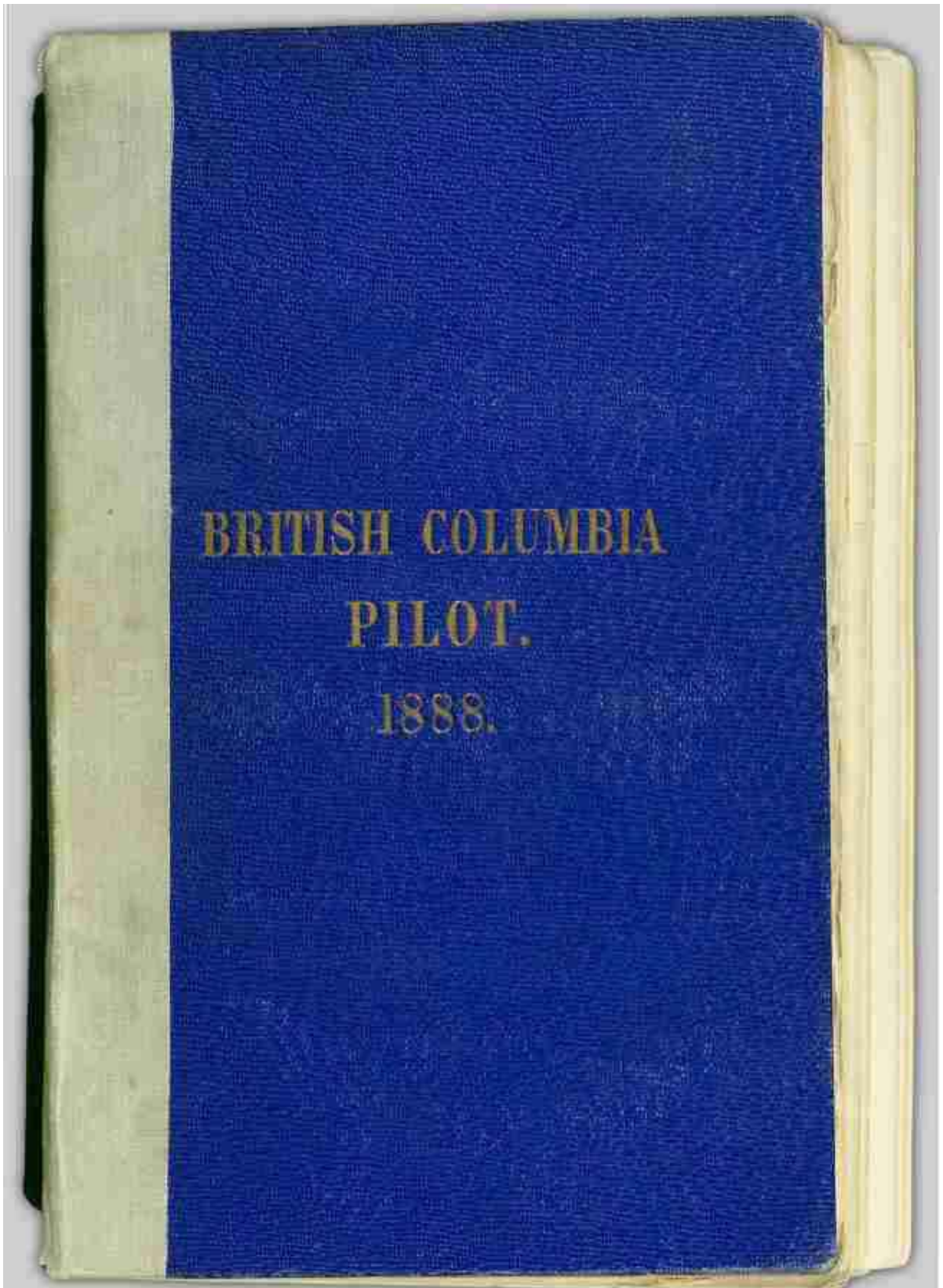




THE
BRITISH COLUMBIA PILOT,
INCLUDING
THE COAST OF BRITISH COLUMBIA, FROM JUAN
DE FUCA STRAIT TO PORTLAND CANAL,
TOGETHER WITH
VANCOUVER AND QUEEN CHARLOTTE ISLANDS.
COMPILED FROM ADMIRALTY SURVEYS.

