows:—Five-Fathoms Ledge S. by W., $\frac{3}{4}$ of a mile; Ellingswood Rock north, $\frac{1}{4}$ of a mile; Seguine Ledges N.N.E., distant $\frac{1}{2}$ a mile, which always dry; Jack's Knife Ledge N.W., $1\frac{1}{4}$ mile, over which are 8 feet water; Wood Island Reef N.N.W., distant $1\frac{1}{2}$ mile, which has 4 feet water on it; and the Whale's Back, N.N.E., distant $1\frac{3}{4}$ mile.

HENDRICK'S HEAD LIGHT is a fixed light, 30 feet above the level of the sea, on the starboard hand going in, near the mouth of Sheepsout River.

NEW MEADOWS RIVER.—At about 6 leagues E.N.E. from Cape Elizabeth, and 2 miles westward of Small Point, is the mouth of the Meadows River, a large inlet, affording good shelter during adverse winds. If you should happen to fall in with this bay with the wind at S.E. or S.S.E., and bound to the eastward, you may make a good harbour in the above river. In standing to the northward, you will have a large round island on your starboard hand, covered with spruce-trees, together with *two large rocks*, one called the *Brown Cow*, and the other the *White Bull*, which are some distance from each other.

You must leave the *Brown Cow* on your starboard, and the *White Bull* on your port hand, the latter of which you may go within a cable's length of, and when you have passed it, must steer for Horse Island, that lies on the starboard, which has a house upon it, that you may go within $\frac{1}{4}$ of a mile of. To the westward of the island lies a *large rock*, which is covered at high water, but bare at half-tide; you may go on either side of it when it is in sight, but the widest passage is to the eastward. When you have passed this rock, steer N. by W. or N.N.W., which course will carry you up to a large island, called Bear Island, which is covered with spruce and birch-trees. When you have passed this island about $\frac{1}{4}$ of a mile, you may haul in for the starboard shore, and anchor in 5 or 6 fathoms water. This is the best place for anchoring with the wind S.S.E. or east; but be careful of a *ledge of rocks* that runs to the northward of this island, about $\frac{1}{2}$ a mile off.

You may anchor in this bay according as the wind may be; if it should be to the eastward, anchor on the east side. If you have lost your anchors and cables, there is a large cove on your starboard hand, about 2 miles from Bear Island, bearing about north, and which is sufficient to hold 30 or 40 vessels; it is land-locked all round, so that no wind can damage a vessel after she gets into it.

HUSSEY SOUND.—If you come from the eastward, and make Segune light, bring it to bear east, and steer west for the sound, if you have day-light and a leading-wind, as you have nothing but islands on your starboard hand, through which the tide of flood sets very strongly; when you get within 2 miles of Hussey's Sound, you will make two islands, without trees, called Green Islands. Continue your course till Hussey's Sound bears N.N.E., then steer in. When past the two islands, after entering the sound, leave three islands on your port, and two islands on your starboard side; the northern island on your starboard is called Smith's Island; when you have passed it about $\frac{3}{4}$ of a mile, you may haul away E.N.E. till you shut in the said island to the S.E., then anchor, in 8 or 9 fathoms, muddy bottom, with Hog Island to the S.W., Basket Island to the N.W., Great Gabegue Island to the N.E., and Smith's Island to the S.E.; here 200 sail of vessels may ride safe from all winds; and when wind and tide serve, you may be out to sea again in an hour.

HALF-WAY ROCK is high and black, about 600 feet in diameter, elevated 16 feet above the level of the sea; at 600 feet from the rock, on the N.W., north, N.E., east, and S.E. sides, there are 5 and 6 fathoms, deepening gradually to 25 fathoms. At $\frac{3}{4}$ of a mile from it a *reef* extends W. by S., $\frac{1}{2}$ of a mile, and it has 10 fathoms within a cable's length of it. You may near this rock on all sides within $\frac{1}{4}$ of a mile, and find from 15 to 25 fathoms. From this rock Segune lighthouse bears E. $\frac{1}{2}$ N., 13 miles; Cape Elizabeth lighthouse S.W. by W. $\frac{1}{2}$ W., 9 miles; Cod Rock S.W. by S., about 6 miles; Portland lighthouse W. $\frac{1}{2}$ S., distant 8 miles; Green Islands W. $\frac{1}{2}$ N., about 5 miles; Drunken Ledges N.N.E., $2\frac{1}{2}$ miles; Mark Island N. by E. $\frac{1}{2}$ E., $4\frac{1}{2}$ miles; Jewill's Island N.W. by N., about 3 miles; and Eagle Island, north, $4\frac{1}{2}$ miles. Drunken Ledges may be seen at all times, breaking with little sea.

Mark Island is small and bare, and has a monument erected on it, as a guide for vessels into Broad Sound. Eagle Island is small, high, and covered with trees; these two islands form the east side of the entrance to Broad Sound; and Brown Cow and Jewill's Islands form the west side. Green Islands lie S.W., $1\frac{1}{4}$ mile from Jewill's Island.

COD LEDGE is $\frac{1}{2}$ a mile in circumference, and has $2\frac{1}{2}$ fathoms on it at low water, gradually deepening to 5, 7, 8, and 12 fathoms; and bears from Portland lighthouse E.S.E., about 7 miles, and from Cape Elizabeth E. by N. $\frac{1}{2}$ N., distance 5 miles; this ledge breaks with strong S.E. winds.

CAPE ELIZABETH and PORTLAND HARBOUR.—Upon Portland Point, which lies about 4 miles to the northward of Cape Elizabeth, stands a lighthouse, built of stone, and 72 feet high, exclusive of the lantern, which is of the greatest utility on this coast. Its light is fixed. The sound or harbour of Portland is buoyed, and the following directions are to be observed when sailing in.

On the observatory at Fort Hill is placed a telescope, by means of which vessels approaching the coast can be discovered 15 leagues off; their colours or signals may be distinguished 8 leagues distant, if the weather be clear; and should any assistance be wanted, they will place their ensign over the private signals, and if they can be discerned, information of their situation will be made known to the owners. This observatory is built on an eminence, 141 feet above high water mark, and the building is 32 feet high, being painted red, and having the telescope at the top; it bears from Portland lighthouse N.N.W. $\frac{1}{2}$ W., distance 4 miles; and these in a line will be a good mark for clearing *Alden's Ledge*, carrying you $\frac{3}{4}$ of a mile to the eastward of it.

Vessels of a large draught will find the best water by bringing Portland light N.W. by N., and steer N.W. by N., and run directly for it.

If you should fall in to the eastward of Portland and make *Seguine light*, bring it to bear east, and steer west, which course you are to continue until you make Portland light to bear from N.W. to W.N.W., when you may run for it without fear. Remember always to pay a due regard to the tide, the flood setting strongly between all the islands to the eastward.

In coming from the south-westward, when within $\frac{1}{2}$ a mile of Cape Elizabeth, the red buoy on Broad Cove Rock may be seen. This buoy bears N.N.E. from the pitch of the cape, distant $1\frac{1}{2}$ mile, and lies in 24 feet water. When advanced to it, leave it to the port hand, at $\frac{1}{2}$ a cable's length, and steer N. by E. $\frac{1}{2}$ E., a mile, which will carry you up to the white buoy on Trundy's Reef, lying in 16 feet water; give this the same berth as the former. You may run N. by W. $\frac{1}{2}$ W., 3 miles, for Portland lighthouse; and when up with the point upon which the lighthouse stands, give it a small berth, and steer N. by W., leaving Bang's Island on the starboard side, till you come to House Island, the S.W. point of which bears north from the lighthouse, distant nearly 2 miles. Before you are up with this island, the black buoy on Spring Point Ledge may be seen; it bears N.W. by W. from the S.W. part of House Island, distant $\frac{1}{2}$ a mile, and lies in 14 feet water. When up with this buoy, you open the town; and, giving it a small berth, you may haul up N.W. for the white buoy on Stanford's Ledge: the latter lies also in 14 feet water, and is a mile distant from Spring Point Ledge buoy. Giving the white buoy a small berth, you may keep midway up the river, and safely anchor off the town, at pleasure.

It is to be observed, that all the buoys before mentioned are to be left on the port hand when coming in. Besides the above, there are also two small buoys lying upon *two ledges*, in Whitehead Passage, at the N.E. part of Bang's Island: this passage is narrow, and seldom used by large vessels. By keeping midway between the two buoys, the red on the starboard, and the white on the port, when going in, you will not have less than 5 fathoms water. After passing the buoys, keep midway in the passage, and run to the distance of a mile, which will carry you into Ship Channel, the same as if you had passed the lighthouse.

The following directions for Portland Harbour will be found useful, in case any of the buoys should be removed by accident.

Coming from the south-westward for Portland Harbour, give Cape Elizabeth a berth of $\frac{1}{2}$ a mile, and steer N.N.E. until you bring Portland lighthouse N.N.W.; then, if the wind permits, haul up N.N.W.; but should your ship be large, and the wind at N.W. or W.N.W., continue a N.N.E. course, which will carry you safe into Hussey's Sound, allowing it to be flood-tide, for Portland entrance is narrow, though bold between the lighthouse and Bang's Island.

If turning in the night into Portland, in standing to the south-westward, you must go about as soon as the light bears N.N.W., and in standing to the eastward, as soon as it bears W.N.W., for there is a *ledge of rocks* bearing S.E. from the light and Ram's Island, very low, about a mile north-easterly from it. With a leading wind you may proceed in without fear, keeping mid-channel; and, when abreast of the light, steer

N. by W. for House Island, which leave on the starboard; and, when passing it, bring it to bear S.E. by E., and steer N.W. by W. or W.N.W., with the tide of flood. You will then perceive a round bushy tree to the northward of the town, and also a house with a red roof and one chimney; by bringing this tree to the westward of the house, you will go fairly up channel, in 6 and 7 fathoms; and when abreast of the fort, which stands on a hill, haul away W.S.W., to avoid the *shoal* on the starboard hand, which has not more than 10 or 12 feet over it at high water.

Be also careful of *two ledges of rocks*, one called *Spring-tide Ledge*, 2 miles N. by W. $\frac{1}{2}$ W. from the lighthouse; the other, named *Stanford Ledge*, with a buoy upon it, bearing N. by W. $\frac{1}{2}$ W., 3 miles, and stretches off from your port hand $\frac{1}{2}$ a mile: these lie to the S.W. of House Island, and are dry at low water. If you are obliged to turn in here, they are much in the way; and when you are standing to the southward, be careful of them. The marks will do in the day, but are of no use in the night. A pilot generally officiates here. This harbour is open to N.E. and E.N.E. winds.

If you are coming in on a dark night, you may go into Hog Island Road, which may be done by steering as follows:—Having passed the lighthouse, steer N. by W. until you pass Bang's Island, leaving it on your starboard hand, and House Island you must leave on your port, or left hand, and when between both, steer N.E. by E. until you reach the second island on your starboard side: anchor abreast of this, in 10 or 12 fathoms. If it is day-time you will see a large house on the said island: anchor as soon as you are abreast of it.

Vessels bound to Portland, and falling in to the westward and making Wood Island, must bring it to bear S.W. by W. $\frac{1}{2}$ W., and steer N.E. by E. $\frac{1}{2}$ E., 13 miles, which will bring them up with the buoy of Alden's Ledge.

Cape Elizabeth is 5 miles to the southward of Bang's Island; and there is a *ledge*, called the *Alden's Rock*, bearing E.S.E. $2\frac{1}{2}$ miles from the cape, and about 2 leagues S.S.E. from the lighthouse. It has only $5\frac{1}{2}$ feet water over it; and, in rough weather, the sea breaks upon it.

A red spar-buoy is placed on Alden's Rock, with a staff and flag, coloured red; there are also two watch buoys within 15 to 20 feet of this buoy. The most dangerous part are *two rocks*, 420 feet apart, bearing E.S.E. and W.N.W. of each other. On the western rock is $5\frac{1}{2}$ feet, and on the eastern rock $7\frac{1}{2}$ feet at low water; between them are 4 and 5 fathoms. The buoys lie to the northward of the rocks, and should have a berth given them of 2 or 3 cables' length. In running for Portland, bring the buoy S.S.E., and steer N.N.W., $6\frac{1}{2}$ miles, which will bring you up to the light.

CAPE ELIZABETH is now distinguished by two lighthouses; they stand about 300 yards from the sea shore, and the same distance from each other. The N.E. light is fixed, and the S.W. one is a revolving light, showing a brilliant light, and obscuring alternately every $1\frac{1}{2}$ minute. The two lights bear from each other S.W. $\frac{1}{2}$ W. and N.E. $\frac{1}{2}$ E. The lanterns are 140 feet above the level of the sea at high water.

From the N.E. light Portland light bears N. $\frac{1}{2}$ E., 4 miles; Wood Island light S.W. $\frac{1}{2}$ W., 9 miles; and Seguin lighthouse E. by N. $\frac{1}{2}$ N., 22 miles.

The following are the bearings and distances, from the north-easterly light, of the shoals and reefs near the cape:—Alden's Rock S.E. by E., $2\frac{1}{2}$ miles; Hue and Cry Rocks S.E. $\frac{1}{2}$ S., $3\frac{1}{2}$ miles; Taylor's Reef S.S.E. $\frac{1}{2}$ E., $1\frac{1}{2}$ mile; Broad Cove Rock N.N.E. $\frac{1}{2}$ E., $1\frac{1}{2}$ mile; outer point of Watch Ledge S.W. $\frac{1}{2}$ S., 2 miles; and S.E. side of Richmond Island S.W., $2\frac{1}{2}$ miles.

To the westward, near Richmond Island, is a windmill, which is the first you will see in coming from the eastward. The variation here is about 9° west.

CAPE ELIZABETH TO CAPE ANNE.

From Cape Elizabeth to Wood Island, on the south side of Saco Bay, the course and distance are about S.W., 8 miles; and thence to Cape Porpoise, S.W., 9 miles. The harbours formed by Wood Island and Cape Porpoise are to be attempted only with a pilot.

On Wood Island is a *Lighthouse*, which may be known from that of Portland by its having a revolving or repeating light; this light is 45 feet above the level of the sea, and may be seen 7 or 8 leagues off; when it first becomes visible, at about the above

distance, the eclipse, in each revolution, will be total, and will thus be repeated, until you get 7 or 6 miles off; then the light will not totally disappear. This island is high, woody, and even.

Wood Island lies 3 leagues N.E. of Cape Porpoise; in coming from the south-westward, you should bring this light to bear N.N.W. or N.W., and then you may run on until within a cable's length in safety. You may go into the harbour either to the eastward or westward of the island. There are *several rocks* to the westward of the island, and also a *long bar*, which lies to the S.W., about $\frac{3}{4}$ of a mile distant, together with *two ledges*, one of which bears S.E. by S. from the light, $\frac{1}{2}$ a mile, having 10 feet on it at low water; and the other is a *dangerous ledge*, called *Danceberry*, bearing S. by E. from the light, about $\frac{3}{4}$ of a mile, and breaks at all times. With a southerly wind you may anchor near *Stage Island*, on which is a monument, in what is called *Winter Harbour*; enter the eastern way, and you will have room to turn your vessel, which you cannot do if you go in by the western. This anchorage is exposed to the N.E. and E.N.E. winds; but if your anchors and cables are not good, you may run into the pool, and lie safe from all winds.

Saco is about a league to the N.W., having a *bar*, with but 9 or 10 feet at high water; but a considerable trade is carried on there.

Richmond Island lies about 7 miles N.E. of Saco, and is fit only for small coasters; but in sailing by this island you must be careful of a *sunken ledge*, called *Watch Ledge*, which lies off about S.E. from the N.E. end of the island, $\frac{1}{2}$ a mile; keep, therefore, farther off, for it is not visible, unless when the wind blows fresh.

CAPE PORPOISE LIGHT.—The lighthouse stands on the S.W. part of Goat Island, and contains a fixed light, elevated 33 feet above the level of the sea. Porpoise Harbour is not very safe for large vessels, and should not be attempted unless with a fair wind; and a pilot is always necessary.

KENNEBUNK HARBOUR is very shoal, and can only be entered at high water; the depth on the bar at low water is 2 or 3 feet. Common tides rise and fall 8 and 9 feet.

The course and distance from Cape Porpoise to Cape Neddock are S.W., 13 miles; between lies Wells Bay; and close to the northward of Cape Neddock Nubble is the Cape Harbour, which is very small.

THE WHITE HILLS are a most prominent and important land-mark in approaching these coasts, and may be seen many leagues off at sea, like a bright cloud above the horizon, when no other land is in sight. They lie N.W. from Portland, and N.N.W. from Wood Island. They have been seen, in clear weather, in latitude $43^{\circ} 10'$, 46 miles off Cape Elizabeth, where there are 80 fathoms water, muddy ground. If from this spot you steer N.W. or W.N.W., you will make *Agamenticus Hills*; which, when bearing W. by N., 6 or 7 leagues, appear to be three in number, the smallest being to the eastward. At the same time you will make *Wells*, or *Bonabeg Hills*, bearing W.N.W.; and when on the northern part of Jeffery's Bank, in 45 fathoms, you will see the hills of *Agamenticus* bearing W. by N. or W.N.W.

BOON ISLAND.—In coming from the eastward for this part of the coast, you should keep a good look-out for Boon Island, upon which stands a lighthouse of stone, with two buildings on it; the one for a dwelling, the other for an oil-house. This is a fixed light, 70 feet above the sea. A *ledge of rocks* lies due north from this island, which must be carefully avoided; there is also, about a league to the eastward of the island, a *dangerous reef* under water, with only 4 feet upon it, over which the water breaks continually; the position of this reef will be seen on inspecting the chart: it is *very dangerous*, and therefore should be avoided. This reef lies about S.E., 5 or 6 leagues from *Agamenticus Hills*. Vessels, in making the land hereabout, should be careful, especially in thick weather, not to go to the northward of latitude 43° , unless they are well acquainted, and judge themselves to be to the westward of the Boon Island Ledges, as this has proved fatal to many who were unacquainted.

