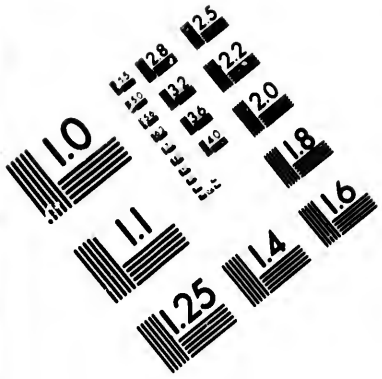

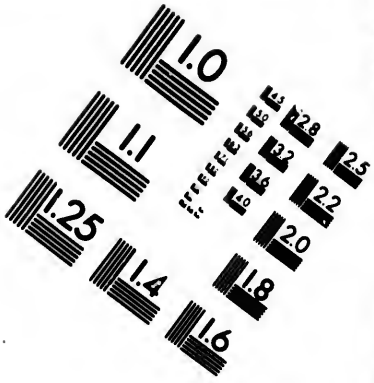

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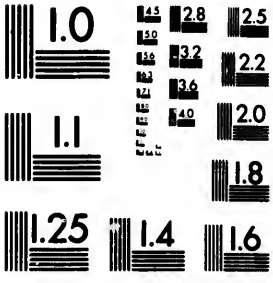

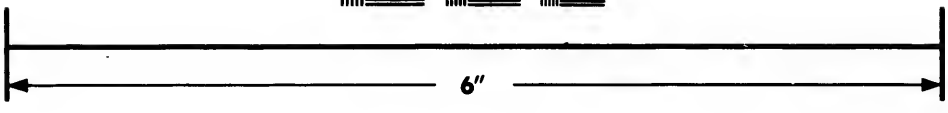

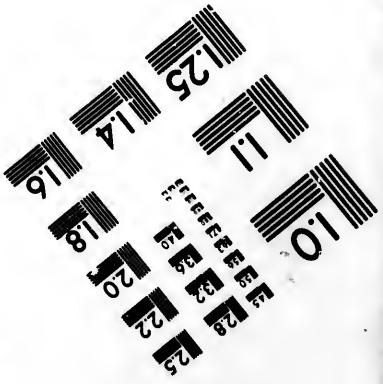

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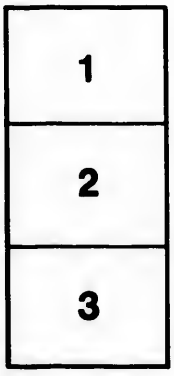

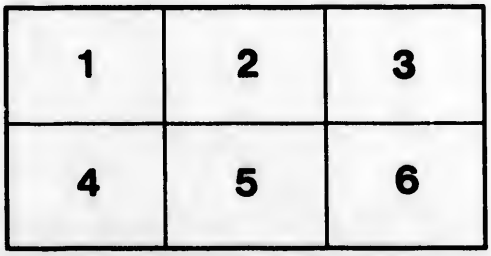

THE

Magdalen Islands,

THEIR

TOPOGRAPHY, NATURAL HISTORY, SOCIAL CONDITION AND COMMERCIAL IMPORTANCE.

BY

THE REV. GEORGE SUTHERLAND,

AUTHOR OF THE GEOGRAPHY, NATURAL AND [illegible] HISTORY OF PRINCE EDWARD ISLAND.

CHARLOTTETOWN, P. E. I.:

PRINTED BY GEORGE T. HASZARD, QUEEN SQUARE.

1862.

From
the Author
Jan'y 14th 1866.

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Preface.

THE following pages are a small contribution towards the geographical and physical knowledge of British America. They are occupied with a topographical and general description of an isolated and limited, but deeply interesting portion of it.

The Magdalen Islands, although situated in the centre of the Lower Provinces, and annually resorted to by hundreds of hardy and enterprising seamen, are veiled from the general understanding in a vague and indefinite obscureness.

Bouchette gives them a small space in his Topographical Dictionary of Lower Canada; but his descriptions are, in general, so inaccurate that we cannot suppose that he had personally visited them. R. Montgomery Martin, in his History of the British Colonies, disposes of them in a few sentences, which are as meagre as they are incorrect. The best excuse for these valuable authors is, that fuller and more reliable information was not within their reach. No other writers on these Islands have been seen by the author.

Accustomed to look upon the works of nature with deep interest, whatever aspect they may assume, he has been favored with opportunities for observation in these Provinces afforded to few, having seen or explored every shore washed by the waves of the Gulf. The present work is the result of a visit to the Islands in May of last year. In some of the details, especially of Natural History, I am under deep obligations to my kind-hearted friend John F. Muncey, Esq., whose residence for twelve years on the Islands, in an important position, has made him perfectly familiar with them.

That an interest may be awakened in behalf of the Islands, and such attention paid to them as may result in the promotion of their general prosperity, is the great aim of the author.

CHARLOTTETOWN, May, 1862.

THE MAGDALEN ISLANDS.

Topography.

These Islands rise amid waters of comparatively moderate depth, not far from the centre of the Gulf of St. Lawrence. Ranged mainly in an irregular, double chain, from north-east to south-west, with the eastern island of each link placed slightly in advance of the corresponding one, they mark the nature and course of the elevating power. The North Bird Rock in latitude 47° 51′, and South Cape in Amherst Island in latitude 47° 12′ 35″ define their extreme boundaries on the north and south, while the Great Bird Rock in longitude 61° 11′ and Deadman's Isle in longitude 62° 15′ 25″ limit their extent on the east and west. The space occupied is not less than 57 miles in length by 14 miles at its greatest breadth, not including the numerous sunken reefs so dreaded by the mariner, and the solitary rock in the west named Deadman's Isle. Amherst, the most important island in the group, and the farthest south, is 50 miles distant from the East point of Prince Edward Island,60 miles distant from Cape North in Cape Breton, 150 miles from Gaspe in Lower Canada, and 120 miles from Cape Ray in Newfoundland. The Bird Rocks, however, are only 70 miles

from Cape Anguille in Newfoundland, and 85 miles from the East Cape of Anticosti Island.

In form and appearance the greatest diversity prevails. Some are mere rocky islets rising precipitously from the sea to a height of 140 or 170 feet, with concave and convex summits. Some are oblong, others almost circular, and others most indefinitely irregular in outline. At one place the sea may be seen rushing madly against the base of cliffs 400 feet in height, and wildly dashing its watery folds far up the face of the rocks; in other places the white crested wave rolls heavily over acres of low shelving beach, and mustering its strength heaves its ponderous mass upon the yielding but impassable sand-barrier. On the one hand is seen a succession of conical sand hillocks, heaped up by the whirling blasts of the tempest, and on the other the low and treacherous morass or the wide-spread but shallow lagoon. Here you may walk over lofty heights of sedimentary rock, and a mile hence you may circumambulate the base of the crater of an extinct volcano. One island rears its dark irregular summit densely covered with wood, another presents its one, two or three bleak, bare conical peaks, at a height of three, four or five hundred feet above the restless deep. You land at one spot, and you can place your foot on nothing but the small angular rocks of crumbling trap, you beach your boat at another place, and the cliff before you presents its sandstone strata in no less than five different colours, yellow, orange, red, blue and grey, and so soft as to crumble beneath the pressure of the fingers. The writer is not drawing upon his imagination but his memory; details and localities will verify his statements. Each island has something peculiar to itself, and a particular description can alone bring out its distinctive features. Beginning at the south, Amherst Island first claims our attention.