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Hydrographic Notice No. 1
should also be purchased.*

For later information respecting the lights which are described in this work, seamen should consult the Admiralty List of Lights in South America, Western Coast of North America, Pacific Islands, &c. This list is published early in the current year, corrected to the previous 31st December.

A 17498

the island under a Royal Charter granted in the reign of Charles II

The Indians along the coast have great skill in the building and management of canoes; they are a polygamous race, and subsist chiefly by hunting and fishing; those of southern Columbia are dark, and wear their hair long, while those of the more northern districts are of a clearer tint. The coast Indians live in substantial one-story dwellings of axe-hewn timber, divided into several compartments, of which one is occupied by each family. In the interior the houses or wigwams are made of skins, old tent cloths, and mats; in severe weather they take shelter in underground houses (circular pits) from 20 to 40 feet in diameter, and 8 or 10 feet deep, covered over with a substantial earthed roof, with a 3-foot circular aperture in the centre, forming the only outlet for the inhabitants and smoke.

Railways.—The Canadian Pacific Railway crosses the heart of the British possessions in the North American continent, and is 3,054 statute miles in length between Quebec and Vancouver town in Burrard inlet, the western terminus; the distance being accomplished in about 5 days 22 hours, and trains leave daily from both places. The railway is in course of construction from Vancouver town to English bay, and a branch line has been made from port Moody to New Westminster.

A railway has also been constructed on Vancouver island, between Victoria, Esquimalt, and Nanaimo, and there is now daily communication between these places.

TELEGRAPHS.—Esquimalt is in telegraphic communication with England through Canada, by way of Nanaimo and Burrard inlet. Also through the United States, by way of Seattle.*

Earthquakes.—See pp. 40, 221.

CLIMATE.—The climate of British Columbia varies considerably according to the locality; in the southern parts and on Vancouver island it is temperate during summer, the thermometer seldom, if ever, rising on the hottest day above 80° Fah., or falling below 20° Fah. in winter; and it may, in fact, be said that this region possesses the climate of England without its humidity. In the central part of the province, however, the drought, heat, and cold are greater, the heat sometimes being very intense. It is, however, remarkably healthy both in summer and winter, there being no malaria or ague either during the hottest weather or in the dampest localities. Generally speaking, the summers are dry at Vancouver island, but with occasional showers; the winters bring a good deal of rain, and snow falls more or less each year.

In the northern part of the province along the coast the atmosphere is excessively humid, and rain falls heavily.

* Submarine electric cables cross Juan de Fuca strait from Clover point to New Dungeness; and the strait of Georgia from Valdes island to point Grey.

OYSTER BAY.—From cape Lazo the coast trends W.N.W., is moderately high, and slightly indented with boulder beaches, which makes boat landing attended with danger unless in very calm weather. At the distance of 13 miles is Kulushan point, the southern extreme of a large but not very deep indentation named Oyster bay; Shelter point, nearly 4 miles N.W. by W. $\frac{1}{2}$ W. from Kulushan, is its northern extreme.

A reef, which affords considerable protection from N.W. winds, extends half a mile eastward from Shelter point. The entrance to Discovery passage (page 200) is 4 miles north-westward from Oyster bay.

Anchorage.—There is fair anchorage in 10 or 12 fathoms water in this bay for vessels waiting wind or tide. A good berth is a little more than half a mile from the shore with Mitlenatch island bearing N.E. $\frac{1}{2}$ E., and the highest part of cape Mudge just open of the low extreme of Shelter point bearing N.W. by N.

CAPE MUDGE is one of those peculiar headlands so frequently met with on this coast, and resembles Roberts point and cape Lazo, except that the yellow clay cliff which forms its face is more covered with vegetation. The cape is between 200 and 300 feet high, flat, and wooded on its summit, falling to the westward as it enters Discovery passage with a low boulder point; the high land of Valdes island appears behind it from the south-eastward. A boulder beach extends in a semi-circular form from it to the eastward, and at the distance of 2 miles in this direction the depth is not more than 5 fathoms. The edge of this shoal water is fringed with kelp during summer, and is generally well defined by a tidal line, and sometimes heavy tide rips, which it is recommended not to stand into. Between cape Mudge and Willow point the tide rips at flood are dangerous to small crafts in blowing weather. The western low part of cape Mudge should not be brought to bear westward of W.N.W. when entering or leaving Discovery passage.