In this direction, and between Jeffery's Bank and Piscataqua Harbour, are 80, 70, and 75 fathoms; the ground in general is mud; and the current will be found setting strongly to the south-westward.

YORK LEDGES.—This rock is bare at $\frac{3}{4}$ ebb, extending E.N.E. and W.S.W., about 400 feet, and is about 300 feet wide. N.E. of the main rock there is a *shoal* runs

off $\frac{1}{4}$ of a mile, having only 2 fathoms upon it at low water. The soundings are gradual, from 5 to 20 fathoms, $\frac{1}{4}$ a mile from the rock. An iron beacon has been erected on this rock; it is $33\frac{1}{2}$ feet high, and about 25 feet above the level of the water; upon the pillars rests an iron tabular column, supporting an iron base, of $3\frac{1}{2}$ feet diameter, upon which is inscribed "YORK LEDGE, 1841."

The *Triangular Shoal* bears S.W., 2 miles from this beacon; it has 4 fathoms on it at low water, and which breaks in a heavy sea.

Boon Island light bears from the beacon E. $\frac{1}{4}$ N., $5\frac{1}{2}$ miles; Whale's Back light W. by S. $\frac{1}{4}$ S., 5 miles; White Island light S. by W. $\frac{1}{4}$ W., $8\frac{1}{2}$ miles.

YORK HARBOUR is small, but safe when once entered; there are 12 feet at low water, and the tide rises 9 feet.

The *Isles of Shoals* is the southernmost cluster or ledge of rocks which surround the entrance to Portsmouth Harbour; in clear weather they may be seen to the eastward 15 or 16 miles off; but in thick weather you will first discern the Meeting-house, which is built upon one of the islands. If bound to Newbury or Portsmouth, you should give them a large berth, going full 3 miles to the southward of them; for about 2 miles off them lies *Innes's Rock*, drying before low water; this is about 2 miles S.W. by S. from Star Island.

WHALE'S BACK LIGHTHOUSE is situated on the eastern side of Portsmouth Harbour; its height is 68 feet above low water mark. It has two fixed lights, one 10 feet below the other.

The following are the bearings and distances of places from Whale's Back light, viz.:—Western Sister Shoal, N. $89^{\circ}41'$ E., a mile, 1310 feet; Eastern Sister, N. $75^{\circ}53'$ E., a mile, 3480 feet; Ordiorn's Point, S. $44^{\circ}30'$ W., a mile, 1920 feet; Phillip's Rocks, (12 feet,) S. $83^{\circ}30'$ E., a mile, 300 feet; Kitt's buoy, S. $23^{\circ}50'$ E., 2130 feet. Gun Boat Shoal lies 4 miles southward of Portsmouth lighthouse; it runs E.N.E. and W.S.W., about 2 cables' length, and has $3\frac{1}{2}$ fathoms on its shoalest part, and bears from Whale's Back light S. by W. $\frac{1}{2}$ W., and from Ordiorn's Point S. $\frac{1}{2}$ E.

PORTSMOUTH HARBOUR may be known by its lighthouse, which stands upon Fort Point, on the western side, and upon which one light is exhibited; this is a fixed light, and stands 85 feet above the level of the sea. In coming from the south-westward, endeavour to bring the Dry Salvages, off Cape Anne, to bear S. by E., then steer N. $\frac{1}{2}$ W. or N. by W., which will bring you to the Isles of Shoals, from whence you may take a fresh departure. Let Star Island bear S.S.E., and steer N.N.W.; then turning in for Portsmouth, bring the light to bear north, but not to the westward of that until you have passed Ordiorn's Point; and when standing to the eastward, tack about as soon as the lighthouse bears N. by W. $\frac{1}{2}$ W., until you get within Wood Island. Be cautious of approaching too near Ordiorn's Point, for *sunken rocks* lie off it more than $\frac{1}{2}$ a mile, which do not appear with off-shore winds. In standing to the eastward, be likewise cautious of the Whale's Back, which lies S.S.W. from Wood Island, and is covered at half-tide.

Whale's Back will be easily distinguished by its lighthouse, which must be left on your starboard hand going in.

At the entrance of the harbour the tide flows, on full and change days, at $\frac{1}{4}$ past 11 o'clock.

Ships bound to this port, from the eastward, with a turning wind, must be cautious of York Ledge, on which the beacon is erected. There is also a *sunken ledge*, called the *Triangle*, before mentioned, lying S.W., 2 miles from York Ledge beacon, which is never uncovered, but always breaks at low water. Some part of York Ledge is uncovered at half-tide.

A ledge of rocks lies a mile north from Boon Island, of which beware. There is also a *dangerous reef*, bearing east, a league from the island, and S.E., 5 or 6 leagues from Agamenticus Hills; these have been noticed before.

ISLES OF SHOALS.—White Island, the south-westernmost of these islands, is rocky, extending $\frac{3}{4}$ of a mile in length from S.E. to N.W., and about $1\frac{1}{2}$ mile distant from the Meeting-house of Star Island. A reef extends about $\frac{1}{2}$ of a mile from its N.W. end, to which a berth must be given.

White Island is now distinguished by a lighthouse, the light of which is elevated 67 feet above the level of high water; the lantern contains 15 patent lamps, with reflectors,

on a revolving triangle, which will make one complete revolution in $3\frac{1}{2}$ minutes, exhibiting on one side a bright red light, on one side a blue, and on the other side the natural colour of the light.

Each of these lights may be distinctly seen for about 50 seconds, at the distance of 9 miles; the light will be wholly eclipsed, for about 10 seconds, between each colour; but within the above distance the light will not entirely disappear in clear weather; taking the medium, the greatest power of light will be to the least, as 40 to 1. The bright, or natural light, will be first discernible, in clear weather, at the distance of about 7 leagues; and, as you approach, the red and blue in succession. The bright light will be visible 2 or 3 miles farther than the red, and the red about a similar distance farther than the blue.

There is also a bell of 800 pounds weight suspended to the tower of the lighthouse, which will be kept tolling at the rate of 10 strokes in a minute, by night as well as by day, whenever, from fog, or any other cause, the light or lighthouse cannot be seen at least 4 miles; at which distance it is calculated the bell may be heard, in moderate weather.

From White Island lighthouse the bearings and distances to various spots are as follows:—to Portsmouth lighthouse N.N.W., $7\frac{1}{2}$ miles; Square Rock lies directly in this range, and is distant from White Island lighthouse $\frac{1}{2}$ of a mile; to Boon Island light N.E. by N., distant 12 miles; to Cape Anne light S. $\frac{3}{4}$ W., $19\frac{1}{2}$ miles; to Rye Meeting-house N.W. by W. $\frac{1}{2}$ W., 9 miles; and to Star Meeting-house N.E., $\frac{7}{8}$ of a mile. Innes's Rock bears S.W. by S. from this island, distant 2 miles, and is uncovered at low water; to the N.W. point of Hog Island N. by E. $\frac{3}{4}$ E.; to Cedar Island Ledge E.N.E. $\frac{3}{4}$ E., $1\frac{1}{2}$ mile; to Anderson's Ledge S.E. by E. $\frac{1}{2}$ E., $1\frac{1}{2}$ mile; and to White Island Ledge W.S.W., $\frac{1}{2}$ of a mile.

Londoner's Island lies about $\frac{1}{2}$ a mile to the northward of White Island, and is about $\frac{1}{2}$ of a mile in length from N. to S., high at each end, but at high tides the middle is sometimes covered; it is surrounded with *rocks*, some being always above water. The south end bears west from the Meeting-house, and the north end W.N.W. $\frac{1}{2}$ W., about $\frac{1}{2}$ a mile distant.

Star Island, distinguished by the conspicuous Meeting-house before mentioned, is about $\frac{3}{4}$ of a mile in length from S.E. to N.W., and about $\frac{1}{2}$ a mile in breadth; its north end is covered with buildings. The Meeting-house stands on an eminence, a little to the northward of the middle of the island, fronting the west; the roof of this building is only 12 feet high; but thence to the top of the steeple, which stands on the middle of it, is 30 feet more; and the whole height, from the surface of the water, is about 87 feet: being painted white, it may be seen from a distance of 8 or 9 leagues. It bears from Thatcher's Island lights, Cape Anne, (hereafter noticed,) N. $\frac{1}{4}$ E., distant $6\frac{1}{2}$ leagues; from Newbury Port lighthouse N.E. $\frac{1}{2}$ E., distant $4\frac{1}{2}$ leagues; from Portsmouth lighthouse S.S.E. $\frac{1}{2}$ E., 3 leagues; from the western Agamenticus Hill S. $\frac{1}{2}$ E.; from Boon Island lighthouse S. W. $\frac{1}{2}$ S., $4\frac{1}{2}$ leagues; and Boon Island Ledge, which lies a league east from Boon Island, S.W. by W., $3\frac{1}{2}$ leagues. Off the south end of this island, at about $\frac{3}{4}$ of a mile from shore, lies a *rock*, called *Anderson's Rock*, which is uncovered at half-tide, and should, therefore, have a good berth when passing. From the Meeting-house it bears S.S.E. There is also a *rock* between this island and *Londoner's Island*, bearing from the Meeting-house N. by W. $\frac{1}{2}$ W., distant $\frac{1}{2}$ of a mile.

Cedar Island is the small island which lies to the eastward of *Star Island*; it is only $\frac{1}{2}$ of a mile from east to west. The east end bears from the Meeting-house E. $\frac{1}{4}$ N., and the west end E.N.E. $\frac{1}{2}$ E., $\frac{3}{8}$ of a mile distant. At $\frac{1}{2}$ a mile from the S.E. end of this island is a *rock*, uncovered at half-tide, which bears E. by S. from the Meeting-house.

Smutty Nose Island is nearly a mile in length from east to west, and about $\frac{1}{2}$ a mile in breadth. It may be known by a windmill on its north part. At the west end is a fine harbour, called *Haley's Cove*, where 15 or 20 small vessels may lie safely in all winds. There are several buildings near this place. Between the island and *Hog Island*, which lies to the northward, there is a fine channel with sufficient depth of water for any vessel, by keeping nearly in mid-channel. The east end of *Smutty Nose Island* bears from the Meeting-house E.N.E., nearly $\frac{3}{4}$ of a mile.

Hog Island is a high island, lying to the northward of *Smutty Nose Island*; it is about a mile in length from east to west, and $\frac{3}{8}$ of a mile from north to south. The

west end lies from the Meeting-house N. by W. $\frac{1}{4}$ W.; east end of ditto N.N.E., $\frac{1}{2}$ of a mile distant.

Duck Island is the northernmost of the Isles of Shoals. It is low and rocky. Some parts are covered at high water, with *rocks* projecting in every direction, especially at the N.W. end, where a *ledge* runs off to the distance of $\frac{1}{2}$ a mile: it is the most dangerous of the Isles of Shoals, and must be cautiously avoided. Its east end bears from the Meeting-house nearly N. by E. $\frac{1}{4}$ E., distant about $1\frac{1}{2}$ mile.

NEWBURY PORT.—The entrance of Newbury Port, or Newbury Harbour, is distinguished by two lighthouses, standing on the northern part of Plum Island; it lies nearly $7\frac{1}{2}$ leagues S.W. $\frac{1}{4}$ S. from Cape Neddock Nubble. If coming round Cape Anne, and at about 2 miles to the northward of the Dry Salvage Rock, before mentioned, bring it to bear S.E., and steer N.W., $4\frac{1}{2}$ leagues, which will bring you to Newbury Bar. In running from the bar to the eastward, strangers should not approach near Hampton Harbour, as off its mouth lie several *sunken rocks*.

The Marine Society of Newbury Port erected, some years since, at their own expense, several huts, at proper distances from each other and from the shore, and supplied them with fire-works, fuel, straw, &c.; but owing to the strong winds driving the sand from their foundations, and the inhuman conduct of people who visited the island in summer, these huts were in a few years totally destroyed. The misfortunes attending this generous and humane attempt in favour of the shipwrecked mariner, deterred the Marine Society, as well as other bodies and individuals, from a like benevolent attempt, until the establishment of the Merrimack Humane Society in 1802. Conceiving it absolutely necessary that some relief should be afforded the unfortunate sufferer on so desolate a spot, and in the most inclement season of the year, the Society voted to build three huts on the island, and have carried their generous resolutions into full effect. The exertions of this benevolent Institution will be, in future, to preserve these huts in repair, and in perfect supply of materials for fire, and other necessaries for the support and preservation of life. Many, no doubt, will owe their lives to the humanity of this design, and with grateful feelings contribute themselves to the preservation of others. The expense and trouble will be trivial in comparison with the noble purposes it may answer; and the hope of its answering these purposes, will be alone a sufficient remuneration to the generous projectors.

From the report of a Committee, appointed by the Society, we have the following description of the huts, and directions to the mariner where to find them:—

“The house for the keeper of the lights, erected by the United States, is about 20 rods south from the lighthouses. About 2500 paces, or $1\frac{1}{2}$ mile south from this house and the lights, on the inside of the island, is the first hut, to which the mariner, in day-light, may be directed by a beacon, about 300 paces to the east, with a hand pointing to the hut.

“2900 paces, or about $1\frac{1}{2}$ mile south from this, is the second hut, with a similar beacon, about 400 paces S.E., pointing to it.

“1700 paces, or about a mile south from this, is a third, with a beacon, bearing east, 500 paces distant.

“5000 paces, or about, 3 miles south of this, is a house, occupied by Mr. Spiller and family, which is about a mile from the south end of the island, and about west, a mile from the south end of the island, are two other houses, with families.

“These huts, together with the other houses mentioned, form a chain from one extremity of the island to the other. The unfortunate mariner, whose fate may wreck him on this shore, can, by noticing the point of the compass from which the wind blows at the time of his being wrecked, be governed in his course across the island, where he will find himself under the lee of the higher land, and protected in some measure from the violence of the tempest. By keeping along the margin of the island, where the travelling is good, and before coming quite to the marsh, either north or south, he will be certain of meeting with one of these huts or houses, where he may find temporary relief. To facilitate still further the means of conveying immediate assistance to those unfortunate mariners who may be wrecked on this island, a number of gentlemen were incorporated for the purpose, and have completed a bridge and turnpike road from Newbury Port to Plum Island. This road leads in a south-easterly direction from Newbury Port, and the bridge crosses Plum Island nearly about $\frac{1}{4}$ of a mile to the

S.W. of Seal Island. An elegant hotel has been erected at the east end of the bridge, within 100 rods of the sea-shore, a mile south from the lights, and about $\frac{1}{2}$ of a mile northerly from the northernmost house erected by the Merrimack Humane Society before mentioned. The hotel is painted white, has three white chimneys, and may serve as a land-mark for seamen.

"If a vessel, by stress of weather, should be obliged to run ashore on this island, and the master can make any choice of the place it is most eligible to run on, as nearly opposite this house as possible, as assistance and shelter can be more promptly afforded, and the communication will be more direct with Newbury Port.

"It rarely happens that any life is lost on this beach, in attempting to escape from the wreck, when the crew remain on board until low tide. Unless the vessel is in imminent danger of going to pieces immediately, the seamen should never take to their boat."

Hampton Harbour lies about 5 miles north from the southern extremity of Salisbury Point; between, at the distance of 3 miles N. by E. $\frac{1}{2}$ E. from the lights on Plum Island, lies another *dangerous rock*, having only $3\frac{1}{2}$ feet water over it.

Plum Island is situated between the mouth of Merrimack River on the north, and Ipswich Bay on the south; and is separated from the main land by a narrow sound. Its length is about $8\frac{1}{2}$ miles, and its width, from the sea to the main, not more than 500 paces. On the north end of the island are two lighthouses, which are constantly lighted at night, and so constructed as to be easily moved; a circumstance requisite from the frequent shifting of the bar at the mouth of Newbury Port Harbour. This bar is probably formed by the current of the river, in its progress out, meeting the drift of the sea and opposing winds, and by that means forming a bank of loose sand, which the strength of the tide is insufficient to force out. It extends across from Plum Island, and about a mile below the lights, to Salisbury Beach. The channel over it is extremely narrow, and terminated on each side by very dangerous *shoals*; that on the north, called the *North Breaker*, and that on the south, the *South Breaker*. The lighthouses are always so situated as to be brought in a range by the mariner coming over the bar; and as, by the violence of winds or tides, the bar shifts, the lighthouses are shifted to conform to it. By keeping the lights in one, vessels may, by day or night, come in with safety, and find good anchorage, in 4 or 5 fathoms water, abreast or between the two lights.

That part of the island bounding on the sea, and extending above half its width, consists entirely of yellow sand, perfectly smooth on the beach, but, farther from the sea, driven by the wind into hillocks, or heaps of fantastic forms, and preserved in that shape by the successive growth of grass and shrubs. On the back part of the island, where it is washed by the sound, is an extent of salt-marsh, bounding its whole length. At the southernmost end of the island there are several houses, with families, and a considerable spot of land in good cultivation. To the northward is a grove of pine-trees, of $1\frac{1}{2}$ mile in extent.

If you advance no farther westward than for the lights on Plum Island to bear S.W., no danger is to be apprehended from either of the rocks above mentioned; but that course to the bar would lead to the North Breaker: you must, therefore, bring the lights to bear W. by S., and anchor in 11 or 12 fathoms water, should the tide not permit you to sail in. No vessel going in should approach the South Breaker nearer than in 7 fathoms; or nearer the North Breaker, in coming from the eastward, than 9 fathoms.