1. Amherst Island.

Let it be understood at the outset, that all the ordinary maps found in the geographical or historical works, published in Britain or America, which note the existence of these islands in the Gulf, are most defective in so far as they are concerned, affording no accurate idea whatever of their physical contour. The hydrographic charts of the Admiralty office are alone minutely accurate. Amherst Island is named after the distinguished general who one hundred years ago, commanded the British forces when they dislodged the French from their Colonial possessions in Eastern America, and secured these possessions to the British Crown. It is eleven miles in length, and not more than four miles at its greatest breadth. Its average breadth is less than two miles. In shape it resembles the human foot—its massive heel of lofty rugged heights planted firmly in the west, and its long slender toe of sandhills sweeping round to the north-east. On the instep of this foot rise three conical hills, the central one, bearing the name of Demoiselle Hill, to the height of 280 feet. From this hill, which the trap will enable you to climb with ease, although the lungs demand an unusual quantity of air, you have on a fine day in summer, a magnificent view. Pleasant Bay lies at your feet, its surface unrufiled save by the prow of the fishing boat or the splash of the sea gull, and stretches far away to the north to the distance of ten miles. On your right in the distance rise the peaks of Entry Island, and on the north beyond the Bay the heights of Grindstone and Alright, while all around the sea is dotted with the white sails of fishing crafts of every description. The healthy sea-breeze is wafted round you as you gaze upon the scene, and your

spirit catching the inspiration of the moment is lifted in adoration to Him who made the sea and the dry land. In the hollow of the foot is the Basin, a sheet of shallow water, a mile and a half in length, by less than half a mile in breadth, and closed from the Gulf by a range of sandhills thrown up by the winds, except at one narrow and unimportant opening, through which the accumulating waters in wet weather find egress. The harbor, bearing the name of the island, is situated on the north side, opening on Pleasant Bay, between the hills of the instep and the tongue of sandhills forming the toe. It is a narrow sheet of water from two to three fathoms in depth completely sheltered from the west, south and east, and only partially exposed to a storm from the north. Vessels bound for this harbor must make for Entry island, and pass along its western front giving a good berth to the shoals which stretch far out from the sand beach of Amherst island, until the Demoiselle Hill can be seen clear off the sand ridge on the left, when all danger is past. The hills of the west end, rising to the height of 550 feet and partially covered with wood, are the first land seen by vessels coming from the south. They are plainly visible in fine weather, midway between Amherst and Prince Edward Island. With their fine arable slopes, they form the great mass of the island. On the north side there is a gradual descent until at a distance of two miles from their summit the low marsh and open water are again reached. The configuration is here peculiar. The narrow ridges of sand extend north to a distance of six or eight miles,—each with two or three openings,—until they connect with Grindstone island. The western ridge connects with the extreme west of Amherst—the other with the centre of the island. On the south they are three miles apart, but converge as they reach Grindstone to less than

a mile and a half. They enclose a large basin of water called Basque harbor, of little value from its narrow shallow openings, but a favorite spawning ground of the herring.

The surface of the island is everywhere uneven. The conical hills and circular hollows, the low shelving beach, the marsh or lagoon and the steep cliff or hill are in close proximity. Yet this very variety imparts a romantic character to the scenery.

Here, DEADMAN'S ISLE may claim a passing notice. It derives its name from the appearance which it presents at a distance. When first seen it greatly resembles a human corpse floating upon the water. Three protuberances represent the head, abdomen and feet. But as it is approached it assumes loftier proportions, and is ascertained to be no less than 170 feet in height. It is a bare, solitary rock, not a quarter of a mile in length, rising abruptly from the sea at a distance of nine miles west of Amherst. There is no reason to doubt that it has far higher claims to the name which it bears than its mere appearance at a distance, as many a human corpse has been borne up and down by the heaving surf, around its steep and barren cliffs, the fatal result of obstructing in the gloom of night the course of the storm-tossed mariner.

2. Entry Island.

The position of this Island has given it its name. It stands like an imposing sentinel at the eastern entrance of Pleasant Bay, and past it on the right or on the left the stream of navigation entering the Islands constantly flows. Its lofty peaks, seen far in the distance, are gladly welcomed by the sail approaching from the east or from the south. A channel three miles in breadth, only one half of which is navigable, separates it on the north east from

the nearest sand-beach of Amherst; but the harbor of that island is distant six miles from it. Its limited space and regular outline demand but little description. It is nearly circular; its greatest diameter about two miles, and its circumference six miles. There was a time when no such limited line would encircle it, but the mighty waves of ocean have battered down its cliffs on the north and east, until it is left but a fragment. On these sides it still presents a bold front 400 feet in perpendicular height, but undismayed by such formidable opposition, the ancient foe heaves successfully with thundering roar its massive billows, and compels the loftiest crag to descend with precipitate submission. But on the south-west it slopes gradually to the shore, opening its circular bosom to receive the warm rays of the sun. The peaks which guard this fine pasturable slope on the north, rise to a great height, the highest being no less than 580 feet above the sea. Entry thus claims the high honor of holding a loftier head than any other isle in the group, or even in the Gulf. These peaks are now nearly bereft of wood. They may be climbed to their very summits. The grandeur of the prospect from such a height when the sun is setting in the west on a calm summer evening, cannot readily be imagined. This island has no harbor; and it is only at certain places that boats can land. Sometimes the storms of autumn may debar all intercourse with the island by means of boats for a fortnight. Vessels, however, often find shelter in disagreeable weather, by coming to in the lee of the island. At a distance of five miles to the north-east lies the small Pearl reef on which the white foam of the breaker may often be seen as it is only eight feet beneath the surface.

3. Grindstone Island.

This Island lies due north of Amherst island. Its nearest point is distant from Amherst harbor above eight miles, and from Entry island about nine miles. The name is probably derived from a singular circular cape of sandstone which towers up over the eastern front of the island, in shape like a millstone, and to which the early French gave the name of Cape Moule. The island is somewhat oval, or tortoise-shaped, in outline; its greatest diameter being from north to south, five miles; the other, only four. The greatest part of it is occupied by high densely wooded summits, which in the north-west attain a height of 550 feet. The eastern front has several high projecting cliffs between which boats may find a landing place; the southern shore is low and shelving, descending to beach or marsh; the north-western coast is steep and almost inaccessible. A ramble over the headlands or along the shore—when the tide is out—of the north-eastern front would afford not a little pleasure to the geological student. Every few hundred yards he is met by circular cavities, some small and others of very large dimensions, which afford abundant evidence, from the crumbling lava around their slopes, that at no very distant period of antiquity they were the outlets of powerful volcanic action. Some are dry, others communicate their accumulating waters, when they reach a certain height, to the adjoining harbor, and others have been converted into lakes, one of which is reported to be fathomless, but which must simply be regarded as of more than ordinary depth. This island affords ample scope for agricultural operations—having abundance of wood, a rich soil, and several fine streams of water. The low red sandstone rock in some parts, strongly

reminds the visiter from Prince Edward Island of his own island home. Grindstone has no harbor properly its own, but co-operates with the adjoining island named Alright in the formation of one. Each island sends forth a long gravel beach towards the other. They converge so far as to leave a narrow passage, through which a strong and rapid current flows and ebbs from Pleasant Bay on the south and the enclosed waters on the north, which bear the name of House harbor. Within the passage are two or three rocky mounds or islets, in the shelter of which the vessels are moored. Thus there is formed a safe harbor equally advantageous to both islands. On the west side of Grindstone island there is a small haven for boats, named Etang du Nord ; (in English North Pond) corrupted by the uneducated into Tante-nore. Near its entrance is Gull island, a great resort of this omnivorous bird. Six miles south-west is the White Horse reef, on which only 10 feet of water are found, and five miles north-west another dangerous rock named Pierre de Gros Cap. Both north and south shores are much indented by coves and inlets. where the shelving bank meets the sand beach ; those on the south connecting with what is named Basque harbour, and those on the north connecting with House harbor.

Another of those sandbanks characteristic of these islands, and the most remarkable for its length, extends from the north point of this island in a north-easterly direction for no less than twenty-two miles, where it joins the north cape of the Grosseisle. It is everywhere thrown up into the usual sandhills by the violent whirlings of the tempest, in which erections the strong beach grass forms a most important auxiliary. Near the centre of this remarkable sand ridge lies Wolf isle, a small elevation partly covered with wood, and less than half a mile in diameter. As the sand is very loose along the

whole ridge, and without a human habitation, woe to him who attempts to tread his weary way from Grindstone to the Grosseisle. Stern necessity has compelled men to perform the journey, but exhausted nature has imagined the distance to be twice its real extent.

4. Alright Island.

Alright, situated to the north-east of Grindstone, is much smaller than the latter island. In shape it approaches the arc of a circle, with the bow pointing to the south-east. Its length, exclusive of its long appended sandridge, is less than four miles, and its breadth about two. At its nearest point it is eleven miles distant from Amherst harbor, but only eight from Entry island. Like the last mentioned island it has succumbed greatly to the persistent violence of the waves. No one can walk along the southern and eastern cliffs without witnessing the triumphs of the mighty deep. On the south, cliffs of trap and sandstone now ranging from one to two hundred feet in height, give clear indications that their loftier heights have long ago gone crumbling down to the boiling surf below. On the east side you may yet stand on the lofty crag 400 feet in perpendicular height above the sea. Except the gravel beach which juts out a mile in length towards Grindstone, the surface of the whole island is very uneven, being a succession of small rounded hills with their intervening hollows. The loftier hills form a rampart in the rear, to the height of 420 feet, sheltering the valleys and smaller hills from the chilling northern blasts. This undulating land is now parcelled into farms of dimensions suited to the enterprize of the fishing Frenchman. In point of beauty, compactness, and fertility this island is one of the most interesting in the group.