Cape Mudge is situated in latitude $49^{\circ} 59' 33''$ N., longitude $125^{\circ} 13' 0''$ W.

Directions for Georgia strait.—From the coast of Gabriola island (page 142) abreast Nanaimo, to the opposite shore of the continent, about Burrard inlet, the width of the strait is 14 miles, the navigation free from danger, and the strength of the tide between one and 2 knots an hour. Coming from the southward, mount Shepherd, on the south end of Texada island, is a very remarkable object, and shows as a solitary peaked island standing in the middle of the strait; it is 2,906 feet high, and is plainly seen in clear weather more than 30 miles off.

Proceeding westward, the long and comparatively low island of Lasqueti rises above the horizon, its singular bare turret-shaped summit,

1,056 feet high, presenting an unmistakeable feature. The Ballinac, and smaller islands westward of them, will now soon be made out. When abreast the former, the width of the channel contracts to 4 miles between them and the small island of Sangster off the south-east end of Lasqueti; after which it opens out again to 7 miles, and the rather remarkable flat-topped mount Geoffrey on the west end of Hornby island will be plainly seen. The southern coast of Lasqueti is bold, with no dangers off it which are not seen, except Seal rocks, which cover at half-tide, and lie $1\frac{1}{2}$ miles west from Sangster island; off its west end are the small groups of Flat and Bare islands, but no hidden dangers. False bay, which indents its west end, is exposed, and not recommended as an anchorage.

The Sisters islets are the next remarkable objects; they are two small black rocks 17 feet above high water, S.W. by S. from the west point of Lasqueti, with a deep-water channel over one mile wide between them and Flat islands. When abreast the Sisters, the main strait turns to the N.N.W. between them and Hornby island for 4 miles, and then resumes its original trend to the W.N.W.: the distance between the Sisters and St. John point, the low bare east point of Hornby island, is 5 miles; the latter, with the small islets off it, should be given a berth of nearly one mile. The Sisters are bold on all sides, but should not be approached too close in calm or light winds, as the tide sets straight past them. Having passed St. John point, the distance to the entrance of the Discovery passage is 38 miles. The strait maintains a uniform width of 9 miles, until near Mitlenatch island, or for 30 miles, the only stopping places being Oyster bay (see page 164), 4 miles from Cape Mudge, and Gillies bay on the west side of Texada island. The shore of Texada island is bold.

Gillies bay, $10\frac{1}{2}$ miles N. $\frac{1}{4}$ W. from St. John point, and 2 miles north-west from the Mouatt islets, a small group, which lie nearly one mile from the shore, is easily recognised by a remarkable white patch on its northern point, which is seen for many miles, and shows as two distinct white spots. An anchor may be dropped at one-quarter of a mile from the beach in 12 fathoms, but it is only a stopping place.

Caution.—When standing to the westward towards the Denman island shore, Lambert channel should not be opened out between the south-east end of the island and Shingle spit (page 162), nor should Cape Lazo be approached nearer than 2 miles.

NORTHERN SHORE OF THE STRAIT OF GEORGIA.

HOWE SOUND,* immediately adjoining Burrard inlet (page 136) on the north, is an extensive though probably useless sheet of water, the

* See Admiralty charts:—Straits of Georgia, sheet 1, No. 579; scale, $m = 0.3$ of an inch; also sheet 2, No. 580; scale, $m = 0.5$ of an inch.

Tides.—It is high water, fall and change, in port Graves at noon; springs rise 12 feet.

Directions.—On the western shore, three-quarters of a mile inside the entrance, a shingle spit extends out for a short distance, which should be given a berth, as shoal water extends half a cable's length off it; when past this spit there is anchorage anywhere in 10 fathoms, but half a mile or more inside it, in 7 fathoms, is the best berth. Vessels entering by Shoal channel, and bound for port Graves, after passing Plumper cove should steer N.E. until near Hope point, and the harbour open, in order not to mistake either of the western bays for it.