Pilots are always ready when the weather will permit them to go out; but if they cannot get to you, keep the two lights in a line, and run for them, until within a cable's length of the eastern light; then haul to the westward, and anchor between the two lights, in 4 fathoms. A vessel drawing 10 feet water may come in at $\frac{3}{4}$ flood; always observing to keep to the windward of the bar, unless the wind be fair. If the sea should be so great that the pilot cannot get over, then a signal will be made by him, when you must run direct for his boat, keeping the lights in range, which will carry you over in safety; or bring the western lighthouse S.W. by S., and run N.W. by N. for Salisbury Point; but as soon as you make that point, you should haul up N.W., which will carry you clear of *Badger's Rocks* and the *Hump Sands*.

In a course nearly north from the lighthouses on Plum Island, and about $\frac{1}{2}$ a mile distant, across the mouth of the Merrimack River, is the southern extremity of Salisbury Beach, called Salisbury Point. From this point a *sand-bank* extends on the verge of the ocean, without an inlet or interruption of any consequence, until it reaches Hampton River. This beach is connected with the main land by a salt-marsh, of considerable extent, intersected by a variety of small rivulets and creeks, which render it impossible for a shipwrecked mariner to reach the inhabited part of Salisbury. Here, too, the hapless seaman is sometimes destined to suffer the misfortunes of shipwreck, and to reach a desolate and inhospitable shore, only to aggravate the horrors of his death. If he can attain the first and wished-for object, in evading the jaws of the angry ocean, yet he finds himself a solitary wanderer on the coast, without shelter and without sustenance; and, in his fruitless search for them, must inevitably perish.

As the N.E. storms are generally most fatal to vessels on this part of the coast, Salisbury Beach is not so frequently a place of shipwreck as Plum Island. But to guard against a possibility of accident, which must sometimes happen to the unskilful or inexperienced navigator, the Marine Society erected a hut, similar to those on Plum Island. Here they deposited every thing necessary for the relief of such as might need it, and were at the pains and expense frequently to inspect it, and renew their generosity by replenishing it: but this has shared the same fate with those on Plum Island; not so much, however, from the insufficiency of its foundation, or the violence of the winds, but from the wantonness of individuals and companies who frequent this spot in the warm season on parties of pleasure. The Merrimack Humane Society has extended its benevolent views to this part of the coast, and erected a hut about $\frac{3}{4}$ of a mile north from Black Rocks, and about 150 paces from the sea-shore. This hut is maintained in commodious repair, and provided with every thing suitable for those who may be so unfortunate as to need its shelter. Others, on the same coast, were to be erected as speedily as the funds of the Society and the charities of individuals rendered it possible, and conveniently furnished and provided for the same laudable purpose.

Across the channel, from the Hump Sands to Black Rock Creek, lie seven or eight piers, on which are from 7 to 2 $\frac{1}{2}$ feet at low water; they were sunk in the year 1776, and still remain. The mark to pass between them is, to bring the beacon at the west end of the town over the south corner of the North Meeting-house.

The *Hump Sands* lie S.W. from Salisbury Point, which renders the channel very narrow and difficult to strangers. The *Badger Rocks* bear N.W. $\frac{1}{2}$ N. from the lighthouses, distant $\frac{1}{2}$ a mile; they are covered at $\frac{3}{4}$ flood, and are to be left on the starboard hand when going in. The *Black Rocks*, which are always dry, lie $\frac{3}{4}$ of a mile N.W. from the lighthouses: these also must be left on the starboard hand. The *Half-tide Rocks* bear W. by S. $\frac{1}{2}$ S. from the Black Rocks, at the distance of 1 $\frac{1}{2}$ mile; they are uncovered at half-tide, and have a buoy on them, which is to be left on the port side. Besides these there are the *North Rocks*, which are only seen at very low tides, and which bear W. by S. from the Black Rocks, from which they are 1 $\frac{1}{2}$ mile distant; there is a buoy on them, which is to be left on the starboard hand, the channel lying between these and the Half-tide Rocks. When you pass the Black Rocks, a W. by S. $\frac{1}{2}$ S. course will bring you into the channel-way and good anchorage; and, even in night or dark weather, when you judge yourself at about $\frac{1}{2}$ a mile from the Black Rocks, you may anchor in safety; but it is always dangerous to run for this port in a gale of easterly wind.

The signals for vessels when in sight, and supposed to be bound for Newbury Port, at the time when the sea is so great on the bar that pilots cannot get out to their assistance, are as follow:—

When a vessel comes into the bay, and cannot get over the bar at high water, owing to insufficiency of the tide, a red square flag will be hoisted up, with a pendant under it; and so soon as these signals are seen from the vessel in the bay, she must keep off, and try some other port.

When the usual signals for vessels are kept up, the ship must lay off and on, without the bar, keeping to windward until signals be made for her to come in; and when it is a suitable time to come over the bar, a red square flag will be hoisted half-mast; she may then come in, keeping the lights in a range or in a line.

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When a vessel is seen in the bay, and does not come in before night comes on, the following lights will be made.

For a vessel to keep off, and not attempt to come in over the bar, during the night, a lantern will be hoisted to the top of the flag-staff.

When there is a proper time for a vessel to come in over the bar, during the night, two lanterns will be hoisted, one at the top of the flag-staff, and the other half-mast high. The vessel must then lay off and on at the bar until a light is made in the eastern light-house, at a window about 8 feet below the lantern. The vessel may then come over the bar, keeping the lights in a line; and when she gets abreast of the upper light, there is good anchorage.

The signal for vessels in distress is a white square flag, with a large black ball in the centre, hoisted half-mast high.

If you should make Cape Anne lights, and bring them, or the Dry Salvages, to bear S. by E., you may run with safety N. by W. or N. $\frac{1}{2}$ W., 7 leagues from Cape Anne to Portsmouth.

In running the above course, you will make the Isles of Shoals, if it is any way clear, from which you take a new departure. When you pass the said islands, you bring Star Island (on which the Meeting-house stands,) to bear S.S.E., and then steer N.N.W. from the said island, distant 3 leagues, to Portsmouth; or give White Island light a berth of $1\frac{1}{2}$ mile, bring it to bear east, then run N. by W. for Portsmouth light. White Island is the south-westernmost island.

There is a very good harbour in the Isle of Shoals, with the wind from north-easterly round to southerly, and you may lie land-locked with any of them; but if the wind hauls to the S.W. or W.N.W., you may run in between Snuffy Nose Island, which has a windmill on it, and Hog Island, where there is water enough for a first-rate man-of-war to anchor, in 12 fathoms, muddy bottom.

IPSWICH.—There are two lighthouses on Ipswich Beach, bearing from each other W. $\frac{1}{4}$ N. and E. $\frac{1}{4}$ S. Keeping the two lights in one, will lead over the bar in the best water, a little to the south of the buoy. Run in close to the beach, and follow it close up, to avoid the *northern spit* on the starboard hand; run up round the first high bluff head, where you will find safe anchorage. There are 8 feet on the bar at low water. The western light at the entrance of Ipswich Harbour is revolving; the eastern fixed.

ANNIS SQUAM, or SQUAM HARBOUR, in the south part of Ipswich Bay.—The lighthouse of Annis Squam stands on the eastern side of the entrance; it is a wooden building, of an octagonal form, about 40 feet high, and about 50 feet above the surface of the water at common high tides. It is painted white, and may be known by its inland situation, and being lower than any other lighthouse hereabout.

The bar of this harbour bears from Halbut Point (the N.E. point of Cape Anne,) about S.W. by W., 4 miles. In running from Halbut Point, be cautious of *Plum Cove Ledge*, which shows itself until nearly high water, and bears from Squam light N.N.E., a little northerly, about $\frac{1}{4}$ of a mile. Passing this ledge, you leave Hodgkin's Cove, which is deep, and a long point of land, called Davis's Neck, on your port hand. When up with this neck, haul S.W. or S.W. by W. for Squam Bar. In sailing into this harbour, bring the light to bear due south, and when at the distance of a mile from it, run directly for the light, leaving Haradan's Rock, which lies N.E. by E. $\frac{1}{2}$ E. from the light, distant $\frac{1}{2}$ of a mile, on your port hand. Continue your course until you are within 50 yards of the light, then haul up S.S.W. for the Bar Rock, leaving the lighthouse to the port. The bar, which runs nearly N.E. and S.W., leaves the river about 90 fathoms broad, opposite the light to the starboard.

In running up, as here directed, you will leave the *Lobster Rocks*, which lie 200 yards S. by W. from the lighthouse, and dry at low water, on your port hand. When you are up with the Bar Rocks, which lie on the starboard hand, and are dry till nearly high water, steer S. by E. $\frac{1}{2}$ E. until you open the houses, and you may anchor in from $3\frac{1}{2}$ to 5 fathoms, clear sandy bottom; or run your vessel on shore, on the starboard side, should you happen to be without anchors and cables.

When the weather is so boisterous that boats cannot get off, a flag will be hoisted near the lighthouse, so soon as there is sufficient depth for vessels upon the bar, then run, as before directed.

On the Lobster Rocks is a monument, 17 feet high, and 12 feet diameter at its base, and is 7 feet out at high water. The lighthouse on Wigwam Point bears from the monument N.E. by N. $\frac{1}{2}$ N., $\frac{1}{4}$ of a mile. The black buoy placed outside the bar bears N. $\frac{1}{4}$ E., $1\frac{1}{4}$ mile from the monument; and a white buoy on the Haradan Rocks bears N. by E. $\frac{1}{4}$ E., $1\frac{1}{4}$ mile from the same; and also a red buoy off the Plum Rock Ledges, in 3 fathoms, N.N.E., $1\frac{1}{2}$ mile from the lighthouse.

Squam affords a safe harbour to those who know the bar, and is of great importance to those who get into Ipswich Bay during an easterly gale. On the bar are 16 or 17 feet at high water, and 6 feet at low water. High water, full and change, at 11 hours.

The Salvages bear from Halbut Point E.S.E., distant $2\frac{1}{2}$ miles; and from Cape Anne lighthouses, which stand on Thatcher's Island, N.N.E., distant 3 miles. Between them and Cape Anne is a channel, which is narrow, and chiefly frequented by small vessels only, it being shoal, and encumbered with large stones.

SANDY BAY PIER.—If from the southward, in passing outside Straits Mouth Island, be careful of *Avery's Rocks*, which bear north from the eastern part of Straits Mouth Island, about $\frac{1}{2}$ of a mile; run W. by N. until you bring the Meeting-house to bear S.W. by S., then run in for the pier-head: in approaching which, keep away a little, and run in until you can see into the pier-head; then luff, and round in. Those constantly in the habit of entering the said pool, when the wind is easterly, make up the head sails, and keep up the main-sail, which enables them to have command of the vessel, and avoid falling off against the wharf built out from the beach. If from the northward, after having passed Andrew's Point, bring the Meeting-house to bear S.S.W., and run for it. This course will carry you clear of *Dodge's Ledge*, which you will leave on your starboard hand.

The passage through Straits Mouth Gap is not safe, except at nearly high water, as there are but 3 feet at low water, and rocky bottom.

CAPE ANNE TO CAPE COD.

CAPE ANNE LIGHTS.—Upon Thatcher's Island are two lighthouses, the lanterns of which are about 90 feet above the level of the sea, and the lights may be seen 7 or 8 leagues off, which will always sufficiently distinguish the coast of Cape Anne. Thatcher's Island affords no harbour, nor is there any safe anchorage near it; there is, indeed, a passage between it and the main, through which small vessels may pass even at low tide, but the water is shoal, and the bottom filled with large stones. As soon as the lights are discovered, you will be certain of your situation; for being two separate lights, they cannot be mistaken for the single light of Boston, or that of Cape Cod, or for the Plymouth lights, which are double, and within a short distance from each other; whereas the distance between the lights on Thatcher's Island is about $\frac{1}{2}$ of a mile. The latter can be brought to range in one only in a S. by W. $\frac{1}{4}$ W. and N. by E. $\frac{1}{4}$ E. direction; while those of Plum Island (Newbury Port), when in a line, bear W. by S. and E. by N. The Plymouth lights cannot appear so arranged from the north until you are on the shore, and from the south only when nearly in with the land. The lights of Cape Anne are therefore of great utility to all vessels in their passage in or out, as they at once serve to point out the situation of the Salvages and Londoner, and for a point of departure to vessels bound outward. Thatcher's Island is in latitude $42^{\circ} 38'$, and longitude $70^{\circ} 33'$. Cape Anne is of moderate height, with trees upon it, and further remarkable by Pigeon Hill, appearing like a boat with the keel upwards. You will always go clear of the Londoner, or Thatcher's Island Ledge, by keeping a league off; and in thick weather, or at night, signals from vessels will be answered by a cannon from the lighthouse.

Thatcher's Island Ledge.—This ledge bears from the body of the island from E.S.E. to S.S.E., extending about 2 miles from the island. After getting the west light to bear N. $\frac{1}{4}$ W., you are to the westward of the ledge; then haul up to the N.W., to bring the lights to bear N.E. by E., and steer S.W. by W. for the eastern point, distant $7\frac{1}{2}$ miles from Thatcher's Island: then your course is W. by S., $7\frac{1}{2}$ miles from the lights on Baker's Island.

CAPE ANNE HARBOUR.—In sailing from off Cape Anne lights to Cape Anne Harbour, you will open Braces Cove before coming up with the harbour, which will, when open, bear N.N.W. On a small island within the harbour, named Ten Pounds Island, there is a lighthouse, of which the base is 25 feet above the level of the sea, and the tower itself 20 feet high.

When you come from the eastward and make Cape Ann lights in the night, bring them to bear S.W., and run direct for them, which course will carry you within the Londoner: and when you pass the said rocks, bring the two lights in one, bearing N. by E. $\frac{3}{4}$ E., and then steer S.S.W. $\frac{1}{4}$ W.; keeping this course about a mile, will carry you clear of Milk Island, which is very low, and cannot be seen on a dark night. When you judge yourself to the westward of this island, then haul to the westward until you bring the lights to bear E.N.E., when you must steer W.S.W., about 5 miles, which course will carry you to the eastern point: when you pass this point, keep on W.S.W., until you bring Norman's Woe, which is the highest land on the north side of the harbour, to bear N.N.W., and run in N.N.W., until you shut the lights in; then N.N.E. will carry you safely in.

If you want to go inside the Salvages, keep close on board Halbut Point, which has a tree on the eastern part of it, and steer S.S.E. for Straits Mouth Island; but be careful to avoid *Avery's Rock*, by keeping the lights on the dry point of Straits Mouth Island, till you get close on board: then haul round the point, and E.S.E. will carry you to the lights. To avoid the Londoner, keep the lights close on board the body of the island on which they stand. The Londoner lies $\frac{1}{2}$ a mile off; it breaks at all times, is quite dry at low water, and bears E.S.E. from the middle of Thatcher's Island. A long *shoal* runs off N.E., $\frac{1}{2}$ a mile from the Londoner. Between Thatcher's Island and the Londoner are 3 fathoms at low water. From the Salvages to Halbut Point and Sandy Bay lies a *large spot of flat ground*, which at low water will take up a large vessel. Outside the Salvages is very bold. Halbut Point bears from the Salvages W.N.W., $2\frac{1}{2}$ miles; and the Salvages bear from the lights N.N.E., 3 miles distant.

The outer harbour of Cape Anne has good, safe anchorage against a northerly or east wind, where you may anchor in $7\frac{1}{2}$ to $6\frac{1}{2}$ fathoms, low tides, muddy bottom, the lighthouse bearing S.E. by E., about 1 or $1\frac{1}{4}$ mile. In the S.E. harbour there is also good, safe anchorage with north, east, and S.E. winds: anchor with the light bearing from N. by E. to N.N.W., in 6 or 7 fathoms, muddy bottom, distant from the light $\frac{1}{4}$ to $\frac{1}{2}$ a mile.

There are several *shoals* within the harbour, marked as follows:—On the ledge off the eastern point is a spar-buoy, in 10 feet; on Round Rock is a spar-buoy, with a black head, in $2\frac{1}{2}$ fathoms, S.W. $\frac{1}{2}$ S., $1\frac{1}{2}$ mile from the light; on Cove Ledge is a spar-buoy, with black head, in 2 fathoms, W. by S., $\frac{1}{2}$ a mile from the light; on Dog Bar Ledge is a spar-buoy, with white top, in 2 fathoms, S. by W. $\frac{1}{2}$ W., $1\frac{1}{4}$ mile from the light.

TEN POUNDS ISLAND LIGHT.—Vessels bound to Cape Anne Harbour, and falling in to the eastward of its east point, on which a fixed light is exhibited, which lies about 2 leagues S.E. from Cape Anne lights, must give that point a berth of about a mile; and when the light on Ten Pounds Island bears N.N.E., you will be to the westward of a *ledge* extending from the point, on which is a spar-buoy, in 10 feet water, bearing E. $\frac{1}{2}$ S. from Ten Pounds Rock, and may steer direct for the light. This ledge bears from the light on Ten Pounds Island S. by W. $\frac{1}{2}$ W., and about $\frac{1}{2}$ or $\frac{3}{4}$ of a mile from the shore. Running in, on a N.N.E. course, will lead clear between Ten Pounds Island and Ten Pounds Ledge; the latter bears from the light S.W. $\frac{1}{2}$ W., $\frac{3}{4}$ of a mile, and has only 6 feet water over it at low water, spring-tides, being about 10 fathoms in diameter; in passing between the island and ledge you will have 13, 14, and 15 feet at low water, springs. On the east side of Ten Pounds Island the ground is foul, and the passage unsafe; but the south, west, and north sides are bold, and may be approached to within 60 and 40 fathoms. Give the west end of the island a berth of from 50 to 70 fathoms, and steer N.E., for the inner harbour. You may anchor at any distance from 100 fathoms to $\frac{3}{4}$ of a mile from the island; the light will then bear from south to S.W. The anchorage is from 6 to 3 fathoms, muddy bottom; this place is protected from all winds.