The sandridge pertaining to Alright begins at the north east corner, and extends in a north-easterly direction for nine miles, with a breadth varying from 500 to 2000 yards. At the termination of the nine miles there is a narrow opening, connecting the inner waters with those of the Gulf, after which the ridge bending two points nearer east extends four miles farther, with a breadth reduced to two or three hundred yards, where it forms one side of the entrance of Grand Entry harbor or the Great Lagoon. These ridges run nearly parallel with the one connected with Grindstone island; leaving between them an open space of shallow water varying from half a mile to a mile and a half in width; in the centre of which is a narrow winding channel fit only for boats, which the inexperienced will do well to eschew, especially at half tide. This long lagoon, measuring from the entrance of House harbor to East Island not less than twenty miles in length, has two harbors, one at each end. The one at the south end, called House harbor, has from two to three fathoms of water, and is a mile and a half in width, by two and a half in length. It forms an extensive basin immediately to the north-west of Alright. Its sheltered southern entrance, however, as already mentioned, is the chosen mooring ground of the vessels frequenting this place. The harbor at the north end of the lagoon is a fine circular sheet of water almost wholly landlocked, with a diameter of not less than three miles, and an average depth of about three fathoms. This harbor is named the Great Lagoon or Grand Entry. A description of the surrounding lands will occasion a further reference to it.

Alright has one reef lying about three miles from its eastern shore. The rocks are white; and in one place have scarcely a fathom of water concealing them. As there is deep water all around, they are not a little perilous to the

unwary coaster. Shag Rock is a small isle at a short distance from Alright sand ridge, and about five miles from the island proper. It derives its name from the dark colored bird which frequents it. It may here be stated that the sand-ridges referred to have a substratum of rock ; else their narrow barrier could never have so long withstood the violence of a very tempestuous sea. The writer in passing down the lagoon, and in wandering along the sand-ridge and on both sides and in different localities has perceived the underlying rock. Over these underlying rocks the sand has long spread its peculiar shield, and looks undismayed at the boiling surf that rolls in upon it.

5. The Grosseisle.

This term is applied to the lands which surround, on the north and east, the Great Lagoon or Grand Entry harbor. It properly belongs to the loftiest headland of this territory, whence the origin of the name as used by the inhabitants. In its wider sense, it embraces four distinct islands, improperly so called, as they are all united by marsh or sand-bank. The island, so called, in this region which possesses the largest extent of upland is Coffin island; and if our measuring line is to stretch over marshes and beaches, the first place in point of territory must be given to East island. The other two, namely, Grosseisle proper, and North Cape are much inferior in extent.

Coffin island, forms the eastern side of Grand Entry. It is four miles long, and one mile broad. The surface is in general high but uneven ; peaks and deep hollows, sometimes lakes, succeeding each other. On the north end two long rocky spurs jut out, one in the east forming what is called Old Harry Head, the other penetrating the lagoon for nearly a mile. The outer coast has a large pond named Oyster Pond, about two miles in length, sheltered from the

Gulf by a sand-ridge. Out from this sand-ridge are the extensive and dangerous Columbine shoals. In rough weather this shore cannot be approached with safety within three miles. East island occupies the extreme north-east of this region. A narrow neck of land connects it on the north with Coffin island. It is above four miles in length, and nearly two in breadth. With the exception of a few prominent cliffs, it is low-lying and marshy. One of these cliffs rises perpendicularly to the height of 240 feet. It overlooks a small inland harbor in the north, affording fine shelter for small fishing vessels. Much of the island is occupied with shallow lakes, the chosen resort of the wild duck. Its moist beaches form the richest cranberry grounds. From these outlying beaches there extends near the East Point a long spit of sand, covered by shallow water. Five miles farther out the Doyle Reef is met. No inexperienced mariner should venture near this shore. Its inland cliffs and low-lying sea-board have deceived many who have left the ribs of their ships,if not their own bones, to bleach on the beach as a warning to the unwary.

Grosse-isle lies to the west of East island, to which it is attached at the north-end by a sand-beach. Though very lofty, its dimensions are limited. It is less than two miles in length, and less than one mile in breadth. It comprises three or four conical peaks, all of which may with a little difficulty be climbed. Those cliffs which overlook the Great Lagoon are 300 feet in height. They have suggested the name. When the day is fine the view on the south from their summit will amply repay your ascent through scrubby thickets and dry entangling windfalls. When first your eyes break upon the scene you feel elevated by its surpassing grandeur. A great circular basin fifteen miles in circumference lies at your feet. On its waters are resting the schooner and the fishing boat,

and over these, but far below you, the ravenous gull whirling and soaring and diving as if in wild sport at the excessive abundance of food now swarming around. On the left, in the distance, is the rugged shore of Coffin Island; on the right the far-stretching sand ridge; and outside of both the dancing and sparkling waters of the Gulf. In the distant south Alright and Grindstone rear their gloomy heights, and through their intervening hollow point you the way to the sunny shores of Pleasant Bay.

Midway up the long lagoon two tides meet, the one entering from the east through Grand Entry, the other descending from the south through House harbor. After blending their waters and expending their strength in washing the far-spreading flats, they separate, and retire with rapid course by the way they came. Unless the wind favors, the oarsman must expect to struggle with the tide for one half the way, and if he has unwisely chosen the hour of starting, he will find that as he escapes from struggling with an out-going tide, he has rushed into a contest with an in-coming one. On the north-east of the Grosseisle the land gradually slopes to the water's edge, affording a safe landing place for the boat, and offering some inducements for the cultivation of the soil. There, consequently, the residents have fixed their abode, and there the double work of fishing and farming is moderately prosecuted.

North Cape is a small circular island about half a mile in diameter. It is connected with Grosseisle by a marsh and beach. It has one conical hill approaching in height those of Grosseisle. Its cliffs in the north are crumbling under the ceaseless assaults of the deep. The sheep track or foot-path recedes year by year as the high bank slides down to be the sport of the waves. Its southern and eastern slopes afford a limited space of fine arable land and a sheltered retreat for the home of the cultivator. A wide

creek connects it with the Great Lagoon, and through that the main stream of its resources constantly flows.

6. Bryon Island.

Moving due north from the point last described, we cross an open strait ten miles wide, and reach the narrow, rugged island, named Bryon. It lies nearly east and west, in length about five miles, and with an average width of less than three quarters of a mile. Its surface and outline are everywhere uneven—winding shores and steep banks being met at every turn. The highest hills however, do not exceed two hundred feet. It has no harbor. Shoals lie off the east and west ends, extending south at the latter for nearly two miles, and the whole shore is dangerous and difficult of access. Yet once landed upon it, it loses much of its repulsiveness, and many fine agricultural slopes invite the attention of the farmer and the herdsman. It has been the scene of not a few wrecks; and from its solitary position those who have escaped the perils of the deep, have perished on its shores before assistance could reach them. Such a calamity may now be averted, as one hospitable home, at least, furnished with abundant supplies, is ever ready to welcome the cast-away mariner.

7. The Bird Rocks.

These Rocks, two in number, lie east-north-east from Bryon, twelve miles. They are distant from the nearest part of the Grosseisle not less than eighteen miles, and from Amherst harbor in a direct course, fifty-two miles. They are the last, in the extreme north, of the Magdalen group. From the immense multitudes of birds, chiefly of the Gannet species, which make these islets their summer

resort, and which are seen in clouds hovering over their summits, or whirling in dozens around their cliffs, or ranged in rows along their terraces, the visitor will have no difficulty in perceiving the origin and propriety of the name. The Rocks are distinguished as the Great Bird, and the North Bird, the latter being smaller and lower than the other, and distant one mile to the north-west of it. They both rise perpendicularly from the sea; the Great Bird to the height of 140 feet; the upper cliffs being shelved or terraced. Being only about 300 yards in diameter, they are too limited to be of any special importance, but are admirably adapted for the purposes to which they have been appropriated. When viewed at a short distance, the Great Bird presents a scooped out appearance, the two ends rising higher than the centre. It is scarcely necessary to state that all these islands vary their shape and appearance as you approach or recede from them. In certain circumstances these Rocks assume a snow-white appearance, attributed to the white plumage of the countless gannets resting upon them, and the bleached and stained condition of their summits. Between the two rocks the water is shallow, and for nearly a mile from the North Bird a rocky shoal extends in a northerly direction. Elsewhere the water is deep all around. On the rocks of this North Bird a magnificent iron steamship belonging to the Canadian line was last spring cast away. She soon went to pieces, and her valuable cargo was scattered over the deep, strewing in the course of time all the shores of the Magdalenes. Apart from the negligence which cannot be excused, it may be remarked that a steady current, from one to two knots an hour, sets here to the south-east, so that the course taken a few hours before to clear the Bird Rocks without respect to the possible strength of this current, may have landed her on the fatal rocks. For these

solitary towers of the deep,the whole fleet of vessels bound for the Labradore, from the southern shores of the Gulf, eagerly look, as regulating their course to the wild and romantic coast of the regions of hope.