The COAST from Gower point, the western entrance of Howe sound, trends W. $\frac{1}{2}$ S. for 18 miles to the entrance of Malaspina strait, and is free from danger. White islet, a bare rock 51 feet high, lies $1\frac{1}{2}$ miles from the shore, 6 miles westward from Gower point, and is remarkable, always showing very white; there is deep water close to it and inside it.

Trail bay.—At 4 miles N.W. from White islet the coast recedes and forms Trail bay. There is a very marked drop in the land at the head of this bay, across which, by a portage of half a mile, the natives carry their canoes into Seechelt arm, one of the many arms of Jervis inlet.

Anchorage may be obtained off the village in Trail bay, abreast a bluff in the north-east corner, in about 15 fathoms. The Indians (Seechelt) are under the care of the R.C. mission, and their chapel is a conspicuous object from seaward.*

Trail islets, four in number, lie a little more than half a mile off the western end of this bay, and if necessary small vessels may drop an anchor inside them in 12 or 13 fathoms water.

TEXADA ISLAND, lying parallel with and on the eastern side of the strait of Georgia, is 27 miles in length, with an average width of scarcely 4 miles. Throughout its whole length stretches a ridge of rugged trap mountains, wooded generally to their summits; at the southern end mount Shepherd reaches a height of 2,906 feet; towards the northern end the range decreases in elevation, but there is scarcely an acre of land fit for cultivation throughout the island. Its shores are steep and bold on all sides, and the land rises abruptly, except at the north extreme. On the north side, 3 miles from Marshall point, there is a boat cove.

Gillies bay, the only anchorage, and that merely a stopping place, is on the south-west side (page 165); good limestone is found at the north end of the island.

* Lieutenant C. S. Nedham, R.N., H.M.S. *Rocket*, 1882.

Upwood point, the south extreme of Texada island, is rugged and precipitous; stunted pines grow between the crevices of the bare trap rock; the land behind more thickly wooded. Almost immediately over it rises mount Dick, a very remarkable hump-shaped hill, 1,136 feet high, and 3 miles inland is mount Shepherd, the highest summit of the island. A rock which covers lies 2 cables' lengths off the point.

LASQUETI ISLAND lies parallel with Texada at its south-east end, and is separated from it by a channel about one mile wide. It is 9 miles long, with an average width of over 2 miles; mount Tremeton, a singular turret-shaped summit, 1,056 feet high, rising nearly in its centre. On its southern side are several boat coves.

Tucker bay,* on the north side of Lasqueti, and equidistant from either end, is a very fair anchorage. Entering from the westward it is 4 miles from Bare island, and will be readily known by a group of small wooded islands which form its eastern side; its western point is sloping and somewhat remarkable, partially bare of trees. The water shoals rather suddenly from 30 to 16 fathoms.

Anchorage.—The anchorage is in 14 fathoms, with the outermost and westernmost of the small islands bearing N.N.E. and the west point of the bay W. by N. $\frac{1}{2}$ N., which will be within one-quarter of a mile of the shore. With a strong N.W. wind and flood tide, the bay, though safe, would not be a comfortable anchorage; from the eastward, sailing vessels would find some difficulty in reaching it in consequence of the prevailing N.W. winds and the narrowness of the channel at that end.

Small vessels may anchor in the south-east corner, inside the small island on the south shore in 6 or 7 fathoms water, sheltered from almost any wind.†

Tides.—It is high water, full and change, in Tucker bay at 7h. 30m.; springs rise 16 feet.

Sangster island, half a mile long, lies one mile S.S.W. from Young point, the eastern extreme of Lasqueti. There is a deep passage of 70 fathoms between the two, but a rocky ledge with shoal water on it extends off the western point of Sangster island.

Seal rocks, which cover at half-tide, lie a little more than one mile W. $\frac{1}{2}$ N. from the western point of Sangster island, and it is not recommended to pass between the island and the rocks.

Jenkins island lies 3 miles westward from Sangster, and close to the south shore of Lasqueti.

* See plan of Tucker bay on Admiralty chart, No. 579; scale, m = 3 inches.

† Mr. John Devereux.

Sea Egg rocks, always uncovered, lie 3 cables' length off the west end of Jenkins island.