HALF-WAY ROCK.—Should a vessel, bound for Cape Anne Harbour, fall so far to the south-westward as the Half-way Rock, which is 180 feet in diameter, 40 feet high, and bold-to, lying to the eastward of Marblehead, about $2\frac{1}{2}$ miles from the nearest land; and half-way between the lighthouses of Boston and Thatcher's Island, now distin-

guished by a pyramidal beacon, the stone work of which is 15 feet high, with a base of 10 feet, and above the stone-work having a spindle of 15 feet high, on which is a copper ball, 2 feet in diameter; care must be taken not to bring the light on Ten Pounds Island to bear to the eastward of N.E. by N., until you are 1 or $1\frac{1}{2}$ mile to the eastward of the Half-way Rock, in order to avoid the S.E. Breakers, which run out from Baker's Island, and which bear from the lights on that island S.E. $\frac{1}{2}$ S. to S.S.E. $\frac{1}{2}$ E., and about $2\frac{1}{2}$ miles distant. On the S.E. part of these breakers is a spar-buoy, painted black, which bears from the Half-way Rock N.E. by E., distant a mile. Having passed to the eastward of these breakers, you may bring the light on Ten Pounds Islands to bear N.E., and run for it. On this course, Ten Pounds Ledge will be left on the starboard, and the ledges off Norman's Woe Rock and Freshwater Cove on the port side; thus, when you are as far up as Ten Pounds Island, you may anchor as before directed.

The bearings of the several ledges above Ten Pounds Island.—The ledge extending from the east point bears from the Ten Pounds Island light S. by W. $\frac{1}{2}$ W., distant about 2 miles, and has from 6 to 10 feet over it at low water.

A single *rock* lies about midway between the east point and Norman's Woe land, called the *Round Rock*; it has 12 feet over it at low ebbs, and bears from the light S.W. $\frac{1}{2}$ S., distant $1\frac{1}{2}$ mile.

A large *high rock*, of 20 to 30 fathoms in diameter, stands about 30 fathoms off Norman's Woe Point; and in a southerly direction, about 100 fathoms from this rock, is a *ledge*, of only 7 and 8 feet water at low ebbs.

A *ledge*, of only 3 feet water at low springs, lies about $\frac{1}{4}$ of a mile from Freshwater Cove, and bears from the light W. $\frac{1}{2}$ N., distant nearly 2 miles.

The Half-way Rock bears from the light on Ten Pounds Island S.W. $\frac{1}{2}$ W., distant 8 miles.

SALEM HARBOUR.—The entrance to Salem Harbour is distinguished by two lighthouses; they are erected upon Baker's Island, near the middle of the entrance, and are about 40 feet asunder, bearing, when in a line, N.W. $\frac{1}{4}$ W. One light is 72 feet, and the other $81\frac{1}{2}$ feet high; the southern light is the highest. Baker's Island lies on the south side of the principal entrance to Salem, and 5 miles to the eastward of the town. The water near the island is deep, and there is no landing-place. Its north and east sides are rocky. The base of the lighthouses is 45 feet above the level of the sea; the lower lighthouse, which to the north is 25 feet high; the upper one is 40 feet: this latter may be seen $6\frac{1}{2}$ and 7 leagues off.

If bound to Salem, observe when you get abreast of Cape Anne, and bring the Cape lights to bear N.N.W., about 2 miles distant, to steer W.S.W., about 3 leagues, then W. by S., about 5 or 6 miles, which will carry you up with the lights on Baker's Island.

MISERY ISLAND lies about a mile from Baker's Island, and is joined by a *bar* to Little Misery, which makes the north side of the channel opposite to Baker's Island. Misery Ledge has 8 feet least water, and bears from the lighthouses N.W. by W. $\frac{1}{4}$ W., $1\frac{1}{4}$ mile. The south part of Little Misery Island bears N.W. $\frac{1}{2}$ N. from the lights, $\frac{3}{4}$ of a mile.

CAT ISLAND is about S.W. by W. from Baker's Island, 2 miles distant, and about a mile from Marblehead Neck, and ranges nearly between the two. On the N.W. end is a high beach, directly opposite the point of Marblehead, called Peach Point. The shore is irregular and rocky. Beyond and in a line with the island are two other heads, of nearly the same projection; and on the southern side are three high *rocks*, two of which are connected with the island by *bars of sand*, uncovered at low water: the other stands boldly up within these two, but more southerly. The Marine Society has erected a spar on Cat Island, 40 feet high, to the top of which is annexed a cask, of about 130 gallons, which is a good sea-mark, being seen at sea 20 to 30 feet above the land. A black spar-buoy lies off the S.E. end, bearing from the lights S.E. $\frac{1}{2}$ S. to S.S.E. $\frac{1}{2}$ E., $2\frac{1}{4}$ miles from the lights.

BOWDITCH'S LEDGE, on the east end of which is a triangular monument of granite, 32 feet high, placed in $2\frac{1}{2}$ fathoms, and bears from Baker's Island lighthouses W.N.W., $1\frac{1}{4}$ mile.

EAGLE ISLAND is about $1\frac{1}{2}$ mile from Peaches Point, and bears from the lighthouses W. by S. $\frac{1}{2}$ S., $1\frac{1}{2}$ mile. A *bar* runs off from the western point of the island, in a

N.W. direction, $\frac{1}{2}$ a mile, and has a red spar-buoy on the east end of it. It may be avoided by keeping Grays Rocks to the southward of Marblehead Fort.

If you fall in to the southward in proceeding for the lights, you should, so soon as you have made them, bring and keep the northern or lower light open to the eastward of the southern, and run for them, which will carry you to the eastward, and clear of the South Breaker of Baker's Island, which bears from the lights S.E. by S., $2\frac{1}{4}$ miles distant, and is *very dangerous*.

If the wind should be westerly in beating up, stand not to the southward or westward farther than to shut one light in with the other, in order to avoid the South Breaker; nor to the northward farther than to bring the lights to bear W. by S. $\frac{1}{2}$ S., on account of Gale's Ledge, which bears from the lights N.E. by E., $1\frac{1}{4}$ mile distant.

In going into Salem by the common or ship channel, between Baker's Island and Misery Island, which is about a mile wide, you may, so soon as you are up with Baker's Island, pass within 100 fathoms of it, and steer W. by N. for the *Haste* (which is a *broken rock* above water), lying near the middle of the channel, bearing from Baker's Island lighthouse W. $\frac{1}{2}$ N., distant $2\frac{1}{2}$ miles, and $1\frac{1}{4}$ mile from Salem Neck. This course will carry you clear of *Hardy's Rocks*, on which is a beacon, which are covered at high water, leaving them to the southward, and *Bowditch's Ledge* to the northward. If you are in the mid-passage between Baker's Island and the Misery Isles, steer W.N.W. till you have passed *Bowditch's Ledge*, or till Cat Island (upon which a spar is erected, 40 feet high, with a large cask at the top), comes open to the westward of Eagle Island; then haul up west for the *Haste*: you may there anchor in safety, in 5 fathoms water, good ground; but if you proceed into Salem Harbour, pass the *Haste* at about $\frac{1}{2}$ a mile distant on your port hand, and steer S.W. by W., which will carry you into the harbour; observe, there is a *ledge of rocks* runs off from the N.E. end of Winter Island, and that *Abbot's Rock* lies abreast of it; to avoid which, you must keep above $\frac{1}{2}$ of a mile from the shore.

Abbot's Rock has 7 feet water on it on a common ebb, and lies with Castle Hill and house into the cove north of Fort Pickering, and Beverley Meeting-house well in with Juniper Point, (or S.E. point of Salem Neck). Be careful, in keeping off shore, to avoid *Abbot's Rock*, that you go not too far, and get on the *Aqua Vita*, which are *sunken rocks*, lying E.S.E. from Fort Pickering, distant nearly $\frac{1}{2}$ a mile.

When coming from the southward, if you are near Cat Island, you may pass to the eastward or westward of it. If you are to the eastward, give a berth of $\frac{1}{4}$ of a mile, and steer N. by W. $\frac{1}{2}$ W., or N.N.W., leaving the *Brimbles* and *Eagle Island* on the starboard, and *Coney Island Ledge* on the port: that course will carry you clear of *Eagle Island Bar*. Continue on the same course till you have passed the *Haste*, and get into the common ship channel; or you may continue the same course until you get under the north shore, where there is good anchorage. If you are to the westward of Cat Island, you may pass in the middle channel between that island and Marblehead Rock, and steer over north for the ship channel, leaving *Gray's Rock* and *Coney Island* to the westward. When past the *Haste*, and entering the ship channel, proceed as before.

If in coming from the southward and eastward you should find yourself near *Half-way Rock*, upon which is a beacon, bring it to bear S.E., and steer N.W. for the *Haste*, passing near to *Black Rock*, which is steep-to, and bears S.W. by S., $1\frac{1}{4}$ mile from Baker's Island, leaving that on the port hand, and the *Brimbles* and *Eagle Island* on the starboard. The *Brimbles* are *sunken rocks*, bare at low water; near them is a spar-buoy, painted red, which appears out of water at half-ebb. By continuing the above course you will leave the *Haste* on the port hand, and enter the common ship channel, as before directed. The tides here usually rise about 12 feet.

There are several other channels for entering Salem, but they ought never to be attempted without a pilot.

BEVERLEY and MANCHESTER.—To enter the Harbour of Beverley, follow the directions for Salem Harbour, till you bring the *Haste* to bear E.S.E., and run W.N.W., about 2 miles, and reach *Beverley Bar*; this is a *spot of sand* running out from the southern or Salem side of the entrance, and has commonly a beacon upon the head of it, above $\frac{1}{2}$ of a mile from the shore. The bar has very shoal water on the eastern or outward side near it, but good anchorage within. There is good water at

the head of the bar. Having passed the bar, there is a sandy point from the Beverley, or northern side of the entrance; and beyond this point are the Lobster Rocks, which bear from the head of the bar, west a little south, and not $\frac{1}{2}$ a mile distant, being above water at half-tide. To avoid this point, after having well cleared the bar, you will steer towards *Ram-horn, Rock* which has also commonly a beacon, and is to be seen at half-tide, bearing S.W. by S. from the head of the bar, $\frac{1}{2}$ of a mile distant. There are several fathoms of water within a vessel's length of Ram-horn Rock. Giving this a good berth, you will clear the sandy point, and steer for the Lobster Rock beacon, bearing from Ram-horn beacon N.W. by W., distant about $\frac{1}{2}$ of a mile. Passing this at sufficient distance, you will be opposite to the wharfs, and may anchor in deep water, in a very safe and excellent harbour.

To enter Manchester Harbour you must bring the southern light to bear S. $\frac{1}{2}$ E., and run north, a mile distant, where you may anchor on good bottom.

N.B.—Eastern Point bears from Baker's Island lights E. by N. $\frac{1}{2}$ N., $7\frac{1}{2}$ miles distant; Half-way Rock bears from the lights S. 2° E., 3 miles distant. Hardy's Rocks bear from the lights W. $\frac{3}{4}$ N., distant $\frac{3}{4}$ of a mile.

In thick weather a gun will be fired from the lighthouse, in answer to any signal which then may be made.

MARBLEHEAD ROCK bears S.W., $\frac{3}{4}$ of a mile from the western part of Cat Island. It is above water, and may be approached to a short distance without danger; on the rock is a monument, or beacon, painted white at the bottom, and black at the top. It is about 8 feet at the base, and 15 feet in height.

The *Brimbles* are *sunken rocks*, bare at low water; near them is a spar-buoy, painted red, which is seen out of water at half-ebb.

MARBLEHEAD HARBOUR.—Vessels bound to Marblehead, falling to the southward, and running for the lights on Baker's Island, after making them, must keep the north and lower light open to the eastward of the southern light, and run thus for them; this will lead them to the eastward, and clear of the South Breakers off Baker's Island, which bears from the lights from S.E. $\frac{1}{2}$ S. to S.S.E. $\frac{1}{4}$ E., distant $2\frac{1}{2}$ miles.

Having made these lights, and the wind being westerly, when you get within $2\frac{1}{2}$ miles of them, be careful not to stand to the southward and westward so far as to shut the northern light within the southern one, on account of the South Breakers; nor to the northward farther than to bring the lights to bear W.S.W. $\frac{1}{2}$ W., on account of Gale's Ledge, which bears from the lights N.E. by E., distant $1\frac{1}{2}$ mile. Drawing near the lights, you must take care of a *ledge*, called the *Whale's Back*, which bears from the lights N. by E., distant $\frac{1}{2}$ of a mile, and comes above water at quarter-ebb.

In going into Marblehead, and being up with the lights, give the north point of Baker's Island a berth of $\frac{1}{4}$ of a mile, or less. Having the lights in a line, you will be up with the point. When the south light is open of the north light, you have passed the north point, leaving Misery Island on your starboard hand, which bears from the lights N.W. $\frac{1}{2}$ N., $\frac{3}{4}$ of a mile; your course will then be S.W. by S. or S.S.W., until you bring the south light to bear N.E. by E. $\frac{1}{2}$ E., when steer S.W. by W. $\frac{1}{2}$ W., about 3 miles for Marblehead Harbour. Thus you will leave Hardy's Rocks, Eagle Island, and Gray's Rock, on the starboard hand; *Pope's Head* (which is a *large high rock*, bearing S.W. by W. from the lights, $\frac{3}{4}$ of a mile); *Brimbles*, and the north point of Cat Island, on the port hand. The *Brimbles* bear from Eagle Island S.S.E. $\frac{1}{2}$ E., distant $\frac{1}{2}$ a mile; and Gray's Rock from the north point of Cat Island, N.W. by W., $\frac{1}{2}$ of a mile.

Falling in with the south point of Baker's Island, and it blowing hard from the eastward, if you cannot avoid it, you may pass the point by keeping it well open on board, say at the distance of from 20 to 50 fathoms from the shore, where you will have from 4 to 5 fathoms water. When up with the S.W. point, steer W.S.W., which will carry you between the North Gooseberry (which bears S.W. $\frac{1}{2}$ S. from the lights, distant $\frac{3}{4}$ of a mile) and Pope's Head, leaving the former on your port hand, and Pope's Head on your starboard hand, between which you will have from $3\frac{1}{2}$ to 5 fathoms water. As soon as you have passed Pope's Head, haul to the northward, until the south light bears N.E. by E. $\frac{1}{2}$ E., then steer S.W. by W. $\frac{1}{2}$ W. for Marblehead Harbour.

“The south entrance of the harbour of Marblehead is bold, and may be approached with safety with the light on the point of the neck, on the S.E. side of the harbour,

bearing from N.N.W. to W. by N., until you are within $\frac{1}{2}$ a mile of it; then bring the light to bear W. by S., and run for it till within 2 cables' length; then steer N.W. by W. until the lighthouse bears S.S.W., then steer S.W., and anchor with the light bearing from E. by S. to N.E. by E., from $\frac{1}{4}$ to $\frac{1}{2}$ a mile distant, in 6 fathoms, good holding-ground and clear bottom, secure from all but easterly gales.

"The following are the bearings of places from the lighthouse.

"Marblehead Rock	S.E. by E. $\frac{1}{2}$ E.	$\frac{1}{4}$ mile.
Half-way Rock	E. by S.	$2\frac{1}{2}$
Cat Island Rock	E. $\frac{1}{4}$ N.	$\frac{3}{8}$
Baker's Island light	N.E. by E.	3
Hardy's Rocks	N.E.	$2\frac{1}{2}$
Eagle Island	N.E. $\frac{1}{4}$ N.	$\frac{3}{8}$
Gray's Rocks	N.E. by E. $\frac{1}{2}$ E.	1
Peaches Point	N. by W. $\frac{1}{2}$ W.	1
Fort Head	North	$\frac{1}{2}$

"The above bearings are by compass."—*American Coast Pilot.*

Vessels coming from the eastward, and running for Half-way Rock, must not bring the rock to bear to the southward of W.S.W., to avoid the South Breaker, which bears from Half-way Rock N.E. $\frac{1}{2}$ E., distant a mile. Being up with Half-way Rock, and bound to Marblehead, bring the rock to bear E. by S. $\frac{1}{2}$ S., and steer W. by N. $\frac{1}{2}$ N. for Fort Head, distant 3 miles, leaving Cat Island on the starboard hand, which bears from Half-way Rock W.N.W., distant $1\frac{1}{2}$ mile, and Marblehead Rock on the port hand, which bears from Half-way Rock W. $\frac{1}{4}$ N., distant 2 miles. Black Rock bears from Half-way Rock N.W. by W., distant $1\frac{1}{2}$ mile. Cat Island Rock and Point Neck bear east and west of each other, distant about a mile.

Vessels being up in Boston Bay, way, by bringing the Boston light to bear S.S.W., run N.N.E. for Marblehead Rock; they are distant from each other about 10 miles. Half-way Rock and Boston light bear from each other S.W. and N.E., distant 12 miles.

Hardy's Rocks are covered at high water, and may be seen at quarter-ebb. The Whale's Back is covered at high water, and may be seen at quarter-ebb. Gale's Rocks are seen only at low spring-tides. The South Breakers off Baker's Island are always covered. The Brimbles are covered at high water, and are seen at half-tide. Black Rock is always out of water, but low. Cat Island Rock, Half-way Rock, Marblehead Rock, Gray's Rock, and Pope's Head, are large, and high above water. Half-way Rock is very bold all round it. Eagle Island is bold only on the south and east; from the N.E. part of it, quite to Hardy's Rocks, is very shoal water, and no passage for ships.