Natural History.

In a book of this kind, intended for popular use, any scientific details on this branch of our subject, interesting only to the scholar, will be avoided. Nothing prominently interesting or important, however, will be omitted. The door will be left open for some future naturalist of the Lower Provinces to give the Magdalen Islands a place in his scientific descriptions. Their Geology as affecting agriculture and their Icthyology as describing the fishery will claim our chief attention. Pursuing the natural order we shall speak (1) of the—

Climate.

As these islands are situated between the 47th and 48th degrees of north latitude, they occupy the same latitude as the southern counties of Newfoundland, the northern counties of New Brunswick, and those counties of Lower Canada immediately below Quebec. But their climate differs in some respects from that of the localities just mentioned. It is cooler in summer and milder and more variable in winter than those parts of New Brunswick and Lower Canada; and on the other hand it is more severe in winter, but dryer and warmer in summer than the southern coast of Newfoundland. It is, in great measure, free from the fogs which invest and darken the Atlantic coast.

While the navigation may remain open, two or three weeks longer in one year than in another, according to the prevailing winds, the first of January generally witnesses all the lagoons, harbors and inner bays completely frozen over. Before this month is past, their solid surface offers a safe and easy mode of communication between the principal islands; and by the time the keen frosts of February have set in, the islander may take his pony, noted for its swiftness and endurance, and make a circuit of the group. The high winds after the middle of March loosen the outer ice, and sometimes open a way to the islands for the egress of the brave and enterprising sealers. For three months the Magdaleners have now been shut out from all communication with the world beyond their own group; and the first intelligence by letters or newspapers by the earliest arrivals is eagerly looked for. So it must continue to be,unless those who have the means, connect them by submarine telegraph with Prince Edward Island. Apart from this, science might direct its attention to boat-communication on ice. A portable india rubber boat might be constructed, suitably furnished with runners and sails, which in most conditions of the ice might perform long and rapid journeys. The great point is to make use of the wind when the ice is firm and passable; and when there is no wind, a gang of trained northern dogs should take the harness. Things which now appear insurmountable or incredible, facts may yet remove or confirm. Towards the last of April, the cakes of ice around the shores slowly move off, and here and there great fields may be seen in the Gulf, moving eastwardly, with the current, towards the ocean. They have scarcely passed the shores of Cape Breton, when they are rapidly diminished by the warmer waters of the Atlantic. As soon as the ice is away, the temperature steadily improves; and from the middle of May till the

middle of September, the islanders have little reason to complain of the calmness, and serenity and beauty of their summer. Even then they cannot be exempted from occasional storms. But now the high winds begin. And from this time till the end of the year, they have their full share of violent gales. Currents from the ocean here meet the fierce autumn blasts that rush down the great estuary of the St. Lawrence, and these commingling with the violent winds hurrying south from the Strait of Belleisle, make these islands the very focus of their wrath, and at times rage round their lofty peaks with resistless fury. Beset east, west, and north by dangerous rocks, visited by these high winds, and, although occupying the main highway between Canada and Europe, without a solitary lighthouse to warn away from danger, they have, in years that are past, been annually strewn with the remains of wrecks. Without a harbor on the whole western front, and those on the eastern only accessible to the experienced and the wary, the vessel bound to or from the ocean will do well to bear away north or south, according to the winds, and give their unlighted shores a good berth. Autumn soon sees the last exports off, and the supplies of the last arrival stored, when the shipping are dismantled, and the boats hauled up, and man is left to review the past, sum up his gains or losses, and forecast the future. It will be well if the precarious gains of time have not blinded the mind to the more enduring riches of eternity.

2. Geology.

The Geology of these Islands is not a little interesting. Although restricted to a narrow range of territory, and confined to a comparatively limited period of formation, it presents not a few pleasing varieties. Rocks,

aqueous and igneous, stratified and unstratified, often in close contiguity, comprise the group. No traces of the Primary Formation appear, neither granite nor slate in any form. With the exception of the recent marine accumulations, the islands belong to the Secondary Formation, and to those parts of it which embrace the Upper Carboniferous and Lower New Red Sandstone systems. The hard silicious, grey sandstone interleaved with thin layers of quartz which form the peaks of the Grosseisle, and the deep strata of yellow, fossiliferous sandstone, which form the South Cape of Alright, and Cape Moule of Grindstone show their affinity to the carboniferous systems of Cape Breton and the adjoining coasts of Newfoundland; while the upper friable strata of red sandstone, and the abundant overlying trap in every variety, with its ever contiguous gypsum, clearly indicate a formation of much later date. The positions and peculiarities of these and kindred rocks may be briefly noticed in detail. Over thirty different specimens now before us, gathered in person on the localities, afford the best guaranty for accuracy.

1. In order of time and extent of surface Sandstone holds the first place. It may be seen in eight different colours, viz: grey, pink, yellow, red, blue, orange, brown, and variegated. The grey may be found, forming a cliff in the northwest of Amherst harbor, and the summit of North Cape Island at the Grosseisle. The pink forms the highest peaks of the Grosseisle proper. The strata on some of these peaks are nearly vertical, are extremely hard, with occasional veins of quartz from an eighth to three-eigths of an inch in thickness. The yellow forms the capes of Alright and Grindstone already referred to. The red composes in great part the lofty cliffs of the Grosseisle which overlook the great lagoon, and constitutes the substratum of the southern side of Grindstone. The blue

and the variegated may be seen in the lower banks of the Grosseisle. The orange and the brown, both bright and distinctly marked, may be found in the vicinity of the trap, and have evidently been colored by effusions of the once active volcano.

2. Limestone. This rock exists only in small quantities, in thin strata, in connexion with the older sandstone It is seen in four varieties, red, coralline, variegated, and greyish-brown. The red is distinguished by its hardness, weight and crystalization—the coralline, by its branching and specially crystalline structure, often embedding masses of pure crystals—the variegated by its waving veins of argillaceous matter, generally very impure—and the last is the very ordinary fossil limestone. The southern cliffs of the Grosseisle and the cliff adjoining Amherst harbor are the localities where these varieties have been found.

3. Conglomerate. This very ordinary rock is seen in connexion with the Red Sandstone, and is so readily distinguished by its structure that it requires no explanation.

4. Trap. Trap is a rock formed from the semi-fluid emissions of a volcano. It is generally compact, sometimes vesicular, and chiefly of a dark brownish-red colour. It is strewn on the shores of Pleasant Bay in great variety and abundance. Four varieties may be mentioned, compact, vesicular or amygdaloidal—both green and dark brown—spotted, and variegated. The spottedd istinguished by its angular sides being coated in great measure with a solution of lime forms the main cliffs of Demoiselle hill in Amherst island. The variegated is peculiar. It is light-brown in color, having much clayey and little mineral matter, and assumes a very fibrous appearance. Cliffs of this rock may be seen on Alright and Grindstone.

5. Lava. This rock may be distinguished from the ordinary trap by its darker, mineral, molten form. It is

found near the scene of volcanic action on Amherst, Grindstone and Alright.

6. Tufa. Tufa is volcanic ashes hardened into stone. Around the shores and on the banks of Pleasant Bay, it may be seen of two colours, light-green and grey; and of two qualities, the one so soft that you can readily restore it to its original ashes by the pressure of the thumb and fingers, the other so hard that it is with difficulty broken by a heavy stone. In the same locality Scoria or volcanic cinders are found.

7. Gypsum. In the immediate neighbourhood of all the localities where there are unmistakeable indications of volcanic eruptions gypsum may be seen. It is found on these islands in four varieties at least. In one place it is pure white, in thin layers, brittle, glistening and resembling salts. In another, its form is massive, and its white is beautifully blended with bluish-grey. In a third, it is bituminous with a hard, black, glistening wavy surface. And again the massive white is interleaved with thin layers of bright red, presenting a hard, wavy, glistening surface somewhat resembling sulphate of barytes. Who could walk these shores with any knowledge of geology without being deeply interested? To the above we may add,

8. Alabaster. This is found in thin, semi-transparent plates, near the gypsum cliffs, when the tide is out. It is evidently formed in the fissures of that rock, to which it bears the closest chemical affinity.

9. Ochre. Ochres of different colors may be seen on Grindstone, Alright and Entry. The best red ochre is found on Entry. The banks in which they are obtained afford valuable materials for the production of paints. In connexion with this may be mentioned a fine-grained, hardened, laminated pink clay, which may be used instead of red ochre for marking.

10. Manganese. This useful mineral may be found near the running streams on Grindstone island. The quantities, however, are so small as to acquire little importance at present..