False bay, at 3 miles westward from Jenkins island, and the same distance N.E. by E from the Sisters islets, is a deep bight but which is not recommended as an anchorage, though small vessels would find shelter in its north-west corner in 7 fathoms.

STEVENS PASSAGE, between the Sisters islets and Lasqueti, is upwards of one mile wide, and perfectly safe and clear. Flat islands, on its eastern side, should be given a berth of one-quarter of a mile, as should also Bare islands, a small group lying off the north-west end of Lasqueti.

SABINE CHANNEL, between Texada and Lasqueti islands, is a good ship passage 9 miles long, in nearly an east and west direction, with very deep water; it is 3 miles wide at the western end, but several high conical islands lying off the north-east side of Lasqueti contract the width at the eastern end, in some parts to three-quarters of a mile. There is also a narrow but deep channel, Bull passage, to the southward of these islands, by keeping close along the Lasqueti shore.

The tides through Sabine channel set at the rate of 2 knots an hour, the flood running to the westward, the ebb to the eastward.

MALASPINA STRAIT is a wide navigable channel, separating Texada island from the mainland. Its general direction is W.N.W. for 30 miles, when it again enters the strait of Georgia between Marshall point (the north-west extreme of Texada) and Harwood island; its southern entrance lies between Upwood point (the south-east extreme of Texada) and the western of the Thormanby islands, and is 4 miles in width. The Texada shore is bold, and almost straight for its whole length, fronted by narrow shingle or boulder beaches.

THORMANBY ISLANDS, two in number, about 500 feet high, almost joined and upwards of 2 miles in extent, are 18 miles from Gower point and form the south-east entrance point of Malaspina strait. Lying close to the mainland, these islands appear as part of it, terminating at their north-west point in a steep clay cliff, off which, at low water, dries a boulder point. Shoal water extends from this point in a north-westerly direction for about 4 cables, and a bank with not more than 5 fathoms water on it borders the northern side of the western island for a distance of from 3 cables to one mile.

From the north point of the eastern island, Tattenham ledge extends half a mile in a north-west direction; this ledge uncovers at the inner part, and has 4 fathoms water on the outer.

lies between the Whitestone islands (lying about 3 cables south-east from Francis point) and the islets lying off the shore to the eastward, the largest of which are Flat (the southern) and Green islets. By keeping in mid-channel the harbour may be safely entered.

The head of Bargain harbour communicates with Pender harbour by a narrow passage, which is available for boats at high water.

JERVIS INLET is one of the most considerable of these numerous and remarkable arms of the sea which indent the continent of America from the parallel of Fuca strait as far as lat. 60° N.; it extends by winding reaches in a northerly direction for more than 40 miles, while its width rarely exceeds 1½ miles, and in most places is even less.

Neither from a commercial point of view, as a refuge for shipping, or as a means of communication with the interior of the country, does it appear likely ever to occupy any very prominent place, as it is hemmed in on all sides by mountains of the most rugged and stupendous character, rising from its almost perpendicular shores to heights of 5,000 to 8,000 feet. The hardy pine, which flourishes where no other tree can find soil to sustain life, holds but a feeble and uncertain tenure here; and it is not uncommon to see whole mountain sides denuded by the blasts of winter, or the still more certain destruction of the avalanche which accompanies the thaw of summer. Strikingly grand and magnificent, there is a solemnity in the silence and utter desolation which prevail here during the months of winter, not a native, nor a living creature to disturb the solitude; and though in summer a few miserable Indians may occasionally be met with, and the reverberating echo of a hundred cataracts disturb the silence, yet the desolation remains, and seems inseparable from a scene which nature never intended as the abode of man. The depths below almost rival the height of the mountain summits; bottom is rarely reached under 200 fathoms, even close to the shore, and frequently at much greater depths; there are a few spots where vessels may drop an anchor, but they are either open and exposed, with an inconvenient depth of water, or from the narrowness of their entrance are only adapted to steamers or coasting vessels.

The entrance of the inlet is between Francis point and Scotch Fir point, which are 12 miles apart in a W.N.W. direction. Nelson island lies immediately in the centre, and divides it into two channels, the westernmost being the principal one. Both channels can be made out from Upwood point, the south-east extreme of Texada island, which lies directly in front, and serves as a barrier to westerly winds, to which the inlet would otherwise be much exposed.