The *Outer Breakers* (generally called the Outer, Middle, and Inner Breakers,) is a very *extensive* and *dangerous shoal*, extending from Searl's Rocks in a S.E. direction, about 2 miles, and in a westerly direction about $\frac{3}{4}$ of a mile, bearing from the lights from S.E. $\frac{1}{2}$ S. to S.S.E. $\frac{1}{2}$ E., $2\frac{1}{4}$ miles. To pass to the eastward of this dangerous shoal, have the northern, or low light, a little open to the northward of the high light.

BOSTON is the capital of the Massachusetts State and of Suffolk County; it is in latitude $42^{\circ} 22'$ north, and longitude $71^{\circ} 3'$ west; is seated on a peninsula, and defended by a strong castle; the peninsula is formed by the harbour. The city extends in the form of a crescent about the harbour, and has a fine appearance. There is only one safe channel into the harbour, which in some parts is very narrow; but within the harbour 500 ships may anchor, and at the Long Pier (2000 feet in length) ships of the greatest burthen may come close. Most of the public buildings are handsome; and here is the monument of Dr. Franklin (who was born here); near to which are buildings of superior excellence. The streets are good; the bridges over Charles River and the West Boston Bridge are of great length; the latter, which leads to Cambridge, is 3,483 feet in length. The foreign and coasting-trade is considerable. Fifteen of the islands off the harbour are well cultivated, and afford agreeable places of resort in the summer to parties of pleasure. Near Boston the first hostilities commenced in 1775, between the colonists and troops of the mother-country, who evacuated the town in 1776. It is high water, full and change, at Boston Harbour at 11h. 15m. Spring-tides rise 13 feet, neaps 10 feet; variation $8^{\circ} 58'$ west. The population of Boston is about 100,000; and three distinct railways have a terminus here.

BOSTON LIGHTHOUSE.—Vessels coming from the south-eastward, or from Cape Cod towards Boston, will, when about a league distant from the former, steer N.W. by W. $\frac{1}{4}$ W. towards the lighthouse, the distance being about 12 leagues. The lighthouse, which is 82 feet high, stands on a small island at the north side of the entrance of the channel. The light, which was formerly fixed, is now REVOLVING, on the improved plan: it appears brilliant 40 seconds, and is obscured 20 seconds, alternately; this light is visible 9 or 10 leagues off. Long Island light lies west from it, and is about 27 feet high, as will be noticed hereafter.

The entrance to Boston Harbour lies between the Lighthouse Island on the north side, and Point Alderton with Nantasket Heights on the south. There are two huts erected near the lighthouse, with accommodations for shipwrecked seamen; and a cannon is mounted at the lighthouse, to answer signals. When you make the light with a fair wind, bring it to bear W. by N. or W.N.W., then steer for it until you are within 2 cables' length distance: come no nearer to it, but run in until it bears N. by E.; you may then steer W. by S., about 2 miles, for Nantasket Road, where, if the weather be so bad as to prevent your getting a pilot from the island, you may anchor, and ride in safety.

If the wind be contrary, you may stand to the southward till you bring the light to bear W.N.W., and to the northward till it bears W.S.W., until you come within 3 miles of it; then you must not stand to the northward any farther than to bring the light to bear W. by N., nor to the southward than till it bears W.N.W.; you may safely anchor in the bay if the wind be off the shore.

From Cape Anne to Boston lighthouse, your course will be S.W., and the distance nearly 7 leagues. When the lighthouses at Cape Anne bear S. by W. $\frac{3}{4}$ W. from you, they are on with each other. To clear without Thatcher's Island Ledge, you must keep about 3 miles distant from the lighthouse. In thick weather a gun will be fired from the lighthouse, to answer any signal which may then be made.

When you proceed from Cape Cod to Boston Bay, with a flood-tide, you should steer about one point to the northward of the before-mentioned course, because the flood sets into Barnstable Bay: this precaution is the more necessary when the wind is northerly. You are to be equally careful in steering from Boston Bay to Cape Cod. Until you advance within 2 leagues of Boston lighthouse, you will shoal your water from 35 to 19 fathoms. Your soundings will be irregular, and on the Cape Anne shore you will find the ground rocky; but towards Cape Cod all is fine sand.

BOSTON HARBOUR.—Off the entrance of Boston Harbour is a small shoal, called the *Cod Bank*; it lies E. by S., nearly 3 miles from the lighthouse, and in the fairway of the harbour, with Alderton Point and the northern sides of Nantasket and Puttock Islands nearly in a line, W. $\frac{1}{4}$ S., while the S.W. ends of the Outer Brewster and Green Island are in one, bearing N.W. $\frac{1}{4}$ W.

On the port side of the entrance are the Hardings Rocks, forming a cluster, which are steep-to, and lie about $2\frac{1}{4}$ miles off the lighthouse. At low water the largest of these rocks shows itself about 23 feet long, and 4 feet high; this is surrounded by smaller rocks under water, extending out about 140 fathoms on all sides: the marks for the largest are the S.W. point of the lighthouse and the western point of Great Brewster Island in one; and Nahant Rock nearly N. by E., a small ship's length open of the S.W. end of the Graves: these are a *parcel of dry rocks*, appearing white, and lying in latitude $42^{\circ} 22'$ north. A white buoy is now placed upon the N.E. side of the Hardings Rocks, which, in entering, must be left on the port hand.

Alderton Shoal extends in a northern direction from the bluff head of Point Alderton,* about $\frac{1}{4}$ over; there is a red buoy on the outer part of this shoal, which bears from the white buoy of the Hardings N.W. by W. $\frac{1}{4}$ W., distant $1\frac{1}{2}$ mile.

* *The single rock that lies off the north part of Point Alderton.*—The rock on with the first fence that runs over Strawberry Hill; Newcomb's Barn, on Gallop's Island, half-way between the lighthouse on Long Island, and the beacon on the spit. When Newcomb's barn is on with the beacon, you pass to the north of this rock, on the north side of which a buoy is placed, and near it.

Mark for a shoal in Lighthouse Channel.—The east low point of Gallop's Island just seen clear of the N.E. end of George's Island; the buoy of the Centurion just clear to the north of the Great Brewster; on this shoal, at low water, there are only 12 to 13 feet. Mr. Wilson, pilot for Boston Harbour, struck on this shoal in a ship drawing 14 feet 9 inches water: then the tide had flowed $\frac{3}{4}$ of an hour.

The Egg Rocks are a cluster above water, on the north side, bearing E. by N., distant $\frac{1}{4}$ of a mile from the lighthouse.

The beacon on the S.W. end of the spit of the Great Brewster, stands at the distance of $\frac{1}{4}$ of a mile W. $\frac{1}{4}$ S. from the lighthouse, and points out the Narrows, which is situated between Lovell's Island on the east, and George's Island, with Gallop and Nick's Mate Islands, on the west.

The *Centurion* is a rock of 11 feet at low water, and lies nearly $\frac{1}{2}$ a mile S. $\frac{3}{4}$ W. from the beacon; it should be left, in entering the Narrows, on the port or west side. The marks for it are, the S.E. points of Great Brewster and the Outer Brewster Islands in a line, and $\frac{1}{2}$ of Nick's Mate Island shut in with the west of George's Island. From the S.E. side of George's Island, a rocky bank extends out more than $\frac{1}{4}$ of a mile, having at its extremity a black buoy. The entrance to the Narrows lies between this buoy and the beacon point.

On Nick Mate's Island, at the other end of the Narrows, upon the western side, is a beacon or monument; and upon the northern part of Long Island, nearly a mile to the westward of Nick's Mate Island, is a lighthouse, lit with patent lamps, on a tower of 20 feet, having a lantern 7 feet high, and is elevated 80 feet above the level of the sea.

The *Handkerchief Shoal*.—This shoal runs off from the south point of Deer Island; at high water it is covered, but it dries at low water, which makes it an object of danger to vessels passing either in out of Broad Sound. A black buoy is therefore placed near its point, which must always be left to the northward.

Sailing Directions for entering Boston Harbour.—Vessels coming directly from the eastward for Boston Harbour, may endeavour to keep the parallel of latitude $42^{\circ} 20'$; this will carry them just to the northward of the Cod Bank. But should you fall to the southward of this parallel, your first care must be to clear the *Cohasset Rocks*, for these lie full 5 miles to the south-eastward of Point Alderton. The outer rock is in 5 fathoms water, and has a black buoy upon it: this is called *Mimel's Rock*; from this buoy the course to Boston Harbour will be N.W., distance 2 leagues. In running on thus, you will pass the white buoy of Harding Rocks; and may thence haul up to the westward, going between the Lighthouse Island and the red buoy on Alderton Shoal.

From the middle of the Lighthouse Channel, steer W. by N., a mile, to the beacon on the spit, to which you may approach within $\frac{1}{4}$ of a cable's length, leaving it on the starboard side, while the Centurion Rock and black buoy on the shoal ground of St. George's Island are left to the port. Having thus entered the Narrows, your course up to Gallop Island Point will be N.W. by N., about $\frac{3}{4}$ of a mile. The beacon on Nick's Mate Island may be left on the port hand, at the distance of a cable's length. From Nick's Mate steer W. by N., about 3 miles, for Castle Island, through the main channel; thus you will leave the white spar-buoy of the Lower Middle Ground upon the starboard hand, which buoy is a mile below the Castle Island. It is said, the Lower Middle Ground partly dries at low water, and has on its eastern part a red buoy, and on its western part a black buoy, lying in 2 fathoms; both these are to be left to the northward in running up channel. Your course when abreast of Castle Island will be N.N.W., $\frac{1}{2}$ a mile, to clear the Upper Middle Ground, which has a black buoy upon it, lying in 2 fathoms water, to be left on the port side; but should this buoy be taken up, which is commonly done in the winter season, steer N.N.W. until the two northernmost steeples in Boston come a handspike's length open; a N.W. by W. course for 2 miles will take you up to the town.

To sail in during the night, and turn into the bay.—If you are coming from seaward at night, endeavour to bring the lighthouse to bear west, and steer directly for it, observing to incline your course a little southerly as you approach, in order to give a berth of 2 cables' lengths to the lighthouse island. When you get abreast of the light, steer west, until you bring it to bear from N.N.E. to N.E., and here, if you are a stranger to the harbour, you had better anchor for the night. With the wind between S.W. and N.W., a vessel may with safety turn into Boston Bay. You may stand to the southward until you bring the light to bear W.N.W., and to the northward until you bring it to bear W.S.W., until you come within a league of the light: then you must not stand to the northward any farther than to bring the light W. by N., and to the southward to bear W.N.W. You may anchor in the bay with safety when the wind is off shore.

BROAD SOUND, BOSTON.—This is the northern entrance to Boston Harbour, but by no means a proper channel for large vessels; those, however, who choose to

attempt it, will proceed according to the direction here given. In this case, when you find yourself advanced so far as the Graves, you will leave them to the port, at the distance of about 2 cables; then bring them to bear S.E., and run S.W. by W., 4 miles, which will take you to Long Island light, which must be left to the port; then proceed by the following directions to the town.

In this passage, between the Graves and Long Island, there are several ledges and dangers, particularly the *Devil's Back*, the *Barrels*, *Aldridge's Ledge*, and the *Ram's Head Bar*, stretching from the north end of Lovell's Island; also the *Fawn Bar*, running from Deer Island, on the opposite side. The outer reefs are the *Devil's Back* and the *Barrel*; near the latter is a black buoy with a white vane, which is moored about 7 fathoms N.E. from the rock, in $3\frac{1}{2}$ fathoms water, at about 2 miles W. by S. from the body of the Graves, W.N.W. from the house on Green Island, and with Long Island Head S.W. $\frac{3}{4}$ W., distant $2\frac{1}{2}$ miles. The *Devil's Back* has a red buoy upon it, lying in 4 fathoms, and is to be left on the port side: the *Ram's Head* bar-buoy is black, and lies in 15 feet, to be left to the port; and on the N.E. point of the *Fawn* bar is a white buoy, which is to be left to the starboard; this lies in $2\frac{1}{2}$ fathoms, with Long Island Head light S.W. *Aldridge's Ledge* lies nearly mid-channel between the *Ram's Head* and the N.E. end of *Fawn Bar*; there is a channel of 3 fathoms on each side: having passed these, you will have entered the main passage to Boston, and must proceed as before directed.

There is a channel also between *Deer Bar* and *Winship Bar*, called *Shirley Gut*; but it is so intricate, narrow, and crooked, that none should attempt it without a pilot.

During the winter, the upper buoys in Boston Harbour are commonly taken away.

"VESSELS OUTWARD BOUND from Boston lighthouse, who would wish to fall in with Cape Cod, the course is S.E. by E. $\frac{1}{2}$ E., distant 11 leagues, thence 3 leagues to the lighthouse; and when it bears S.W., 2 leagues distant, you may then steer S.S.E., which will carry you out of the South Channel.

"Vessels in Boston Bay which bear away for Cape Cod Harbour, must endeavour to fall in with Race Point lighthouse, which contains a revolving light, and run for it, till within $\frac{1}{2}$ a mile; when it bears E.N.E. haul up E.S.E., or as near as the wind will permit, and anchor, in from 10 to 4 fathoms, in Herring Cove, where there is good shelter with the wind from N.N.E. to S.E. by E. Should the wind shift to the N.W., Province Town Harbour is under the lee, to which we refer: should you first make Cape Cod light, bring it to bear E. by N., and run for it till you have soundings, in 14 or 15 fathoms water; then steer N.E. until the light bears E. by S.; then run in N.W. for the harbour. The course from Boston lighthouse to Sandwich is, first, S.E. by E., 3 leagues; to Cohasset Rocks, thence to Sandwich, S.S.E., 11 leagues.

"It is high water, full and change, off Race Point, at 10h. 45m. Vessels leaving Cape Cod, bound to Boston, should calculate the tide, as the flood sets strongly to the S.W. off Cape Cod from the Race to Chatham. Flood sets to the south, ebb to the north; southern tide 9 hours, northern tide 3 hours."—*American Coast Pilot*.

SCITUATE.—About half-way between the harbours of Boston and Plymouth is the township of Scituate, having a small harbour and lighthouse; the latter was principally erected for foreign vessels, which were accustomed to fall into the dangerous bay to the northward, and upon the Cohasset Rocks. The lighthouse stands on Cedar Point, which makes the north chop of the harbour, the first cliff so called being the south chop: there are four of these cliffs extending towards the north, the southernmost being the highest.

SCITUATE LIGHTHOUSE is built upon Cedar Point, about 4 miles from Cohasset Rocks, and is elevated 50 feet above the level of the sea, showing two lights, one above the other; the upper light is a brilliant white light, and the lower one red, which will effectually distinguish it from Boston light, to the northward, which revolves, and that of Plymouth, which shows two lights on the same building.

From the body of the lighthouse, the northerly part of Cedar Point, and a ledge, called *Long Ledge*, extend N.N.W., nearly a mile; so that vessels falling in a little more than a mile to the northward of the light, may bring the light to bear south; and by making good their course north, they will clear the Outer Ledges of Cohasset Rocks. Sailing $\frac{1}{2}$ a mile east of the body of the light, you will clear Cedar Point, Long Ledge, and the first Cliff Ledge. Ledges extend from all the four cliffs, but there are none

between them; and by keeping at the distance of $\frac{1}{2}$ a mile from shore, all but the largest vessels will go clear of every thing. A S.S.E. course from the body of the light will clear Branches Point; consequently, if the light has a berth of $\frac{1}{2}$ a mile, there can be no danger steering in that direction.

There is a passage within the Cohasset Rocks, frequented by coasters; this is found by giving Scituata light a berth of $\frac{1}{2}$ a mile, and running N.W. by N. to the southerly entering rock.*

At about 2 miles W. by N. from the light is a Meeting-house; and near the N.W. side of the harbour is a farm-house, with two large barns a little to the northward. To enter the harbour, the mouth of which is nearly $\frac{1}{2}$ of a mile wide, bring the Meeting or the farm-house to bear about W. by N. from the middle of the entrance, and run in on that direction for the farm-house, until you have passed the bar, which is a hard bed of stones and gravel, that does not shift; and after you have got over the bar, and come upon sandy ground, then haul up, and anchor near the beach, on the south side of the harbour.

Off Branch Point there is a ledge, with only 8 feet water on it. It lies with Gurnet Ledge S. $\frac{1}{2}$ E., $\frac{1}{2}$ miles; Branch Point $\frac{1}{2}$ mile distant. There is a buoy on Philip's Ledge, $\frac{1}{2}$ of a mile in-shore of it, bearing W.N.W. $\frac{1}{2}$ W.

PLYMOUTH HARBOUR is to the southward of Boston light, 9 leagues, and bears from Cape Cod W. $\frac{1}{2}$ S., distant 6 leagues; it may be known by its two lighthouses, standing on a round hummock, called the Gurnet, and on the southern side of the entrance by a high double land, called the Monument; this side is encumbered with many shoals, but the northern side is fair and safe with all but easterly winds; and should these blow hard, you may run into the harbour, and anchor within Brown's Island.

The harbour of Plymouth is capacious, but shallow, and formed by a long and narrow neck of land, called Salthouse Beach, extending southerly from Marshfield, and terminating at the Gurnet Head, and by a smaller beach within, running in an opposite direction, and connected with the main land near Eel River, about 3 miles from the town. The lighthouses on the Gurnet are about 86 feet above the surface of the sea, and so situated that they cannot be brought in a line to the northward unless by those on shore. The lights are visible 5 leagues off.†

From these lights the high land of the Monument bears S. $\frac{1}{2}$ W., distant 3 miles; Monument Point S.S.E., 2 leagues; Squash Head W. $\frac{1}{2}$ S., 3 miles; the eastern part of Brown's Island S.S.W., $1\frac{1}{2}$ of a mile; and the Gurnet Rock E. by S. $\frac{1}{2}$ S., $\frac{1}{2}$ of a mile; on this rock are but 3 feet; it has a white buoy on it. The Gurnet bears from Race Point W. $\frac{1}{2}$ S., distant 6 leagues.