Through all these varieties three elements predominate, Sandstone, Trap and Gypsum. Their decomposition and combination form excellent soil. Such is the soil of every habitable island in the group. It is everywhere rich and productive, with anything like ordinary cultivation. The recent formations include the gravel beaches, marine marshes and sandhills. They require no description.

Fossils. Petrified wood in two varieties have been found by the author. The one was a stout branch of a tree, with connected limbs, embedded in a mass of yellow sandstone on the south cape of Alright. The fossil, containing more iron than the surrounding mass, had successfully resisted the action of the sea, which had worn away the stone, and left the fossil standing out in bold relief. The other, found at the foot of the cliffs of the Grosseisle, consisted of large blocks of a trunk converted into limestone exactly similar to the fossil limestone of Pugwash, Nova Scotia. These fossils offer valuable aid in determining the period in which the enclosing rocks were formed.

3. Botany.

Our remarks on this department will be brief. We shall merely notice the chief vegetable productions of the water, the sand beach and the upland. In the open bays the sea-cord and the sea-belt may be seen at all seasons, rising and falling with the waves, and moving out and in with the tide. By the storm they are cast ashore to dry and wither on the rounded pebbles above high-water mark. On the margins of the channels of the lagoons, the long and slender eel-grass may be passed over, moving gently

to the motions of the water, or bending under the pressure of the tide. The bottom of the flats, in many places, is covered by a dense foliage of slender bright-green trailing plants, which accumulate and grow rank as the water becomes warm, to the no small annoyance, at times, of the rower. At a certain season these plants assume a yellow colour, being covered by the countless millions of the ova of the herring. It would be a task to describe all the denizens of this marine forest. When small boulders line the shore, the usual olive-green crackling rock-weed may be seen. Sometimes the winds and waves waft stray seeds of various kinds to the gravel beach, and before the summer is gone strange weeds may be blooming on its brow. The prevailing vegetation of the beach and sand-hills is a strong broad-bladed coarse grass. In the moist hollows the grass is finer and richer. There too, as the soil has an intermixture of fine sediment, the cranberry luxuriates. Three varieties of this valuable and highly-prized berry, differing in size and colour, abound. The uplands, as might be expected from their soil, produce all the ordinary grasses, grains, and vegetables. They are, however, but partially provided with wood. Entry and Alright are nearly bereft of wood for fuel. The islands were at one time densely covered with forest, but the cuttings and clearings of a century have circumscribed the woods to narrow limits. There is yet abundance on Grindstone, and a limited supply on Amherst and at the Grosseisle. These woods consist almost exclusively of varieties of spruce and birch. Where the soil is moist and sandy, the well-known species of Coniferæ called var, and occasionally juniper, prevail; on the high capes exposed to the spray of the sea, a short, scrubby spruce with dense foliage appears; and in the sheltered valleys where there is deep rich soil, the white birch is found. A few other smaller varieties of

hard wood are met with along the margin of the brooks. The wild pear, the delicious capillare or hair berry, and the fragrant tea-berry, are also seen. The author found the wild parsnip growing rankly on one of the circular cavities of Grindstone. When there the strawberry was in bloom on the very summit of the Grosseisle. Indeed, the oval summit of one of the peaks was exclusively a strawberry-bed. In lower ground, the raspberry bush readily appears where fire has overrun the land. The dewberry takes its place occasionally in the same hedge. And in some favored mossy spot, sheltered by the overhanging rock, the delicate and delicious bake-apple, so well known to the inhabitants of Labradore, has in some seasons been found. This berry grows on a stock four or five inches above the ground,and is in size considerably larger than the raspberry, which, in lobular form it much resembles. It is at first of a pale pink colour, then as it becomes full grown assumes a bright crimson, and when fully ripe turns a pale orange. It is indigenous on the wide mossy plains around the far-reaching bays of the barren Labradore.

It is quite possible that the patient investigation of a skilled botanist would result in the discovery of other strange or rare shrubs, on these hitherto almost unexplored islands.

4. Zoology.

The Zoology, especially in the Icthyological and Ornithological departments, is interesting, although limited. Of the Invertebrate or lowest class of the animal kingdom, specimens of the Radiated, Mollusk,and Articulated are not wanting. On a calm summer morning the whole surface of Pleasant Bay is alive with innumerable radiated soft

skins, or sea-jellies expanding and contracting in every angular form, feeding and sporting in the warm sun-beams of the surface water. On the shores of the same bay may be seen beautiful specimens of sea-stars, with their angular crusty covering; and sea-eggs, with their circular radiated shells. In most instances the inmate of the last is gone, and the hollow shell, with the round opening on the lower surface, is cast by the waves on the beach, there perchance to lie by the side of the lifeless tenement of the lord of creation, the lowest and the highest being alike the victims of the ruthless tempest. Of the mollusks, two of the most attractive specimens are the small oval white clam, found on the flats where the herring spawn; and the large, strong sea-clamb, measuring over five inches in length by four in breadth. The one abounds on the flats of the great Lagoon, the other is brought up from the deep water of Pleasant Bay. Oysters have lately been dropped in the lagoon called Basque harbor, but some time must elapse before the result of the experiment is fully known. The articulated animals exhibit an ample variety in the shape of worms, insects and spiders. The sand and water forming their great breeding places, they exist in countless millions, and not a little patience and time would be required to examine and describe their multifarious forms. To this class of the Invertebrate belongs the useful and sometimes highly prized lobster. At a certain season of the year these animals approach the beach from deep water, for the purpose of spawning, and are caught in considerable numbers.

The Vertebrate or highest class of the animal kingdom include Fishes, Reptiles, Birds and Mammals.

FISHES, are of two classes, those which have a cartilageinous skeleton, such as the skate and dogfish, and those which have a bony skeleton, such as the herring and cod-

fish. The skate and dogfish pursue or accompany the herring, the former coming close in to the shore where it is frequently caught along with the herring in seines; the latter taking the hook like the codfish, and sometimes becoming entangled in herring nets in which it makes great havoc. Both these fish are caught in the waters within and around the Magdalen Islands. The thresher and some smaller varieties of the Shark family, belonging to the same class of fishes, may occasionally be seen in that portion of the Gulf, but they are rare visitors. All the fish of this first division are comparatively valueless, and some of them highly destructive to man. The fish of the higher division or bony skeleton, include by far the most varied, numerous and useful species. The Magdalen Islands can boast of specimens of all the most valuable and important. There representatives of the Clupeidæ or herring family, the Scombridæ or mackerel family, the Gadidæ or cod family, the Pleuronectidæ or halibut family, the Salmonidæ or salmon family, the Percidæ or perch family, and the Anguillidæ or eel family, pay their annual visits and fulfil at once the desires of nature and the designs of providence. Of these, the herring, mackerel and cod deserve the first place, and demand a passing notice.

The Herring comes in from the deep waters of the ocean in early spring. They strike the southern coast of Newfoundland and then pass into the Gulf; visiting the coast of Cape Breton and Nova Scotia about the same time. The Gulf is their great summer resort, in which they appear at this season in immense shoals, making their way to their chosen spawning grounds. When the ova have been deposited, the fish retire to deeper water, and moving farther north feed largely on vast masses of diminutive fish called herring-bait, with which the waters of the Strait of Belleisle are sometimes swarming. In August

and September they pass down the Labradore coast, moving out and in certain harbors, but always pressing north, till as the season closes, they are on the verge of the Arctic ocean, from which they again pass south and prepare for their annual circuit The ice has scarcely left the bays and lagoons of these islands when the herring make their appearance, often in such dense masses that 50,000 barrels have been caught in Pleasant Bay alone in fifteen days. Nets and seines are both used. By the latter from 500 to 3000 barrels are caught in one haul. It is not always that the fish can be seen near a locality fit for seining; and when thousands of barrels have been inclosed, a storm may compel the speedy removal of the seine before one half have been secured. They press their way sometimes into the lagoons in such dense masses, that between the flats on the one side and the strength of the tide on the other, thousands of them are suffocated. On their first arrival they are very bright and active, but soon become dull and inert, and are then less palatable. Their approach is the signal for exertion, and many an anxious heart now beats high, with buoyant expectations of coming sustenance or future gain.