Aganemnon channel, the eastern entrance to Jervis inlet, is 9 miles N. by W. from Upwood point; after running between Nelson

Williams and Charles islands lie immediately across the entrance, forming three channels; that to the northward between Williams island and the main (Henry point), the north entrance of Pender harbour is not one cable in width, but it is the best and has a depth of 20 fathoms.

Entering the harbour between Williams and Charles islands the channel is only 100 yards in width, with 7 fathoms water, and a rock which covers at three-quarters flood lies more than half a cable N.N.W. from the east point of the latter island.

Skardon islands, two in number, lie $2\frac{1}{2}$ cables' lengths eastward from Williams island; pass on either side of them and steer up the harbour, which is over one-quarter of a mile in width, and the depth will soon decrease to 12 fathoms. One mile within the entrance a peninsula extends to the south from the northern shore; pass between its southern point and Mary island, a little over one cable apart, with a depth of 12 fathoms.

Anchorage.—Anchor in Gerrans bay, one-quarter of a mile to the southward of the peninsula, in 6 or 7 fathoms; there is also good anchorage in Garden bay, just eastward of the peninsula, and abreast an Indian village, in 5 or 6 fathoms. The latter is the more suitable for a large ship. Pender harbour extends three-quarters of a mile above Garden bay by a very narrow passage with only 2 fathoms in it, and then opens out with a depth of 7 fathoms. To the eastward of this narrow passage is Gun Boat bay, where small vessels may anchor in 7 fathoms. The space in this anchorage is somewhat confined, as is also the case with both Gerrans and Garden bays.

Tides.—It is high water, full and change, in Pender harbour at 6h. 0m.; springs rise 12 to 14 feet.

The Western entrance to JERVIS INLET is between Alexander point, the south extreme of Hardy island, on the east, and Scotch Fir point on the west. The points are not remarkable, but the opening is easily made out; it is nearly 2 miles in width, and takes for a short distance a N.N.W. direction. Scotch Fir point is rocky, and has two small islets lying close to the westward of it, which, like the point itself, are covered with stunted pines. Hardy island lies close to and is nearly connected with Nelson island; Blind bay between them is useless, and its entrances choked by small islands.

Thunder bay, formed on the western side $1\frac{1}{2}$ miles above Scotch Fir point, is one of the few places in Jervis inlet where a vessel may drop an anchor, and being near the entrance is likely to prove convenient. The bay is about half a mile deep, with a sandy beach at its head, off which, at the distance of 2 cables, 17 fathoms water will be found; immediately

Tides.—It is high water at full and change in Jervis inlet at 6 hours, the rise and fall being about 14 feet; within the Seechelt arm the rise and fall seldom exceeds 6 or 7 feet.

The tidal streams are, except near the entrance of Seechelt arm, weak and irregular and influenced by winds.

HARWOOD ISLAND, off the west entrance to Malaspina strait, $1\frac{1}{2}$ miles from the continental shore and about 3 miles north-west from point Marshall, is $2\frac{1}{2}$ miles long in a northerly direction, $1\frac{1}{2}$ miles wide, from 150 to 200 feet high, flat, and thickly wooded. It is bordered by a sandy beach, and at its north point is a low grassy spit. There is deep water between the island and the shore.

Rebecca islet, lying midway between point Marshall and Harwood island, is of small extent, and 5 feet above high water.

Bare islet, one mile W.S.W. from the south end of Harwood island, is a bare, yellow, cliffy rock, about 2 cables in extent, and 30 feet above high water.

The COAST.—Westward from Jervis inlet, the north shore of Malaspina strait takes a westerly direction for 11 miles, terminating at Grief point; for a considerable distance inland it is low, and bordered by a sandy beach; there are no off-lying dangers that are not seen.

From Grief point the north or continental shore of the strait of Georgia trends W.N.W. for nearly 20 miles almost straight to Sarah point, the south-east entrance point of Desolation sound. Throughout the whole distance the coast is low, not rising to more than 500 or 600 feet, and but slightly indented. There is a fresh-water stream of considerable size 4 miles west of Grief point communicating, at about 2 miles from the shore, with a lake which extends some 40 miles northward towards the head of Toba inlet.