In proceeding for Plymouth, so soon as you have shut in the sandy hill with Gurnet Head, you will be clear of the Gurnet Rock; after which be cautious of hauling close to the head, as there are many *sunken rocks* at some distance from shore. When you have brought Squash Head to bear W. by N., steer W. by S.; and if bound for Plymouth, keep that course towards a large red cliff on the main, which is a very good mark for leading clear of Dick's Flat, on which is a stone monument; then steer more southerly for Beach Point, or run up until you are abreast of Squash Head, giving it a distance of $\frac{1}{2}$ of a mile; run on W. by S. $\frac{1}{2}$ S., which will carry you clear of Dick's Flat, directly for Beach Point, keeping within 15 or 20 yards of the sandy point as you edge away to the southward, until you have shut in the lights, where you may anchor in 3 or 4 fathoms; but the channel is very narrow, having nothing but a flat all the way to Plymouth, except this small channel, which runs close to the neck of land, and in which you will have 4 or 5 fathoms close to the sandy point.

If bound into the Cow Yard, steer as above directed, which will lead clear of Dick's Flat and the Muscle Bank, on both of which are stone monuments. Observing to keep

* On the *Cohasset Rocks* a lighthouse is being erected; but from the difficulties attending the situation, the workmen are enabled only to work a few months in the year.

† But to the southward these lights may be brought in one, and lead clear of Brown's Island, or Bank. On Salthouse Beach stands one of the huts erected by the Humane Society of Massachusetts, for the reception of shipwrecked mariners. There is a breach in the inner beach, which exposes the shipping, even at the wharfs, during an easterly storm.—*American Coast Pilot*.

the house on Gurnet Head just out side of Saquash Head, until you have opened the high pines with Clerk's Islands; then you will clear Muscle Bank, and may steer N.W., until you have 3 fathoms at low water.

In turning into Plymouth, stand not to the northward into less than 3 fathoms, as it runs flat a long way off from Gurnet Head to Saquash; off both the heads a point of rocks extend to a considerable distance from shore, many of which are nearly uncovered at low ebbs. There is also shoal water all the way from Saquash to the Muscle Bank, so that you should not stand into less depth than that above mentioned; and in steering towards the sands to the southward, tack in 4 fathoms, as it is steep-to, and you may observe the ripples, unless the water be very smooth. The shoal extends from abreast of the lights to Beach Point, and the greatest part of it is uncovered at low ebbs.

In coming from the southward for Plymouth Harbour, do not open the northern light to the westward, but keep them in one, bearing N.N.W. $\frac{1}{2}$ W., which will carry you into 5 fathoms, by the easternmost part of Brown's Island, keeping that course until within $\frac{1}{2}$ a mile of the Gurnet Head, where you will have but 4 fathoms: Saquash Head will then bear W. by N., a little northerly, and the two outermost trees on the head be in one; then steer directly for them, until the lighthouse bears E.N.E., and the house on Saquash N.W., just open with the first sandy beach, where you may anchor in Saquash Road, in 4 fathoms, good clear bottom; but, if bound to Plymouth, or to the Cow Yard, steer as before directed.

Should you fall in to the southward of Brown's Island, between that and Monument Land, where, in some places, you will find 20 fathoms, do not attempt to run for the lights until you have brought them on with each other, bearing N.N.W. $\frac{1}{2}$ W.; for if you do, you will run on Brown's Island, or Sand, where there is no passage even for a boat at low water.

In coming in from the northward for Plymouth at night, do not bring the lights more southerly than S. by W., as thus you will avoid the *High Pine Ledge*, which lies north, $2\frac{1}{2}$ or 3 miles from the Gurnet Head. The shoalest part of this ledge, which is uncovered at low ebbs, lies about $1\frac{1}{2}$ mile from the shore, with the high pines in a line with Captain's Hill, which will then bear W. by S. It extends N.N.E. and S.S.W., nearly a mile, and has 4 and 5 fathoms close to it, which deepens gradually as you run to the eastward from it, having 10 and 12 fathoms at the distance of a mile.

By night, with the lights bearing S. by W., proceed to the southward until they bear N.W. or N.W. by W., when you will be clear of the rock, and may steer up W. by S., until you have the lights bearing E.N.E., where it will be prudent to anchor until day-light.

The tides flow in Plymouth until 9 o'clock, on the full and change.

Should you make the Gurnet lights in the night, during hard northerly or N.W. winds, and cannot get into the harbour of Plymouth, you may run for that of Cape Cod, bringing the lights to bear W. by N., and steering for Race Point light, following the directions given for entering Province Town Harbour by the fixed light on Long Point, and come to an anchor. If it should blow so hard that you cannot turn up the harbour, you may anchor off the point, on a clear bottom. It is bold-to; and, unless it be very dark, the sandy hills may be seen before you can get on shore.

CAPE COD is the northern part of the peninsula of Barnstable. On the hook of the cape is Province Town, distinguished by its very useful harbour, which has depth of water for any ships. On its extremity, called Point Race, is a lighthouse, exhibiting a revolving light, 155 feet above the level of the sea, but it cannot be seen inward-bound until it bears S.S.W. $\frac{1}{2}$ W.; and more to the S.E., at the Clay Ponds, is a larger one. The inhabitants are chiefly fishermen.

Cape Cod Light.—By order of the United States, a lighthouse has been erected at the Clay Ponds, on Cape Cod, in latitude $42^{\circ} 3'$ north, and longitude $70^{\circ} 3'$ west. The house is erected on land elevated about 150 feet, which, with the elevation of the lantern, makes the whole height 220 feet above high water mark. The light, which was formerly revolving, is now fixed.

If inward-bound to Boston, and you want to fall in with the back of Cape Cod, bring the light to bear S.W., 2 leagues distant; then steer W.N.W. for Boston light-house.

The new lighthouse on the Race Point of Cape Cod was first lighted on the 5th of November, 1816, and stands in latitude $42^{\circ} 4'$ north, and longitude $70^{\circ} 11'$ west. It is 25 feet above the level of the sea, and 155 feet distant from high water mark. It is a revolving (or repeating) light, on the same principle as that of Boston, already noticed; and is therefore readily known from the light on the high land, which may now, with propriety, be called the high light of Cape Cod.

Cape Cod is low sandy land; but Race Point is very bold, and may be known by a number of fish-houses on it. From 1 to 3 miles to the southward of Race Point is what is called Herring Cove, where you have good anchorage $\frac{1}{2}$ a mile from the shore, the wind being from east to N.N.E., in 4 or even in 3 fathoms.

LONG POINT LIGHT.—On Long Point, at the entrance of Province Town Harbour, is a lighthouse, containing a fixed light, 25 feet above the level of the sea.

CAPE COD HARBOUR (Province Town) is one of the best harbours on this coast. If bound to this harbour from the northward, you may run within $\frac{1}{2}$ a mile of the lighthouse on Race Point; after passing it, and it bears east, steer S.S.E., about $2\frac{1}{2}$ miles, when the lighthouse on the high lands will bear E. by N.; then run for it $1\frac{1}{2}$ mile, which will bring you in the fairway of the harbour; then haul up N.N.W., westerly, a good mile, when you may anchor in 5 to 7 fathoms, with the light on Long Point bearing S.W. by S. Large ships should bring the light on Race Point to bear N. by W., and steer S. by E., to pass Wood End Bar in 10 fathoms. So soon as the light on Long Point bears N.E. by N., steer N.E., until in 8 fathoms water; then anchor, the light on the high lands of Cape Cod bearing from E. $\frac{1}{2}$ N. to E. $\frac{1}{2}$ S.

In running from Race Point to Wood End, after passing the black land, or hummocks, you will come up with a low sandy beach, forming the harbour, extending between 2 and 3 miles to Wood End, which is difficult to be distinguished in the night; it is, however, very bold, and there are 25 fathoms within $\frac{1}{2}$ a mile of the shore.

In beating into Cape Cod Harbour, keep the eastern shore on board until you get into 4 or 3 fathoms, standing no farther to the westward than to bring the light to bear E. by S., as a *long spit of sand* runs from the western shore, where, being very bold, you will have 11 fathoms within a stone's throw of the shore. In case it blows so hard that you cannot beat into the harbour, there is good anchorage without, in from 10 to 15 fathoms.

The lighthouses of Cape Anne and the high light of Cape Cod bear from each other S.S.E. $\frac{1}{2}$ E. and N.N.W. $\frac{1}{2}$ W., distant 14 leagues. The variation is about $8^{\circ} 30'$ west.

BILLINGSGATE ISLAND.—This island is small, and situated so far up Barnstable Bay, that it cannot be mistaken; it lies 5 leagues S.E. by S. from Race Point light. There is now a lighthouse erected upon it, fitted up with lamps and reflectors, and bearing a fixed light.

The island is 13 feet above the level of high water mark, and the tower and lantern are 27 feet high, so that the light is 40 feet above high water. From the west end of the island a long *shoal* extends full 10 miles, in a W. by S. $\frac{1}{2}$ S. to W. by N. direction from the lighthouse, and in a N.W. to N.N.W. direction, 5 or 6 miles: this shoal is chiefly composed of hard sand. At $1\frac{1}{2}$ or 2 miles distance from the light there is about 8 feet water, the Meeting-house (with a steeple) at Brewster bearing S. by E.; at the distance of 5 miles from the lighthouse are from 10 to 12 feet, the said Meeting-house bearing S.S.E.; and at the distance of 7 miles from the lighthouse are $2\frac{1}{2}$ fathoms, the Meeting-house bearing S.E. by S.: at these depths of water the lighthouse bore from E. by N. to E. by N. $\frac{1}{2}$ N. In crossing this shoal point of flats, you will drop into 4 to 5 fathoms water, at the distance of 40 fathoms from the edge of the shoal, when the lighthouse will bear E.N.E. In coming round the shoal, approach no nearer than $2\frac{1}{2}$ fathoms. As soon as you deepen to 4 fathoms, haul up for the light, and anchor.

Vessels drawing 12 feet and upwards should bring the lighthouse to bear E.N.E. to N.E. by E., and steer in from E. by S. to E.S.E., until they get the lighthouse to bear N. by W., when they will have good anchorage, in 3 to 4 fathoms at low water, soft muddy bottom, and be distant from the lighthouse $1\frac{1}{2}$ to $1\frac{3}{4}$ mile. Brewster Meeting-house on with a windmill that stands near it, will then bear S. by W. $\frac{3}{4}$ W.; and the north Meeting-house, which stands on a hill at Eastham (no other building being near it) will bear E. $\frac{1}{2}$ N.

The following bearings and distances were taken from the lighthouse, viz.:—The high land of the north point of the Monuments W. by N. $\frac{3}{4}$ N., distant 10 leagues; Brewster Meeting-house, with steeple, S. by W. to S.; entrance of Orleans S.E. $\frac{1}{4}$ S., 6 miles; Eastham north Meeting-house S.E. by E. $\frac{1}{4}$ E., 4 miles; and Silver Spring Harbour of Eastham E. by N. $\frac{3}{4}$ N., 4 miles. The above places are all *barred harbours*; and *flats* extend off shore from 1 to 2 miles, with very shallow water over them.

WELFLEET HARBOUR.—There is a *rock* in the passage up to Wellfleet, about 12 feet in length and 8 feet in breadth; it is named the *Bay Rock*: and there is not more than 1 or 2 feet water over it at low tide, while around it are 9 to 11 feet at low water. When on this rock, Chipman's Windmill, the southernmost mill in Wellfleet, is a little open to the northward of a *rock*, called *Blue Rock*, and standing near the shore at Wellfleet, bearing N.N.E. $\frac{1}{4}$ E.: this rock is covered at high water. The east point of the Horse-Shoe bears from the lighthouse on Billingsgate Island E.N.E., distant about $\frac{1}{2}$ of a mile. On the south side of this island *sandy flats* extend to the distance of $\frac{1}{2}$ to $\frac{3}{4}$ of a mile, having only from 6 to 9 feet water.

The Meeting-house, with a steeple, at Brewster, to the eastward of Barnstable, is the only one to be seen; and this is a good mark to pass over the long shoal point that extends off from the lighthouse.

BARNSTAPLE BAY.—From Centre Hill Point to Sauset Inlet the distance is about 4 miles, and the course S. $\frac{1}{2}$ E.; the shore is clean and bold, having from $3\frac{1}{2}$ to 4 fathoms, sandy bottom. A *bar of sand* lies parallel with the shore, near Centre Hill Point, which extends to the southward, and terminates about $\frac{1}{2}$ of a mile to the northward of Sauset. From the shore over this bar to 3 fathoms water, the distance is 240 to 25 fathoms, and the bar is from 100 to 140 fathoms wide, having over it 9, 10, and 11 feet; while between that and the shore are 3 and $3\frac{1}{2}$ fathoms. From the south end of the bar, along shore, to the entrance of Sandwich, is 3 fathoms, and the distance from 70 to 90 fathoms, sandy bottom, and regular soundings in approaching the land.

On the south side of Sauset Island is a low rocky point, of 90 fathoms. At $\frac{2}{3}$ of a mile off shore are 3 fathoms, and at the distance of $1\frac{1}{2}$ or 2 miles, 9 to 10 fathoms, muddy ground. Passing from Sandwich to Barnstable, the *flats* run off shore 100 and 180 fathoms.

BARNSTAPLE LIGHT is fixed, and erected on a dwelling-house, over which it is elevated 16 feet.

BARNSTAPLE HARBOUR.—To enter this harbour when coming from the northward, you must not approach nearer to the bar than 5 fathoms water, until the lighthouse on Sandy Neck bears S.W. $\frac{1}{2}$ W., for a long *bar* stretches out from the point full 3 miles in a north-easterly direction, on the eastern part of which is a buoy, lying in 2 fathoms water, the light bearing from the buoy N.E. $\frac{1}{4}$ E., distant 3 miles. When up to this buoy, haul close round it, leaving it on your starboard side; then run about 2 cables' length S.S.W., to clear the S.W. part of the bar, when steer S.W. by W. $\frac{1}{2}$ W., $1\frac{1}{2}$ mile, or until the light bears S.W. by S., which will be the case when you are up to Yarmouth Flats: then steer direct for the light. Always be careful to make the above courses good, for the flood-tide generally sets strongly over the flats, and the ebb runs equally strong to the northward over the bar. Continue your course for the light, until within a cable's length of the beach, and follow the shore round the point. There is safe anchorage inside, abreast of the light, with all winds; and with the light bearing from S.W. to N.E., you will have from 5 to $2\frac{1}{2}$ fathoms.

Vessels drawing 8 feet water may, at high water, bring the light to bear S.W. $\frac{1}{2}$ W., and run directly for it. High water, full and change, at 11 hours. The tide rises 10 feet; and there are 7 feet on the bar at low water.

CAPE COD TO CAPE MALABAR.

From Cape Cod lighthouse the general tendency of the shore is S. by E., about 30 miles, to Cape Malabar, or the sandy point of Chatham.

The Humane Society in America has furnished the following description of the coast herabout, from Cape Cod to Cape Malabar, together with the places and huts erected by them for the preservation and relief of such mariners as may unfortunately be wrecked upon this part:—

"The curvature of the shore on the west side of Province Town and south of Race Point, is called Herring Cove, which is 3 miles in length. There is good anchoring-ground here; and vessels may ride safely in 4 or 5 fathoms of water, when the wind is from N.E. to S.E.

"On Race Point stand about a dozen fishing-huts, containing fire-places and other conveniences. The distance from these huts to Province Town, which lies on Cape Cod Harbour, is 3 miles. The passage is over a sandy beach, without grass or any other vegetable growing on it, to woods, through which is a winding road to the town. It would be difficult, if not impossible, for a stranger to find his way thither in the dark. The woods are so full of ponds and entangling swamps, that if the road was missed, destruction would probably be the consequence of attempting to penetrate them in the night.

"Not far from Race Point commences a *ridge*, which extends to the head of Stout's Creek. With the face to the east, on the left hand of the ridge, is the sandy shore; on the right is a narrow sandy valley, beyond which is naked sand, reaching to the hills and woods of Province Town. This ridge is well covered with beach-grass, and appears to owe its existence to that vegetable.

"Beach-grass, during the spring and summer, grows about 2½ feet high. If surrounded by naked beach, the storms of autumn and winter heap up the sand on all sides, and cause it to rise nearly to the top of the plant. In the ensuing spring the grass sprouts anew, is again covered with sand in the winter, and thus a hill, or ridge continues to ascend, as long as there is a sufficient base to support it, or till the circumscribing sand, being also covered with beach-grass, will no longer yield to the force of the winds.

"On this ridge, half-way between Race Point and the head of Stout's Creek, the trustees of the Humane Society have erected a hut. It stands a mile from Peaked Hill, a land-mark well known to seamen, and is about 2½ miles from Race Point. Mariners cast away on this part of the coast will find a shelter here; and, in N.E. storms, should they strike to the leeward of it, and be unable to turn their faces to the windward, by passing on to Race Point, they will soon come to the fishing-huts before mentioned.

"At the head of Stout's Creek the trustees have built a second hut. Stout's Creek is a small branch of East Harbour in Truro. Many years ago there was a body of salt-marsh on it: and it then deserved the name of a creek. But the marsh was long since destroyed; and the creek now scarcely exists, appearing only like a small depression in the sand, and being entirely dry at half-tide. The creek runs from N.W. to S.E., and is nearly parallel with the shore on the ocean, from which it is at no great distance. Not far from it the hills of Province Town terminate; and, should not the hut be found, by walking round the head of the creek, with the face to the west, the hills on the right hand, and keeping close to the shore on the harbour, in less than an hour the shipwrecked seaman would come to Province Town.