A few days after the herring leave the Magdalens, or about the last week of May or first week of June the Mackerel make their appearance. They have come from deep water; and their object is the same as that of the herring. Although they move in shoals, their masses are not so dense as those of the earlier fish, and hence at this period they are chiefly taken in nets. Their movements are much influenced by the winds. One season they may be very abundant, and in the following very scarce. Like the herring they remain only about a fortnight, and in these few days the fisherman's hopes may be fully realized or sadly disappointed. The spawning is over by the mid-

dle of June, and they are off again to roam the deep in search of food. Again they make their appearance. But it is now the last of July or the first of August. And during this and the two following months they move round these islands in the most capricious manner. Occasionally they enter Pleasant Bay and are caught with the hook and line. Unlike the early spring run which are very poor, they are now large and fat, having fully recovered from the enfeebling process of spawning. The most successful fishers of mackerel are the Yankees They make it their special task to secure this valuable fish The cotton sails of their four hundred schooners reflect their snowy whiteness on every section of our Gulf, during the fishing months. By great tact, endurance, and experience, combined with the very rational but not very common method of feeding the fish where they happen to discover them, they are supposed to take away from our Gulf annually not less than 50,000 barrels of mackerel. Let their example stimulate others.

The Cod fishery is the most extensive and the most valuable on the shores of British America. This highly prized fish generally roams in waters ranging from twenty to seventy fathoms in depth. In the spring it, likewise, approaches the shores and remains for about two months where there is a depth of only twelve, eight, or even five fathoms It then retires to certain banks where its food is most abundant. At the Magdalen Islands, the cod, following the herring, appears in the early part of May, and is caught off Entry Island, in Pleasant Bay, and at North Pond on the western coast. Later in the season, it may be obtained off the northern and southern extremities of the group, near the Bird Rocks and Deadman's isle. These fish generally swim near the bottom; but in fine weather, and on some coasts, they rise in great numbers to

the surface, and it is a most animating sight to witness some four or five thousand of these large fish pitching and tossing themselves,in the wildest manner,on the surface of the water around your vessel. They are sometimes taken by a seine or bag-net, but the usual method is by hook and line. The best bait is capelin, or fresh herring. The cod will not taste salt food, if it can obtain fresh. It is very ravenous, and takes the hook most readily. Its perfect curing requires great attention. In most cases, the flavour, and not unfrequently the very substance, of both herring and codfish are destroyed by carelessness and ignorance in the treatment of them after they are caught. Besides the common cod, the haddock a species of the same family is taken in these waters. Hake, however, is not found. Its chosen place is the muddy bottom which does not belong to these shores.

Of the Pleuronectidæ, two common species are caught here. The one, the large halibut, is often taken on certain frequented spots. The other, the small flounder or flat-fish abounds around the shores. The Salmonidæ have here four representatives, the salmon, trout, smelt and capelin. But few salmon are caught. Occasionally one is found entangled in a herring net in Pleasant Bay. They are not supposed to frequent these shores in such numbers as would warrant any outlay for their capture. The sea-trout however, comes in great abundance. Two brooks on Grindstone and one on Amherst have long been their resort for the purpose of spawning. No sooner has the ice removed from the mouth of the brooks than the smelt rushes up in great quantities, affording at that early season very acceptable food to many of the poor. The capelin is not so common. It approaches the shores of Entry, and the gravel beach near the West cape of Amherst, where at certain seasons it may be seen tossing in the roll-

ing surf. It is the best bait for codfish, but cannot always be obtained. When lightly salted and dried, it is a finely flavored and very palatable fish. Of the Percidæ the small blue perch is the only species. It is caught at North Pond. The Anguillidæ have their representative here, in the shape of the large sea eel. It spends the winter in the mud of the narrow channels of the lagoons. On the approach of spring they betake themselves to deep water, and when the cold season returns, some of them may be seen making their way over a narrow beach from the gulf without to the still waters of the lagoon. Guided by instinct they wait till a south-east storm raises the sea unusually high at the Grosseisle, when moving into the surf they are swept in upon the land, and attempt the tedious process of land transportation. The attempt is not always successful, for the inhabitants of the neighbourhood sometimes await their arrival, and intercept them in their progress. In the depth of winter they are speared through holes in the ice, after a thaw, and form in the estimation of many a very rich and wholesome food.

The REPTILES may be dismissed in one sentence. The inhabitants say that neither Snake, Lizard, Toad nor Frog has ever been seen on their shores.

BIRDS. Birds are classified under six general divisions, viz: Birds of Prey, Perching Birds, Climbing Birds, Scraping Birds, Wading Birds and Swimming Birds. One or more species of the most of these divisions frequent the Islands. The second and sixth divisions, having the greater number of species, are proportionally represented.

The first division indicate their presence here by the stray visit of the eagle, whose alighting on these shores has sometimes proved fatal to him; and by the summer sojourn of the hawk and the white owl.

The second division are represented by the robin, the blackbird, the kingfisher, the crow, the bluejay, the yellow, blue and grey birds, the snow bird, and the humming bird. Of the third division one solitary species alone is seen, the common woodpecker. There is no wild representative of the Scraping birds. The domesticated hen, belonging to this class, may be seen in the possession of almost every householder.

The plover, the curlew, and the snipe, are the most valuable species of the Wading birds seen here. As there are extensive ranges of marsh and beach, these birds are by no means rare.

The Swimming birds of the last division are, as might be expected, very numerous. Geese, Ducks, Gulls and Gannets, are the prevailing species. They deserve a passing notice. The wild goose and the brent make these Islands their chief halting place in their progress north and south both Spring and Autumn. Twenty miles of beach, with the same expanse of lagoon and marsh, indented with sheltered creeks, lined with fine grass, tempt their stay. Some of the brent, so well pleased with their place of sojourn, decline proceeding on to the rocky shores of Anticosti, or the lonely bays of the Labradore, and spend their summer here. It is not a little exciting to the fowler as he passes down the lagoon to see a flock of these fine birds rise from some sheltered inlet, and making a long circuit to withdraw attention from the spot, gradually move back to their retreat.

Ducks of every species, black, grey and spotted, are very numerous. In the more retired parts they annually hatch their young. Scarcely a day passes without the inhabitant of every corner of these isles witnessing from his door or from the beach the passing and repassing, the moving out and in of these birds, in pairs, or half dozens,

or in larger numbers. Experience has taught them, however, to sweep round at a respectful distance from the approaching boat, and to take instant alarm as the rustling reeds in their vicinity are heard to crack.

Gulls, white, grey and speckled may be said to claim these islands as their summer home. They are almost always in sight on the wing, in one quarter or another. Each one seems to look out for himself. He is moving out or in the bays, resting on the water, or pouncing down on some refuse floating on the waves, or soaring aloft screeching after some one who seems to have been more lucky than himself. During the herring season, their jargon of screeching notes never ceases, from the dawn of day till dusk. At the great lagoon of the Grosseisle, when its shallow waters are teeming with herring, the discordant notes of multitudes of the large grey gull are heard deadening every other sound. Their eggs, laid on certain retired rocks, are eagerly sought after and readily appropriated.

The Gannet makes its home upon the Bird Rocks. These Rocks are literally covered with the swarming hosts of these large birds. The gannet is above three feet in length, white in colour, except the top of the head and back of the neck, which are tinged with yellow, and the quill-feathers which are black. It possesses extraordinary buoyancy, from the length and muscular force of its wings and an arrangement of extensive air-cells by means of which it can fly with great rapidity and ease, and remain long upon the wing. They live chiefly on herring. When in search of food, they soar to a considerable height, until detecting with piercing glance the desired object, they dart down with great impetuosity, and seize their prey beneath the waters. They have been known to seize a herring at the depth of two fathoms. On fine nights, when the herring have come in to spawn in great numbers at the Grand

Entry, these birds come up from their lofty rocks like a white cloud, and present an animating scene when diving all around you in the great landlocked lagoon, and rising with flapping wings from the surface, and their glistening prey firmly clenched between their beaks. A species of the same family, but less daring and active and of a dark color, called the Shag, occupies a small rock, a few miles to the north of Alright. The young may there be seen at a certain season covered with a long, black down, and comparatively helpless.

A few of the Murrs of the Mecatina rocks of Labradore sometimes lay on the Bird Rocks. These birds are about the size of a duck, and have a spotted black and white plumage. The author had the gratification at one time of landing upon Treble island, one of the Mecatina group, and witnessing in close quarters the countless numbers of these birds lining every terrace and shelf of the brow of the island. A few minutes were sufficient to load the boat with fresh eggs, and one discharge of an old musket killed eight outright, and wounded an unknown number. Two were caught alive, and kept for some time on board the vessels.

Mammals. These animals may properly be spoken of under the two divisions of Sea Mammals and Land Mammals. Of the Sea Mammals the Whale, the Porpoise, and the Seal deserve mention, as seen in these waters.

Four species of Whales frequent the Gulf. These are the Black, the Finner, the Sulphur Bottom and the Humpback. Their names describe their distinctive features. After spending the winter in warmer latitudes, they arrive in the Gulf with their young, now from eight to twelve feet in length, about the end of May. The young, feeding on capelin and herring, grow very rapidly. Of the four species, the most valuable, but the most rare, is the Black

Whale. It yields from 100 to 500 barrels of oil,according to its size and condition; while the other species yield generally less than 100 barrels each. The Humpbacked is very easily killed; but the Finner and the Sulphur Bottom are very violent, and require to be lanced and exhausted from loss of blood,before the harpoon can be safely used.