Claamen.—At one mile farther westward a vessel may anchor in fine weather for night or tide at a distance of 3 or 4 cables off shore near the coast abreast Harwood island in 12 to 13 fathoms. Anchorage must be taken up with caution as flats extend a considerable distance off shore. When anchoring do not shut in the north shore of Savary island.*

Navigating along this coast between Grief and Sarah points, a vessel will avoid danger by keeping not more than half a mile off shore as far as Hurtado point, and passing northward of Harwood and Savary islands. When past Hurtado point, a vessel ought to steer more to the westward, and pass southward or westward of the White, Double, and Powell islets.

SAVARY ISLAND, nearly 6 miles W.N.W. from Harwood island and one mile from the continental shore, is 4 miles long in a W.S.W. direction, and less than one mile wide. A sandy beach strewed with huge boulders

* Lieutenant C. S. Nodham, R.N., H.M.S. *Recher*, 1882.

surrounds it, and extends a considerable distance off its north and west sides, which should not be approached nearer than half a mile; these boulders extend a greater distance from the south side of the island, which side, therefore, should not be closed nearer than three-quarters of a mile. The height of the island varies from 80 to 120 feet, and the south side is faced by some remarkable white sandy cliffs, very conspicuous from the south-east; its east extreme is a granite cliff, steep-to. There are several clear grassy patches on the island, but the soil is poor and sandy. A sandy bar or ledge, of one to 2 fathoms water, extends from its west point to Hernando island.

Hurtado point, on the main abreast Savary island, is about 250 feet high, bold and cliffy. There are 37 fathoms water in mid-channel between it and the island.

Mystery rock, $2\frac{1}{2}$ miles S.E. $\frac{1}{2}$ E. from the east end of Savary island, is a patch which uncovers 4 feet at low water. From the rock shoal patches of from one to 3 fathoms extend towards the east end of Savary island. Vessels therefore in navigating this locality should observe great caution when going between Savary and Harwood islands, but by keeping within half a mile of the continental shore, and also by keeping Grief point open to the northward of the north extreme of Harwood island, this danger will be avoided. Vessels working up or down the strait of Georgia, when standing to the eastward between Harwood and Savary islands should not shut in the south end of Hernando island with the south end of Savary island.

RAGGED ISLANDS, lying close to and parallel with the continental shore, are a rocky group of small islands $2\frac{1}{2}$ miles long and 3 cables wide; their south-east part is about $2\frac{1}{2}$ miles north-west from Hurtado point, and some rocks extend 4 cables from their north-west extreme.

White islet, one mile to the south-west from Ragged islands, is a very remarkable, bare, white granite, rock, about 70 feet high. A rock which uncovers at low water lies one cable's length east from it, but in the middle of the passage between the islet and Ragged islands is a depth of 37 fathoms.

Double islets, half a mile west from the north-west part of the Ragged group, are small, and about 90 feet high, with a single tree on each of their summits.

Powell islets, one mile north-west from Double islets, are two in number, small, about 90 feet high, and covered with a few stunted bushes and trees; the westernmost islet is steep-to on its north and west sides.

Sarah point, at 20 miles W.N.W. of Malaspina strait, may be called the north-west entrance point of the strait of Georgia. It is a

rounded, rocky point, sloping gradually to the sea from a height of about 750 feet, at a short distance within it. The coast here turns sharply round to the eastward into Malaspina inlet.

Sarah point is situated in latitude $50^{\circ} 3' 40''$ N., longitude $124^{\circ} 52' 0''$ W.

Mitlenatch island lies 16 miles N.W. from cape Lazo, is half a mile in extent, 200 feet high, bare and peaked. Between it and the Vancouver island shore, distant nearly 6 miles, is the fair channel to cape Mudge and Discovery passage.

HERNANDO ISLAND, 2 miles west from Savary, and 3 miles N.N.E. from Mitlenatch island, is about 2 miles in extent, flat, thickly wooded, and from 120 to 170 feet high. A ledge composed of sand and huge boulders extends two-thirds of a mile from its south-east point, and there is only a depth of $1\frac{1}{2}$ fathoms in the channel between it and Savary island. From the west side some rocks extend off upwards of 2 cables in many places, and it should not be approached nearer than half a mile in passing.