"The Humane Society, several years ago, erected a hut at the head of Stout's Creek. But it was built in an improper manner, having a chimney in it, and was placed on a spot where no beach-grass grew. The strong winds blew the sand from its foundation, and the weight of the chimney brought it to the ground; so that in January 1802, it was entirely demolished. This event took place about six weeks before the *Brutus* was cast away. If it had remained, it is probable that the whole of the unfortunate crew of that ship would have been saved, as they gained the shore a few rods only from the spot where the hut had stood.

"The hut now erected stands on a place covered with beach-grass. To prevent any accident from happening to it, or to the other hut near Peaked Hill, the trustees have secured the attention of several gentlemen in the neighbourhood. Dr. Thaddeus Brown, and Captain Thomas Smalley, of Province Town, have engaged to inspect both huts, to see that they are supplied with straw or hay in the autumn, that the doors and windows are kept shut, and that repairs are made when necessary. The Rev. Mr. Damon, of Truro, has also promised to visit the hut at Stout's Creek twice or thrice a year; and the Rev. Mr. Whitman, of Wellfleet, distinguished through the country for his activity and benevolence, has undertaken, though remote from the place, the same charge.

"From the head of Stout's Creek to the termination of the salt-marsh, which lies on both sides, and at the head, of East Harbour River, the distance is about 3½ miles.

A narrow beach separated this river from the ocean. It is not so regular a ridge as that before described, as there are on it one or two hills, which the neighbouring inhabitants call islands. It may, without much difficulty, be crossed every where, except over these elevations. By these hills, even during the night, the beach may be distinguished from those hereafter to be mentioned. It lies from N.W. to S.E., and is in most parts covered with beach-grass. The hills have a few shrubs on the declivities next the river. At the end of the marsh the beach subsides a little; and there is an easy passage into a valley, in which are situated two or three dwelling-houses. The first on the left hand, or south, is a few rods only from the ocean.

"The shore which extends from this valley to Race Point, is unquestionably the part of the coast the most exposed to shipwrecks. A N.E. storm, the most violent and fatal to seamen, as it is frequently accompanied with snow, blows directly on the land; a strong current sets along the shore; add to which, that ships, during the operation of such a storm, endeavour to work to the northward, that they may get into the bay. Should they be unable to weather Race Point, the wind drives them on shore, and a shipwreck is inevitable. Accordingly, the strand is every where covered with the fragments of vessels. Huts, therefore, placed within a mile of each other, have been thought necessary by many judicious persons. To this opinion the trustees are disposed to pay due respect; and hereafter, if the funds of the society increase, new huts will be built here for the relief of the unfortunate.

"From the valley above mentioned the land rises, and less than a mile from it the high land commences. On the first elevated spot (the Clay Ponds,) stands the lighthouse. The shore here turns to the south; and the high land extends to the table-land of Eastham. The high land approaches the ocean with steep and lofty banks, which it is extremely difficult to climb, especially in a storm. In violent tempests, during very high tides, the sea breaks against the foot of them, rendering it then unsafe to walk on the strand, which lies between them and the ocean. Should the seaman succeed in his attempt to ascend them, he must forbear to penetrate into the country, as houses are generally so remote, that they would escape his research during the night; he must pass on to the valleys, by which the banks are intersected. These valleys, which the inhabitants call hollows, run at right angles with the shore; and in the middle, or lowest part of them, a road leads from the dwelling-houses to the sea.

"The first of these valleys is Dyer's Hollow, $1\frac{1}{2}$ mile south of the lighthouse. It is a wide opening, being upwards of 500 fathoms broad from summit to summit. In it stands a dwelling-house, $\frac{1}{4}$ of a mile from the beach.

"At $1\frac{1}{2}$ mile south of Dyer's Hollow is a second valley, called Hardin's Hollow. At the entrance of this valley the sand has gathered, so that at present a little climbing is necessary. Passing over several fences, and taking heed not to enter the wood on the right hand, at the distance of $\frac{3}{4}$ of a mile a house is to be found. This house stands on the south side of the road; and, not far from it, on the south, is Pamet River, which runs from east to west through a body of salt-marsh.

"The third valley, $\frac{1}{2}$ a mile south of Hardin's Hollow, is the head of Pamet Hollow. It may with ease be distinguished from the other hollows mentioned, as it is a wide opening, and leads immediately over a beach to the salt-marsh, at the head of Pamet River. In the midst of the hollow the sand has been raised by a brush fence, carried across it from north to south. This must be passed, and the shipwrecked mariner will soon come to a fence which separates what is called the road from the marsh. If he turns to the left hand or south, at the distance of $\frac{1}{4}$ of a mile, he will discover a house. If he turns to the right hand, at the distance of $\frac{1}{2}$ mile, he will find the house which is mentioned in the foregoing paragraph.

"The fourth opening, $\frac{3}{4}$ of a mile south of the head of Pamet, is Brush Valley. This hollow is narrow, and climbing is necessary. Entering it, and inclining to the right, $\frac{3}{4}$ of a mile will bring seamen to the house, which is situated at the head of Pamet. By proceeding straight forward, and passing over rising ground, another house may be discovered, but with more difficulty.

"These three hollows, lying near together, serve to designate each other. Either of them may be used, but head of Pamet Hollow is the safest.

"South of Brush Valley, at the distance of 3 miles, there is a fifth opening, called Newcomb's Hollow, east of the head of Herring River, in Wellfleet. This valley is $\frac{1}{4}$ of a mile wide. On the north side of it, near the shore, stands a fishing hut.

"Between the two last valleys the bank is very high and steep. From the edge of it, west, there is a strip of sand, 100 yards in breadth; then succeeds low brushwood $\frac{1}{2}$ of a mile wide, and almost impassable; after which comes a thick, perplexing forest, in which not a house is to be discovered. Seamen, therefore, though the distance between these two valleys is great, must not attempt to enter the wood, as, in a snow-storm, they would undoubtedly perish. This place, so formidable in description, will, however, lose somewhat of its terror, when it is observed, that no instance of a shipwreck on this part of the coast is recollected by the oldest inhabitants of Wellfleet.

"At $\frac{1}{2}$ a mile south of Newcomb's Hollow is the sixth valley, called Pearce's Hollow. It is a small valley. A house stands at the distance of little more than $\frac{1}{4}$ of a mile from the beach, W. by S.

"The seventh valley is Cohoon's Hollow, $\frac{1}{2}$ a mile south of Pearce's Hollow. It is not very wide. West from the entrance, several houses may be found at the distance of a mile. This hollow lies E. by N. from Wellfleet Meeting-house.

"At 2 miles south of Cohoon's Hollow, the eighth valley, is Snow's Hollow. It is smaller than the last. West from the shore, at the distance of $\frac{1}{4}$ of a mile, is the county road, which goes round the head of Blackfish Creek. Passing through this valley to the fence, which separates the road from the upland and marsh at the head of the creek, a house will immediately be found, by turning to the right hand, or north. There are houses on the left, but more remote.

"The high land gradually subsides here, and $1\frac{1}{2}$ mile south, terminates at the ninth valley, called Fresh Brook Hollow, in which a house is to be found, a mile from the shore, west.

"The tenth, $2\frac{1}{2}$ miles south from Fresh Brook Hollow, is Plum Valley, about 300 yards wide. West is a house, $\frac{3}{4}$ of a mile distant.

"Between these two valleys is the table-land.

"After this there is no hollow of importance to Cape Malabar.

"From Fresh Brook Hollow to the commencement of Nauset Beach, the bank next the ocean is about 60 feet high. There are houses scattered over the plain open country; but none of them are nearer than a mile to the shore. In a storm of wind and rain, they might be discerned by day-light; but in a snow-storm, which rages here with excessive fury, it would be almost impossible to discover them either by night or day.

"Not far from this shore, south, the trustees have erected a third hut, on Nauset Beach.* Nauset Beach begins in latitude $41^{\circ} 51'$, and extends south to latitude $41^{\circ} 41'$. It is divided into two parts, by a breach which the ocean has made through it. This breach is the mouth of Nauset, or Stage Harbour; and, from the opening, the breach extends north, $2\frac{1}{2}$ miles, till it joins the main land. It is about a furlong wide, and forms Nauset Harbour, which is of little value, its entrance being obstructed by a bar. This northern part of the breach may be distinguished from the southern part by its being of a less regular form: storms have made frequent irruptions through the ridge, on which beach-grass grows. On an elevated part of the breach stands the hut, about $1\frac{1}{2}$ mile north of the mouth of Nauset Harbour. Eastham Meeting-house lies from it W.S.W., distant $1\frac{3}{4}$ mile. The Meeting-house is without a steeple; but it may be distinguished from the dwelling-houses near it by its situation, which is between two small groves of locusts, one on the south and one on the north; that on the south being three times as long as the other. About $1\frac{1}{4}$ mile from the hut, W. by N., appear the top and arms of a windmill. The Rev. Mr. Shaw and Elisha Mayo, Esq., of Eastham, have engaged to inspect this building.

"The southern part of Nauset Beach, most commonly called Chatham Beach, and by a few persons Potanquaqu Beach, begins at the mouth of Nauset Harbour, and extends 8 or 9 miles south to the mouth of Chatham Harbour. It is about 130 fathoms wide. A regular well-formed ridge, which, in the most elevated part of it, is 40 feet high, runs the whole length of it; and, with the exception of a few spots, is covered with beach-grass. This beach forms the barrier of Chatham Harbour, which, from Strong Island, north, receives the name of Pleasant Bay. A mile south of the entrance of Nauset Harbour it joins the main land of Orleans, except in very high tides, when the sea flows from the north-eastern arm of Pleasant Bay into the harbour of Nauset, com-

* On Nauset Beach three lighthouses have been erected, 150 feet apart.
[N. AMERICA—PART I.] K k

pletely insulating the beach. By those who are acquainted with the shallow, it may be safely forded at any time; but strangers must not venture to pass it when covered with water, as below the channel is 7 feet deep. On this beach, about half-way between the entrances of Nauset and Chatham Harbours, the trustees have erected a fourth hut. The spot selected is a narrow part of the beach. On the west, the water adjoining it is called Bass Hole. Salt Marsh is north and south of it next the beach, but is here interrupted. Orleans Meeting-house lies from it N.W. The Meeting-house is without a steeple, and is not seen; but it is very near a windmill placed on an elevated ground, a conspicuous object to seamen coming on the coast. It may be necessary to add, that there are three windmills in Orleans, forming a semi-circle; that the mill referred to is on the right hand, or N.E. point, and that the mill in the middle point of the semi-circle stands on still higher ground. The Meeting-house of Chatham is situated from it S.W. This Meeting-house is also without a steeple, and is concealed by Great Hill, a noted land-mark. The hill appears with two summits, which are $\frac{1}{4}$ of a mile apart. The hut lies east from Sampson's Island, in Pleasant Bay. Timothy Bascom, Esq., of Orleans, has undertaken to inspect this hut.

"Lest seamen should miss this hut, by striking to the leeward of it, the trustees have erected another on the same beach. It stands a mile north of the mouth of Chatham Harbour, east of the Meeting-house, and opposite to the town.

"Another spot on the same beach would be a proper situation for a hut. It is north of the fourth hut, and east of the middle of Pocket Island. The highest part of the ridge is near it, south. A break in the ridge, over which the sea appears sometimes to have flowed, divides this high part from the northern portion of the beach.

"On the beach of Cape Malabar, or the sandy point of Chatham, the trustees have built a sixth hut. This beach stretches from Chatham, 10 miles into the sea, towards Nantucket, and is from $\frac{1}{4}$ to $\frac{3}{4}$ of a mile in breadth. It is continually gaining south; above 3 miles have been added to it during the past 50 years. On the east side of the beach is a curve in the shore, called Stewart's Bend, where vessels may anchor with safety, in 3 or 4 fathoms of water, when the wind blows from N. to S.W. North of the Bend there are several *bars* and *shoals*. A little below the middle of the beach, on the west side, is Wreck Cove, which is navigable for boats only. The hut stands 200 yards from the ocean, S.E. from the entrance of Wreck Cove, $\frac{1}{2}$ a mile. Between the mouth of the cove and hut is Stewart's Knoll, an elevated part of the beach. The distance of the hut from the commencement of the beach is 6 miles, and from its termination 4. Great Hill, in Chatham, bears N. by W., distant 6 miles, and the south end of Morris Island, which is on the west side of the beach, N. by E., distant 4 miles. Richard Sears, Esq., of Chatham, has engaged to visit the two last-mentioned huts.

"At 2 miles below the sixth hut is a fishing-house, built of thatch, in the form of a wigwag. It stands on the west side of the beach, $\frac{1}{4}$ of a mile from the ocean. Annually, in September, it is renewed, and generally remains in tolerable preservation during the winter.

"Another spot, a few rods from the sea, 4 miles south from the commencement of the beach, and $\frac{1}{2}$ a mile north of the head of Wreck Cove, would be a proper situation for a hut. A little south of this spot, in storms and very high tides, the sea breaks over from the ocean into Wreck Cove.

"Cape Malabar Beach may be distinguished from the two beaches before described, not only by its greater breadth, but also by its being of a less regular form. It is not so well covered with grass as Chatham Beach. From Stewart's Knoll, south, to the extremity, it is lowest in the middle. In this valley, and in other places, fresh water may be obtained by digging 2 feet into the sand. The same thing is true of Nauset and Chatham Beaches.

"The six huts, the situations of which have thus been pointed out, are all of one size and shape. Each hut stands on piles, is 8 feet long, 8 feet wide, and 7 feet high: a sliding door is on the south, a sliding shutter on the west, and a pole, rising 15 feet above the top of the building, on the east. Within it is supplied with straw or hay, and is farther accommodated with a bench.

"The whole of the coast from Cape Cod to Cape Malabar, is sandy, and free from rocks. Along the shore, at the distance of $\frac{1}{2}$ mile, is a *bar*, which is called the *Outer Bar*, because there are smaller bars within it, perpetually varying. This Outer Bar is separated into many parts by guzzles, or small channels. It extends to Chatham; and,

as it proceeds southward, gradually approaches the shore, and becomes more shallow. Its general depth at high water is 2 fathoms, and 3 fathoms over the guzzles; and its least distance from the shore is about a furlong. Off the mouth of Chatham Harbour there are bars which reach $\frac{3}{4}$ of a mile; and off the entrance of Nauset Harbour the bars extend $\frac{1}{2}$ a mile. Large heavy ships strike on the Outer Bar, even at high water, and their fragments only reach the shore; but smaller vessels pass over it at full sea; and when they touch at low water, they beat over it, as the tide rises, and soon come to the land. If a vessel is cast away at low water, it ought to be left with as much expedition as possible; because the fury of the waves is then checked, in some measure, by the bar; and because the vessel is generally broken to pieces with the rising flood. But seamen, shipwrecked at full sea, ought to remain on board till nearly low water; for the vessel does not then break to pieces; and, by attempting to reach the land before the tide ebbs away, they are in great danger of being drowned. On this subject there is one opinion only among judicious mariners. It may be necessary, however, to remind them of a truth, of which they have full conviction, but which, amidst the agitation and terrors of a storm, they too frequently forget."

NAUSET BEACH LIGHTS.—On Nauset Beach three lighthouses have been erected; they are 150 feet apart. The northernmost is in latitude $41^{\circ} 51' 40''$ north.

CHATHAM LIGHTS are situated on the S.E. part of the peninsula of Cape Cod, about 7 leagues to the southward of Cape Cod light. They are two fixed lights, on James's Head, 70 feet above the level of the sea; they are only of use in running over the shoals, as the beach has made out 2 or 3 miles since they were erected. Its harbour is convenient for the fishery, in which they have usually 40 vessels employed; and contains 20 feet at low water. There is also a fixed light on the sandy point of Monomy, 8 miles to the southward of the Chatham lights.

DESCRIPTIONS OF THE BANKS SITUATED BETWEEN CAPE SABLE AND THE PENINSULA OF CAPE COD.

BEFORE we conclude this section, it may be useful and proper to notice and describe, as well as our information will admit, the sand-banks and soundings which the mariner navigating this part of the coast of America, situated between Cape Sable and Cape Cod, will, in all probability, fall in with in this passage. These are Cashes Ledge, Jeffery's Bank, and St. George's Bank.

CASHES LEDGE is situated directly opposite to Massachusetts Bay, and in a right line between Machias Bay and Cape Cod; it was carefully examined by the master of H.M. sloop the *Beaver*, by whom we are furnished with the following description:—

"I took my departure from Thatcher's Island to the eastward of Cape Anne; the island bore from me north, distant 3 miles: from this bearing I steered E. $\frac{1}{4}$ N., 65 miles, with a fair wind, and fell in with the north part of the bank where Cashes Ledge is, about 2 leagues to the northward of the shoal, in 60 fathoms, hard black clay. This bank lies north and south, 7 leagues, and east and west, 2 leagues; and in the centre of the bank is the shoalest ground. Its length and breadth are about $\frac{1}{2}$ a mile; there are on it, in some parts, 10 fathoms, in others only $4\frac{1}{2}$, all exceedingly *rocky*. In the length of a boat you will have from 10 to $4\frac{1}{2}$ fathoms, and there are 17 fathoms within a cable's length of the shoal, which gradually deepens as you stand from it, all over the bank to 90 fathoms; at this sounding you are on the edge of the bank. You will, in general, have upon the bank, oazy and sandy bottom, with black stones and broken shells, till you get in 25 or 30 fathoms; it then becomes *rocky*. The current sets exceeding strong and irregular; in less than an hour it will run all round the compass. All ships and vessels should endeavour to steer clear of this shoal, for I am persuaded, that in a fresh gale of wind they must strike; if not, the sea will run so as to founder them. By four days' observation, the weather being exceedingly clear, found the shoal to lie in latitude $43^{\circ} 1'$ north, and longitude $69^{\circ} 6'$ west. On its shoalest part there are only 12 feet water."