The Porpoise is no stranger around the Islands. Scarcely a calm day in summer occurs without his dark glossy back being exposed above the surface of the water in his peculiar tossing and tumbling manner. Sometimes large numbers are seen; but generally two in company. They pursue the herring and mackerel with great eagerness, and on reaching them attack the shoal with great violence. The Dolphin and Grampus are kindred species, but are less frequently seen.

Three species of Seal are seen in these waters. One of these, the common Harbor Seal, is solitary, being generally seen alone. The other two, the Harp and Hooded Seals,are gregarious. The Harp is sometimes five feet in length; the Hooded, so called from a moveable sack on its head, is even longer. Seals come up from the Arctic seas in the month of November. They move gradually along the shores of the Strait of Belleisle and spend the winter in the Gulf, resting a great part of the time on floating ice. In March their young are brought forth on the ice, where they remain for a month before they take the water. It is at this season that they are attacked by the Seal-fishers. It is in vain to pursue a seal when he has reached the open water; his agility will defeat the most persevering. When the ice begins to move in March, they often show themselves in herds on the shores of the Magdalenes, Cape Breton and P. E. Island. Some idea of the numbers killed may be formed from the fact that over 500,000

sealskins are annually exported from Newfoundland. The Walrus, which visited these Islands in vast herds in years long past, are seen no more. They have been exterminated from all the shores of the Gulf.

The Land Mammals in a wild state, are, as may be supposed from the position and extent of territory, but very few. One or two species of the Carnivora and of the Rodentia alone are seen. Of the former, the Fox is perhaps the only species. There are none of the Weasel family. Even here the Fox assumes three varieties in color, red, silver-grey and black. Of the Rodentia, the chief representative is the Rabbit. They are very numerous. The Field Mouse is met with in the sand-ridges. From his plump condition, he seems to enjoy his sandy domicile with much satisfaction.

On the whole, there is perhaps no place in British America, of equal extent, which can offer so many objects of interest to the enthusiastic Naturalist.

Social Condition.

It is most likely that the early European explorers of this Western Continent, discovered these Islands, on their first visit to the Gulf of St. Lawrence. A ship on a voyage of discovery bound west from the south coast of Newfoundland could not miss them. The first object, on sighting the land, would be to ascertain its character by sailing round its southern or northern extremity, and possibly, if the weather was fine, by effecting a landing. These strangers on approaching the shore would mark the lofty headlands, clothed with their sombre spruce and the low-lying intervening sand-ridges, decked with the more humble attire of the rank beach grass. A solemn silence reigned all

around; no human footstep was heard on the shore, but the agitated waters of the Bay gave tokens of their living millions, ranging unmolested, and the neighboring beach seemed streaked with black where the seals were basking, dreading not the approach of a destroyer. For the next century these Islands received occasional visits from the European fishing crafts which made their way into the Gulf, some calling for wood and water, others seeking shelter from the tempest, and others enriching themselves from their waters. A century later, and these visits were greatly multiplied; permanent establishments were formed upon them, as the result of authorised possession; and Frenchmen of rank, convinced of the vast wealth floating in the western waters, had erected their dwellings in every prominent fishing ground from Petit Degrat at the south of Canso to Bradore Bay on the Labradore. The solitary position of these islands greatly retarded their permanent occupation; so that at the time Cape Breton and Prince Edward Island came into the possession of Great Britain, in 1763, they are said to have been inhabited by only ten families. Admiral Sir Isaac Coffin obtained a grant of the Islands in 1798. He was born in Boston, in 1760. Entering the navy at the early age of 13, he passed through the various grades of rank until the midshipman became the full Admiral in 1814. He was actively employed for many years on the American coast, and invariably distinguished himself by his bravery. In the wars of the French republic, he performed much service on the coast of France and Spain.

It is reported that on passing the Magdalen Islands, in command of a ship of war conveying one of the Governors of Canada to Quebec, he expressed a wish to the Governor, most probably Sir Guy Carlton, Lord Dorchester, that the islands might become his The day was remarkably fine,

and the islands appeared to great advantage. The Governor promptly consented to use his influence to obtain the grant; the request was at once complied with by the Home Government; and the islands became the sole possession of Captain, afterwards Admiral Sir Isaac Coffin. The Admiral died in 1839, and left the islands to his nephew Captain John Townsend Coffin, an officer in the British navy who has of late attained to the rank of Rear-admiral. They are now an entailed estate in his possession. Both the late and the present possessor have in a variety of ways testified their interest in the welfare of their tenants, the inhabitants of the islands. The income derived from them is merely nominal, being generally expended in their improvement or welfare. At the time the grant was given, the population had increased to 100 families, embracing not less than 500 souls. This increase can readily be accounted for. The people were all of one race and religion. The means of subsistence, such as it was, were abundant; and Acadians, feeling themselves strangers in a country once their own, naturally sought such a retreat as these Islands offered. In 1830, the population amounted to something less than 1000. About this time a new element became associated with the French population. This was the accession of several British Protestant families, which up till the present have been steadily augmenting their numbers. The healthy energy of the new race aroused the dormant activity of the old settlers, and materially contributed to the improvements which have since taken place. Last year (1861,) the census was taken, when the total population was found to be 2659, of whom 300 may be regarded as Protestants. All the rest are Canadian or Acadian French. The Protestants are chiefly from Nova Scotia; a few are from Prince Edward Island. Both classes direct special attention to

fishing; but in most cases there is an effort to cultivate some portion of land near their dwellings. The French prefer to live in close, compact groups of houses, which might be classed as villages, but from want of all order and arrangement in their location beyond what the vicinity to a road may require. Their location is exactly similar to that seen in the various Acadian settlements of Prince Edward Island and Nova Scotia. They do not aspire to be farmers; the piece of ground cultivated partaking rather of the dimensions of a garden than of a farm. Their ordinary dwellings are plain constructions of wood, without much that is attractive either within or without. Want of education and resources are the main causes of this backwardness; for where some wealth has been gathered, and some knowledge of the world obtained, the dwelling and the furniture invariably assume a creditable appearance. The houses of the other race are decidedly superior, on a whole, to those of the French, being almost on an equality with farmers' dwellings in the neighbouring colonies, and considering the circumstances of the people, indicate neatness and comfort. Their houses are farther apart, and their efforts in cultivating the soil make some approach to farming. Like most fishing coasts, where communication by water is easy, and the making of roads difficult and demanding labor, at the time that fishing is profitable the roads on these Islands have been too much neglected. The three most important islands, Amherst, Grindstone and Alright, have each one main highway passing through from east to west along which a cart or strong wagon may make its way without much trouble. At the Grosseisle they are not so far advanced, the extent of level surface being much less; and the beach or a footpath along the bank is the chosen land course. It may be said that boats are their carriages, and the Great Lagoon their high-

way. Education has not been wholly neglected. Three or four teachers have generally been engaged in imparting the rudiments of learning to the young. Canada, of which these Islands form a part, has extended her sympathy to her outlying children, and promptly contributes to the support of education. In this important matter the priests, who have the religious instruction of the great body of the people intrusted to their care, have taken some interest; and the Protestants, although widely scattered and few in number, have not been totally indifferent to what must ever be to them of vital moment. Yet there is wide room for improvement. The difficulties and disadvantages are many, but union and energy might overcome these; and the pleasures to be obtained in the paths of learning, might go far to remove the loneliness of their insular position, especially during winter. Four schoolmasters, at least, might secure constant employment; each of the more important places should have one; and two of the four ought to be able to teach Book-keeping and Navigation. The younger children could receive special attention in the summer; the elder, in the winter, when their parents have less need of their assistance. In respect to religion, the people are divided into two classes, Protestants and Roman Catholics. The Protestants have three churches; one on Amherst, a second on Grindstone, the third at the Grosseisle. It is to be hoped that these buildings, yet unfinished, may soon be completed. The Roman Catholics have three chapels; one on Amherst, a second on Grindstone, the third on Alright. They embrace seven-eighths of the population. They have generally two priests. The Protestants are under the care of an Episcopalian Clergyman sent to them by the Episcopal Church in Lower Canada. His parishioners, however, have been chiefly brought up in connexion with the Presbyterian Church. But they

have in their clergyman, at present the Rev. Mr Boyle, a man of noble, generous sentiments, of great courage and endurance, and of indefatigable industry. Both minister and people deserve the sympathy and assistance of their more highly favored brethren in other places. Few can form a correct idea of the hardships to which the minister must be subjected who has to attend to the spiritual wants of a people scattered over this group. In the toil and storm and danger, the hardy seamen bear their part.