Stag bay, on the north side of Hernando, affords anchorage in 12 to 15 fathoms at a distance of about 2 cables' lengths off shore, and is useful as a stopping place for vessels bound to Bute inlet or Desolation sound. There is a small fresh-water stream in the east part of the bay.

Tongue point, the north-west extreme of Hernando and of Stag bay, is a low sharp sandy point or spit, covered with a few trees, steep-to, and may be approached to 50 yards.

Anchorage.—Vessels should anchor at about three-quarters of a mile from this point, with the east part of Twins islands bearing N. by W.

Baker passage, to the northward of Hernando island and leading from the strait of Georgia to the entrance of Desolation sound, is about 3 miles long in a north-easterly direction, and one mile wide in the narrowest part, being bounded on the north side by Cortes and Twins islands. The only danger is at its north-west entrance point, off which a boulder ledge extends upwards of 3 cables' lengths in a south-easterly direction.

Tides.—It is high water, full and change, in Baker passage at 6h. 0m.; springs rise 12 to 14 feet.

Twins islands, about $1\frac{1}{2}$ miles north from Hernando, are two rocky islands connected by a sandy beach at low water, covering an extent 2 miles long in a north-westerly direction, and about one mile broad; their south shore is steep-to and may be approached to within a distance of one cable. The northernmost Twin is 490 feet high, rising to an almost bare summit in the centre; the southern one is about 300 feet, and

Squirrel cove can only be entered by steamers, or sailing vessels with a fair wind, and the chart is the best guide. There are no dangers whatever within or near it.

Boulder point, the south-east entrance point, is low, and may be easily known by a large boulder on its west side; a rock, which covers, lies nearly one cable south from it, but the point may be rounded at a distance of 2 cables.

Northward from Squirrel cove the west side of Lewis channel becomes more rocky, and gradually increases in height; it takes a northerly direction for one mile to Junction point, and then trends to the north-west for 7 miles, the channel ending at Bullock bluff, the north extreme of Cortes island. At $3\frac{1}{2}$ miles from Junction point the depths in the channel shoal to 27 and 30 fathoms, and a vessel may anchor in about 18 fathoms at one cable's distance from the west shore.*

MALASPINA INLET, $1\frac{1}{2}$ miles E.N.E. from Sarah point, and $1\frac{1}{2}$ miles E. by S. from Kinghorn island, penetrates the continent 8 miles in a S.E. by E. $\frac{1}{2}$ E. direction, forming with the strait of Georgia a peninsula about 2 miles wide; it has one good harbour, and several arms, at the head of some of which there is anchorage. The inlet at its entrance between Georgina point and Zaphine head, the west point of Gifford peninsula, is 4 cables wide, which is its general width, until abreast Scott point on the northern side, a distance of 2 miles, when it is contracted to 2 cables; this portion of the inlet, however, is so studded with islands and rocks as to considerably narrow the navigable channel. The depths in it vary from 30 fathoms to 6 fathoms. At Scott point the inlet for three-quarters of a mile takes an easterly direction, and then between Hillingdon point and the north end of Coode peninsula widens out to one mile and again turns to the south-eastward for $2\frac{1}{4}$ miles, and, under the name of Oke over arm, continues in the same direction for a farther distance of $2\frac{1}{2}$ miles, the width gradually decreasing to $3\frac{1}{2}$ cables. To the eastward of Coode peninsula the water becomes very deep, but at the beginning of Oke over arm it shoals to 40 fathoms, and gradually to 5 and 6 fathoms at the distance of nearly 2 cables from its head.

Freke anchorage, in 12 or 14 fathoms water, is at the head of Oke over arm, about 3 cables from the edge of the flat that extends 2 cables from the head of the arm, just above Lucy rock, which lies very close to the south-western shore.

Josephine islands, about three-quarters of a mile within the entrance of Malaspina inlet, with a passage on both sides, are two in number and almost joining each other; the north-western one is very small, the other

* Vancouver's ships anchored here in 1792 while exploring this part of the coast.