Another navigator, the master of the *Argonaut*, has since confirmed the above extent of the bank, north and south, and states, that its shoalest part is near the centre, but

allows it to extend only $\frac{1}{4}$ of a mile each way. "This ledge (he observes) bears from Cape Anne E. $\frac{1}{4}$ N., distant 24 leagues, and lies in the latitude and longitude just given;" adding, that "You will have on this part from 10 to 4 fathoms, very irregular soundings, and all rocky bottom. The current shifts all round the compass every hour, and generally runs at the rate 2 miles an hour."

The following account of Cashes Ledge is given in the "American Coast Pilot."—**CASHES LEDGE, which is dangerous.**—The position or extent of this shoal is not accurately determined. It was recently searched for by Captain Owen, R N., three times, but without success. From the best information we can get, we give the following:—

"East by compass, 17 or 18 leagues from Thatcher's Island, you get soundings upon the *Fippanies*, a bank of 8 or 10 leagues in extent from north to south, and about 6 miles wide in the centre of the northern end; on the southern end it is 2 to 2 $\frac{1}{2}$ miles wide. The depth varies from 27 to 46 fathoms, shelly and pebbles.

"From the eastern edge of the *Fippanies*, east, 4 or 5 leagues, will bring you upon Cashes, on the shoal ground, which is upon the eastern edge of the bank, and is a *flat white rock*, of from 200 to 300 feet in extent; upon this rock are 4 fathoms water.

"South of the flat rock there is a gully, of 90 fathoms water, which runs in upon the bank in a south-westerly direction; upon the south side of this gully, 3 miles south of the flat rock, there is a *shoal*, of 7 fathoms, from which the soundings run suddenly to 15 and 30 fathoms on all sides, except the east, where it deepens suddenly to 80 fathoms.

"N. by W., 9 miles from the flat rock, there is another *shoal*, of 14 fathoms; between this and the flat rock there are from 10 to 35 fathoms, rocky bottom, on which there is kelp 45 feet in length; on the flat rock there is none.

"The above bearings and distances place the shoal or flat rock in 69° 3' west longitude, and 42° 44' north latitude. (The old position is latitude 43° 4' north, and longitude 69° 11' west.)"

JEFFERY'S BANK.—This is an extensive deep-water bank, of 30, 40, 50, and 60 fathoms, 16 leagues in length N.E. and S.W., and 3 leagues in breadth; it is generally represented in the charts as commencing close to the southward of Mount Desert Rock, and extending to about the longitude of 68° 45' west. Outside of the bank the water deepens to 70 and 80 fathoms, and between it and the shores of America are 100, 70, 60, and 55 fathoms; on or about it there is no danger whatever.

ST. GEORGE'S BANK.—This bank was very little known until it was regularly surveyed in 1821, by the United States schooner *Science*, and the sloop *Orbit*, under the orders of Captain Isaac Hall. The following description is a copy of his report.

"There are properly *four shoals* on *St. George's Bank*; the whole of them are included between the latitudes of 41° 34' north and 41° 55' 30" north, and longitudes 67° 18' west and 67° 59' west. Between them are from 15 to 35 fathoms of water.

"The largest, and on which is the greatest danger, is the most southerly and westerly. It is somewhat triangular, with a long and narrow spit running out from the S.E. angle. The S.E. point is in latitude 41° 34' north, and longitude 67° 40' west. The west point is in 41° 42', and longitude 67° 59'. The N.E. point is in latitude 41° 48' north, and longitude 67° 47' west. The eastern side of this shoal, although somewhat irregular, runs nearly S.S.E. and N.N.W., having on it from 3 feet to 9 fathoms at common low water; this appears to be what is commonly called the Malabar Bank; it is composed of a great number of sand spits, very narrow, so that the width of a narrow vessel will make several fathoms difference in the depth of water. The general range of the spits is from south-east to north-west. As there are no rocks, they are consequently liable to change, in some measure, their position and ranges. On their eastern edge, even in calm weather, unless it be either high or low water, the tides run with great rapidity, and form considerable breakers, when setting to the westward. This is accounted for by a knowledge of the fact, that directly on the edge of this shoal there is from 12 to 16 fathoms of water, so that the edge forms a sort of dam, stopping the force of the flood-tide, and over which the ebb falls down.

"When there was any considerable wind, we observed, that the breakers were higher within the edge to the westward, than on the edge; and I have no doubt (says Captain Isaac Hall) that the water there was still shoaler, and that we should have seen the

sand had it not been for the heavy sea. The breakers were such, unless it was entirely calm, that it was impossible to go among them with boats; nor was it considered safe to attempt with vessels. For besides the danger of striking on the hard sand spits, the vessels would have been liable to have been filled by the breakers. Even on the eastern edge, and at nearly slack water, the vessels were, at times, nearly covered with them. It was therefore not thought necessary to attempt it, as the object of the survey, to ascertain if there was danger on the shoals, and the situation and extent of this danger, could be accomplished without the risk. Had not the sea been very smooth, and at high water, we should not have been able to have gotten on where we found only 3 feet, when reduced to low water. The prevailing wind was to the eastward; and I have no doubt that this place would have been bare, with any continuance of an off-shore wind.* I think there are no rocks about the shoals. We had one cast on the S.W. side, which indicated rocky bottom, in 15 fathoms; but I believe it to have been some sharp stone that the lead struck upon.

"The centre of the northern shoal is in latitude $41^{\circ} 53' 30''$ north, and longitude $67^{\circ} 43'$ west. It extends east and west, about 4 miles; the shoalest part, having 6 fathoms, is very narrow, and composed of hard sand; but there is not more than 12 fathoms of water for 3 miles to the southward of the above latitude. On the north side, at 2 cables' length from the shoal, the sloop dropped into 33 fathoms. The breakers on this shoal are very heavy; and when there should be a sufficient sea to endanger a vessel, they might be seen some miles, and heard at a considerable distance; and as the shoalest part is not more than a cable's length inside, and no danger near it, a vessel might avoid it.

"To the eastward of the last-mentioned shoal, in latitude $41^{\circ} 51'$ north, and longitude $67^{\circ} 26'$ west, is another *small shoal*, with 8 fathoms water, having, however, considerable breakers. There are but 17 fathoms for 3 miles to the northward of it; but very near to the eastward are 31 fathoms, and from 20 to 30 fathoms to the south and west.

"The centre of the east shoal is in latitude $41^{\circ} 47'$, and longitude $67^{\circ} 19'$. It is about 2 miles long from east to west, and has 7 fathoms water. To the southward there are but 17 fathoms for 2 miles; but in other directions there are from 20 to 30 fathoms.

"The above shoals, I am confident, are all which are on St. George's Bank; their positions and sizes may be relied on, as well as the soundings which I have laid down; they were ascertained by a vast number of celestial observations, taken with good and well-adjusted instruments, on board the two vessels, and very carefully and faithfully calculated. The rates of the chronometers were found by a transit instrument previously to sailing from Boston, and after our return; and all our observations recalculated for the small variation that appeared.

"At anchor, in different places and on different days, we determined the set and strength of the tides, and, as nearly as possible, their rise and fall. The rise of them is from 1 to $1\frac{1}{2}$ fathom. They set round the compass every tide, setting S.E. every full moon, and running from 1 to 4 knots per hour, at a mile's distance from the breakers. The mean rate is, however, materially varied by the winds. They set strongest at W.S.W. and E.N.E., and which is, undoubtedly, the strength of the flood and ebb. From these causes and variety in the tides, arises a principal danger in approaching the shoals. When under-way about the shoals, in a few hours' time we found ourselves drifted far out of our reckonings; and to ascertain our situations, when both vessels were under-way, we took continued observations for the longitude by the chronometers, and, at the same time, double altitudes for the latitudes; which latter were calculated by Brosius's new and certain method. By allowing for the set of tides, as ascertained at anchor, the observations and reckonings agreed very nearly; so that the latitudes and longitudes of every place may be considered as certain. Should, therefore, any vessel fall in with these shoals, a knowledge of the course and strength of the tides will prove of the greatest importance; and they can, by the preceding facts, be calculated for any day and hour.

* This tends to confirm the assertion made by the Cape Cod fishermen, that part of the shoal has been seen quite dry, with sea-gulls sitting upon it.

"In proceeding from Cape Cod to the shoals, at 5 leagues from the light, there are 86 fathoms, muddy bottom. The water gradually deepens to 133 fathoms, and then decreases towards the shoals. In latitude $41^{\circ} 51'$ north, and longitude $68^{\circ} 11'$ west, there are 90 fathoms; in latitude $41^{\circ} 50'$ and longitude $68^{\circ} 3'$, there are 49 fathoms, sand and gravel, on the western edge of the bank; the water then shoals fast; to the northward of the shoal, in latitude $41^{\circ} 59'$, and longitude $67^{\circ} 52'$, on the south side of the north channel, there are 60 fathoms, soft mud; in latitude $42^{\circ} 12'$, and longitude $67^{\circ} 51'$, there are 102 fathoms; in latitude $42^{\circ} 10'$, and longitude $67^{\circ} 18'$, there is no ground at 175 fathoms. To the eastward we did not ascertain the extent of the bank. At 2 miles southward of the S.E. point of the shoals, there are from 20 to 26 fathoms, which soundings continue 20 miles to the southward and westward.

"The bottom on the bank, so far as we examined it, is of such a narrow character, that it is difficult for a vessel to ascertain her situation by it; we often found a great variety of soundings, in a very short distance, such as sand of various colours, and differently mixed, coarse and fine gravel, pebbles of various colours, stone, sponge, and shells. Notwithstanding this variety, some general character of the soundings may be useful. The mariner, therefore, will find, to the westward of the shoals, and at some distance from them, the bottom to be coarse sand and gravel of all colours; to the N.W., a mixture of white, black, and yellow sand; to the north, black and white sand; to the N.E., chiefly gravel and pebbles; to the east, fine white and yellow sand; and in latitude $41^{\circ} 57'$ north, and longitude $66^{\circ} 40'$ west, some white moss; to the S.E. fine white and yellow sand, and to the south, generally white sand.

"As the shoals are approached, in whatever direction, the soundings become coarse, and are frequently mixed with shells of different kinds. Near the shoal much of the bottom is pebbles; and to the east of the largest and most dangerous shoal, there are stones the size of hens' eggs, with moss and sponge on some of them.

"Near the S.E. point is from 15 to 20 fathoms; a prevailing character of the soundings is green shells, chiefly of the species called sea-eggs. If a vessel be far enough south to avoid danger, she will have no shells.

"The reports that rocks have been discovered on these shoals are undoubtedly incorrect; at the western part of the bank we saw, in strong tide rips, large quantities of kelp and sea-weeds, which, at a distance, had the appearance of rocks, but on sounding we found good water and a regular and clear bottom.

"It will be seen, by the bottom, that the holding ground is not good; but the vessels employed in the survey, by having a long scope of cable, frequently rode out a considerable gale of wind for 22 hours, on the east side of the main shoal, and also to the windward of it; the sea breaking very high at the time, we being in 10 fathoms water.

"It may be worthy of remark, that at one cast of the lead, on examining the arming, I found one-third black sand, one-third white sand, and one-third green shells, in as distinct dimensions as they could be drawn."

Since this survey, in 1821, the shoal has been surveyed by Captain Charles Wilkes, and others, in the U.S. brig *Porpoise*, in the year 1837, and from this report the following is taken.

"The shoalest water found on any part of the bank was $2\frac{1}{2}$ fathoms, or 15 feet, reduced to low water; and this is only to be found in two small places, viz.: in latitude $41^{\circ} 40' 13''$ north, longitude $67^{\circ} 44' 10''$ west, and latitude $41^{\circ} 40' 33''$ north, longitude $67^{\circ} 44' 30''$ west. The whole of the shoal is composed of hard sand spits; fine sand on the shoalest places, and coarser as the water deepens, until it becomes large pebbles without sand.

"The rise and fall of tide is 7 feet, extremely regular, the first part of the flood setting N.N.W., the latter part N. by E., and ebb S.S.E. and S. by W. The flood runs $4\frac{1}{2}$ hours, the ebb $5\frac{1}{2}$ hours; greatest velocity $2\frac{1}{8}$ of a mile; from $\frac{1}{2}$ an hour to 2 hours in changing, going round with the sun from north by way of east. The wind has but little effect on the velocity. High water, full and change, at 10h. 30m. Variation $8^{\circ} 15'$, westerly."

"LITTLE GEORGE'S BANK, having only 5 fathoms, and which breaks in heavy weather. It is in latitude $41^{\circ} 11'$ north, and about longitude 68° west, being about S.W. by S. from the great shoal of George's Bank. The fishermen have given it the above name.

"A bank, which is called upon the chart, "*Clark's Bank*," has been discovered inside of George's Shoal, and 10 fathoms water have been found upon it, in latitude $41^{\circ} 34'$ north, longitude $69^{\circ} 15'$ west.

"NOTE.—In coming from the southward for George's Bank, you will get soundings in latitude $40^{\circ} 4'$ north, if on the S.S.W. part of the bank. Should you not get soundings in latitude $40^{\circ} 30'$ north, you may be certain you are to the eastward of the shoal, when you must direct your course accordingly to clear it; when your first soundings will be in 75 to 60 fathoms. When steering to the northward, you will shoal your water gradually to 20 fathoms, when you will be in latitude $41^{\circ} 20'$ north, which depth of water you will have 10 or 12 leagues distant, either east or west."—*American Coast Pilot*.

REMARKS ON THE DEVIATION OR LOCAL ATTRACTION.

It may not be improper to observe in this place, that the needle is subject to a *local attraction*, resulting principally from the masses of iron on board ship, by which it will be drawn more or less from the magnetic meridian, according as the disturbing cause is situated with regard to the needle; this effect is called the *aberration of the needle*. For further particulars on this subject, see pages 207 and 208, eleventh, twelfth, thirteenth, fourteenth, and fifteenth editions of *Norie's Epitome on Navigation*, in which excellent work will be found the following Table (see page 208), thereby showing the allowances that are made for the aberration of the needle, at the same time proving the extraordinary changes of the variation, according to the direction of the ship's head.

<i>Ship's Head by Compass.</i>	<i>Variations.</i>	<i>Ship's Head by Compass.</i>	<i>Variations.</i>
North.	$24^{\circ} 30' W.$	South.	$24^{\circ} 30' W.$
N. N. E.	$23^{\circ} 21'$	S. S. W.	$25^{\circ} 39'$
N. E.	$22^{\circ} 23'$	S. W.	$26^{\circ} 37'$
E. N. E.	$21^{\circ} 44'$	W. S. W.	$27^{\circ} 16'$
East.	$21^{\circ} 30'$	West.	$27^{\circ} 30'$
E. S. E.	$21^{\circ} 44'$	W. N. W.	$27^{\circ} 16'$
S. E.	$22^{\circ} 23'$	N. W.	$26^{\circ} 37'$
S. S. E.	$23^{\circ} 21'$	N. N. W.	$25^{\circ} 39'$

Hence the variations to be allowed are opposite the courses steered; thus, if the ship's head is E.N.E., the variation to be allowed is $21^{\circ} 44'$ west; but if W.S.W., the variation to be allowed is $27^{\circ} 16'$ west. All the courses given in this work will be subject to this correction.

See also *Captain Bayfield's Remarks on the Deviation or Local Attraction*, in p. 157.

A USEFUL TABLE FOR FINDING THE DISTANCE OF AN OBJECT BY TWO BEARINGS, AND THE DISTANCE RUN BETWEEN THEM.

Difference between the Course and Second Bearing in Points of the Compass.

Table with columns for 'Per.' (1-10) and 'Dist.' (1-10) for each bearing difference (1-10). The table contains numerical values for distance and includes a diagram of a compass rose showing bearings and distances.

- A.—The place sailed from.
B.—Flambro' Head Light.
C.—The place arrived at.

The Figure is constructed with a Scale 10 to an inch.

EXAMPLE.—Flamborough Head light bearing N.W. by W., and after running N. by W., 11 miles by Log, it bore S.W. 3/4 S.; required the distance from the light, at the time the last bearing was taken.—Enter the Table with the difference, in points, between the ship's head and the first bearing (4 points), at the side, and the difference between the ship's head and the second bearing (11 1/2 points), at the top, which will give 9.71; then this, multiplied by the distance run (11 miles), gives 7.8 miles—the distance from the light at the time of last bearing.—[See Figure.]

END OF THE FIRST PART.

9	2.53	2.27	2.06	1.89	1.75	1.63	1.53
9½	2.50	2.24	2.03	1.86	1.73	1.61	1.51
10	2.46	2.20	2.00	1.83	1.71	1.59	1.49
10½	2.41	2.16	1.96	1.79	1.67	1.55	1.45
		2.36	2.11	1.91			
			2.30	2.06			
				2.24			

EXAMPLE—Flamborough Head light bearing N. W. by W. and after running N. by W. 11 miles by Log, it bore S. W. ½ S.; required the distance from the light at the time the last bearing was taken. Enter the Table with the difference in points, betw. the ship's head and the first bearing (4 points), at the side, and the difference between the ship's head and the second bearing (11½ points), at the top, which will give 0.71; then this, multiplied by the distance run (11 miles), gives 7.8 miles—the distance from the light at the time of last bearing.—[See Figure.]



9
9½
10
10½