Both classes seem to live on friendly terms with each other. There is little violence or disturbance. The Acadians are everywhere, as a people, quiet and inoffensive. Occasionally an outbreak may occur, but it is speedily terminated. The inhabitants wear a cheerful and frank demeanour; and are universally kind and hospitable to strangers.

Commercial Importance.

The commercial importance of any country depends upon its resources and facilities for trade. The resources may be either its own actual or possible productions, or those of another country of which it is the emporium; the facilities for trade arise from its position and communications. The resources of the Magdalen Islands are both agricultural and marine, but chiefly the latter. Let the actual be distinguished from the possible, in both cases. Of 7083 acres occupied last year, probably less than two thirds were under cultivation. Yet these few acres yielded 4196 bushels of barley, 8531 bushels of oats, 1262 bushels

of wheat, and 21,637 bushels of potatoes. 2731 tons of hay were cut; but it is probable that the greater portion of this was obtained from the sand-ridges, not generally included in the returns of cultivated lands. As the population is only 2659, there were raised 1½ bushels of barley, more than 2 bushels of oats, nearly half a bushel of wheat, and 8 bushels of potatoes for every man, woman and child on the islands. To this must be added Stock, valued at $48,849, sustained by the productions of the soil. Such is the actual; let us glance at the possible. The whole surface of the group occupies not less than 45,000 acres, exclusive of the sand-ridges. It will be seen that not quite one-sixth of it is occupied. Of the unoccupied portion, probably two-thirds are fit for cultivation; and where the hills are too steep for the plow, the sheep and cattle may feed, as the highest peaks contain fertile soil. Are we not safe in saying that the islands, when brought under proper cultivation in their whole extent, would produce 20,000 bushels of barley, 50,000 bushels of oats, 10,000 bushels of wheat, and 120,000 bushels of potatoes? The soil is richer than that of Prince Edward Island, which is noted in British America for its special adaptation to the production of grain and potatoes. Sea manure is every where easy of access; so that there is no real difficulty, if industry be exercised, and proper attention given to agriculture, in these islands producing not only an ample supply for their own wants, but also a large surplus for exportation.

Their marine resources consist mainly of the products of the Seal, Herring, Cod, and Mackerel Fisheries. He who has established the relative boundaries of sea and land, has placed these isles, like fishing hamlets, in the midst of the most valuable fishery on the face of the globe. How far the inhabitants have actually availed themselves

of these advantages, a few figures, drawn from authoritative documents, will show. In 1860, they caught 16,000 quintals of dried fish, and 104,000 barrels of pickled fish; and manufactured 30,000 gallons of oil, and 5,500 seal-skins. The aggregate of these articles were valued at not less than $270,000. In these operations, 38 schooners, 232 boats, and 574 nets were employed by the inhabitants. A large proportion of the fish caught and entered, was taken by vessels from abroad. Some idea of the rapid increase of trade, may be gathered from the following Table, drawn up by the Collector of Customs at the port of entry on Amherst:

YEAR.	EXPORTS.	IMPORTS.	DUTIES.
1851	$19,564	$5684	$444
1852	44,384	12,984	1212
1853	68,388	12,704	1336
1854	76,820	18,304	1696
1855	61,288	29,600	1492
1856	82,952	34,212	1368
1857	153,072	41,880	2121
1858	234,583	28,704	1809
1859	266,656	54,803	3821
1860	270,000	45,280	6070

Thus the exports have increased in ten years from $19,564 in 1851, to $270,000 in 1860; the imports from $5684 in 1851, to $45,280 in 1860; and the duties from $444 to $6070, within the same period. As the essential antecedent to this increase, there has been a corresponding increase in the number of vessels arriving and departing annually. In 1854, 104 vessels entered; in 1860, 250 vessels entered, —in all 10,600 tons, and with crews numbering 1373 men. To these must be added about 100 vessels annually, who decline to enter in the orderly way, although fishing within and around the islands. If we say, 350 vessels, 15,000 tons, and 2000 men, we may yet be within the mark. The trade is chiefly with the Lower Provinces;

Nova Scotia absorbing more than all the others united. Of 374 vessels entered at Amherst in 1859, 294 were from the British Provinces, and 76 from the United States. Of the $266,656 worth of exports of that year, $181,962 worth went to these Provinces, and $84,064 worth to the United States; and of the $54,803 worth of imports of that year, $49,058 worth came from Nova Scotia alone. The value of the imports of the coasting trade with Quebec and neighboring ports is given at $12,000 annually; the number of vessels engaged, 21; and the tonnage, 856. Such is a bare outline of the actual products of the fisheries, and of the trade arising therefrom. No one really acquainted with the place, or with the fisheries of the Gulf, will suppose that these products have reached their utmost limit. With proper care in allowing the fish at least a limited access to their spawning grounds, and with the exercise of ordinary prudence in their destruction, no diminution in the shoals annually approaching our shores need be anticipated. The production has been arranged by a beneficent Creator to keep pace with an enormous waste. The destroyed and captured millions are rapidly replaced by the reproductive powers of the fish. The female herring, for example, carries from six to eight millions of ova. Still these millions are of no avail unless they reach the place destined by nature for their reception and growth. The fish which spawn in shallow lagoons, as the herring, or near the sources of rivers, as the salmon, are more in danger of extinction than the mackarel and the cod, which spawn in deeper waters. Yet there is a limit beyond which man's covetousness cannot proceed, without disastrous effects recoiling upon himself. Wise and stringent legislation has now been brought to bear upon the protection of the fisheries, and not an hour too soon. Fishing must be conducted on the principles of nature and right,

and then the supply will become more abundant, and be more generally distributed. If the Hebrews, by the Divine command, allowed their lands and fruit trees to rest without cropping or stripping every seventh year, might not the fishes of our shores and rivers, with the most advantageous results, be granted a similar privilege by the most unrestricted access every seventh year to their breeding places? It would prevent the possibility of extinction in the case of any of our valuable fish, by any ordinary means. This is merely a suggestion. We have no space here for its discussion. In the mean time, untold treasures of the deep visit and roam round these islands, untouched by the hand of man. Glance at the possible increase of products from the main fisheries. At present from twenty to thirty vessels fit out at the Magdalen Islands for the seal fishery. They generally do well, sometimes very well. Here, as elsewhere, all parties are liable to the inevitable vicissitudes which attend this business. The seals are abundant, if the vessels can only get out to the ice on which they show themselves. Their movements are uncertain. Thousands may be seen within reach, and a full cargo secured in a few days, or weeks may be spent without seeing one. These chances must be foreseen and provided for, or ruin may ensue. A little to the north of the group, a small vessel of 40 tons, a few years ago, found, about the end of April, fields of floating ice covered with seals, and killed 600 of them in eight days. At the same time, a brig from Newfoundland, a short distance from her, killed 3000. The Magdaleners deserve credit for the enterprise already shown in this daring business; but who can doubt, if the means were only at hand, that twice the number of vessels would go out, and instead of 6000 seals coming home after two months labour and fatigue, 30,000 might be brought back.

Newfoundland sends out over 300 vessels of 30,000 tons, and 10,000 men annually to catch seals wherever they may be found. What should hinder the Magdalen Islands, if they had the capital, from equipping 50 for the same hazardous, but generally remunerative occupation.

The catching of Spring herring receives general attention, and on it the people rest their expectations in great measure. But shoals of these fish move off and on these islands unreached. If 50,000 barrels have been caught in one fortnight in Pleasant Bay alone, how many more might be caught in other places at the same time, if there were the men and means to take and cure them? No one who visits these islands at that season can be so ignorant as to believe that all the fish are caught that might be, and that without endangering the future abundance of the fish. It too often happens that they are taken in greater quantities than the facilities for preserving would warrant, when of course they are destroyed. The same fishing might be advantageously prosecuted in a still greater degree than it is, by sending a larger fleet to the coasts of the Labradore, there to await the visits of the fish in its restored and fattened condition.

The cod fishery is capable of indefinite enlargement. The Gulf is alive with these valuable fish. Sandy shoals on neighbouring coasts invite the attention of the enterprising. Instead of exporting 16,000 quintals only, 30,000 would be much nearer the requisite limit.

Similar remarks may be applied to the mackerel fishery. No blame is here attached to people who may be doing all within their power. The aim of these statements is to show that the producing capabilities go far beyond the actual products. Enough has been said on these matters. Our Gulf is teeming with all kinds of valuable fish every

summer. The Magdalen group occupy the centre of this Gulf,—they have ample facilities for trade on every side,—they are availing themselves to some extent of their great advantages; but their actual gains lie far within the circle of their immense resources.

THE END