

ART V.—ON THE MAGDALEN ISLANDS, BEING THE SUBSTANCE
OF FOUR REPORTS, BY LIEUTENANT BADDELEY, R. E.

INTRODUCTORY.

In the autumn of the year 1831, the Government hired Brig *King Fisher*, being under orders for the Gulf upon Colonial services, I was honored with His Excellency Lord Aylmer's commands to proceed to the Magdalen Islands, by that opportunity, and, on my return, to report upon them, under certain heads of instructions, with which I was furnished.

Owing to the lateness of the season, and to the necessity we were under of visiting other places, our detention off the Magdalen Islands was only of nine days duration, a period totally inadequate to afford me the opportunity of giving a full description of them; a fact which I must urge as *one* excuse for what will be found defective in the present attempt.

Upon submitting my Reports to His Excellency, he condescended to suggest that I should present to the Literary and Historical Society at Quebec, such portions of them as might be likely to interest that body; on doing which they were ordered to be published in the third volume of its Transactions.

The principal suppressions are in the third Report, which, having been originally of a military character, contained matter now, for obvious reasons, withheld.

The writer can put forth little claim to originality in the first and fourth Reports, as they are, for the most part, compilations of the opinions and assertions of others. This,

indeed, is necessarily the case, as the want of time and experience on such subjects would render negative those opinions which he might otherwise have ventured to offer. Almost all such as have been advanced were either obtained or confirmed upon the spot, and are, consequently, entitled to credit, particularly as the individuals consulted are among the best informed and most respectable on these islands.

FIRST REPORT.

COMMERCE AND REVENUE.

READ BEFORE THE SOCIETY, 21ST DECEMBER 1831.

No trade whatever, in the way of export, is carried on in the Magdalen Islands, in any article which is not the produce of the fisheries, with the exception of furs, skins, feathers, cranberries and red ochre; and the amount of these is very small. The great staples of these islands are cod-fish and its oil, the former either pickled or dried; but an uncertain fishery in seals is also pursued, the oil and skins of which form valuable items of commerce. Considerable shoals of herrings visit the islands in the spring; but they are not made, to any extent, an article of export by the residents, although the Americans and Nova Scotians carry off large quantities of them annually. About thirty years ago, an extensive business was pursued in oil obtained from the Walrus, commonly called the sea-cow or sea-horse; no other vestige, however, of this amphibious animal is now to be seen, except its long ivory tusks, which are sometimes thrown up upon the beach in stormy weather; their defection has been attributed to the indis-

criminate slaughter which was formerly made of them, particularly of the females at the periods of their parturition.

The seal fishery is the first which engages the attention of the inhabitants upon the breaking up of the winter, and it is succeeded by the cod fishery, which continues until late in the autumn ; the certainty of the latter gives it a decided advantage over the former. The furs and skins, seal skins and fox skins excepted, are not productions of the islands, but are brought from the coast of Labrador. Lobsters, crabs, and particularly mackerel, are abundant in the proper seasons, but are not made an article of trade. Besides answering as the occasional food of the inhabitants, the mackerel is made use of as a bait for the cod fish, as is also the molluscous animal which inhabits the clam-shell.*

Very unsuccessful attempts were made on board the *King Fisher* to catch cod-fish, while she lay off these islands, in her trip ; and had not the dried article on the shore, and the notoriety of the Magdalen Islands as a fishing station, proved the abundance of fish, we might very well have doubted the fact. We were afterwards informed, in explanation of the circumstance, that the fish leave the shallows towards the autumn and betake themselves to the deep waters, which are situated at greater distances from

* Colonel Bouchette, who, in his recent work on Canada, has given us some information respecting these islands, describes a fish called a "*flattan*" as common to them, the length of which is about $2\frac{1}{2}$ feet, and width 7 or 8 inches ; this, I am informed, is the halibut, and common throughout the Gulf.

Eels and trout also are described, by this writer, as being harpooned frequently by torch light : I am doubtful as to the accuracy of the latter information, as there are no rivers on the islands, and the only fresh water traversing their surfaces is so shallow and insignificant, that a trout large enough to be transfixed with the harpoon would experience some difficulty to float.

the islands than the anchorage grounds of the vessels visiting them.

The imports, which are received in exchange for the staple commodities of the islands, are chiefly articles of consumption, tea, coffee, sugar, tobacco, rum, molasses, &c. and fishing gear, brought in schooners of from 30 to 60 tons, owned by residents at Pictou, Halifax or Quebec. About twelve of these schooners trade with the islands. The number of vessels fitted out in the Magdalen Islands as traders is about twenty-seven, and ten of these are annually engaged in the fisheries on the Labrador coast, from whence they often return with their fish green, which they dry upon the beaches.

About the middle of April the first foreign fishing vessels begin to arrive,—in the month of May they are most numerous, and they cease to arrive in October or November. Those vessels which arrive first are owned chiefly by Americans, who pay 10 per cent. to some of the residents for the privilege and trouble of drying their fish upon the beaches and flakes; and who, in consideration of this, and, perhaps, a little traffic, contraband or otherwise, welcome the return of these strangers, and are far from considering their presence as any injury to their interests. The American vessels are succeeded by others from the French settlements of Miquelon and St. Pierre, which become numerous in July and August; but even the visits of these, although their crews dry their fish on their own shores, and, consequently, pay no per centage, appear to give little or no displeasure to many of the inhabitants; a traffic, similar to that above-mentioned, and family alliances (most of the families on these islands having come originally from these French settlements, or from Acadia, with the families of

which they often intermarry in the present day) may explain this.

That these strangers illegally interfere to a considerable extent with our Magdalen fisheries is unquestionable ; and it is equally unquestionable, that such interference is politically, morally and commercially injurious to the many, although a few may be benefitted by it. It has been made the subject of complaint* to the Assembly of Lower Canada ; and in the Reports of the Committee for the year 1823, may be seen the information which was obtained on this subject, in particular, and on the interference of the Americans with the fisheries in the Colonies of British North America in general.†

Previously to visiting the Magdalen Islands, Mr. Ferrier, the Collector of Customs at the Port of Quebec, politely offered me the use of any information which his office might afford ; and particularly directed my attention to two reports connected with a part of the duty I had to perform. These reports, one written by the late Sub-collector of the Magdalen Islands, Mr. Colbeck, the other by Mr. Bruce, of the Custom House, have afforded me considerable assistance in framing my report, both as authorities, and by directing my enquiries ; and I shall now introduce here some extracts from them, with the view of shewing

* For causes which have been assigned, the inhabitants generally do not appear to sympathize in this complaint.

† Mr. Brown, of Amherst island, says, that from 90 to 100 vessels visit the islands in the season, and much the greater portion of these come from American and French ports ; and Mr. Colbeck states, that 1500 non-residents are engaged in these fisheries. When leaving these islands, we fell in off Bryon Island with four French schooners from Micquelon, the crews of which, by their own account, had caught to the amount of 100 quintals of cod-fish per man, the whole probably from our fishing grounds.

the amount of exports, contrasting it at the same time with the information I received upon the spot from Mr. Cormier, one of the oldest resident merchants upon these islands, and the head of a large fishing establishment at Amherst Harbour.

MR. COLBECK.	MR. CORMIER.																																			
<p>This season (1830) the produce may be estimated nearly as follows:—</p> <table border="0"> <tr> <td>Seal oil and skins, . . .</td> <td style="text-align: right;">£4000</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>*12000 quintals dry cod-fish, at 12s. per quintal,</td> <td style="text-align: right;">7200</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>1000 quintals green fish, at 10s. per quintal,</td> <td style="text-align: right;">500</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Cod-fish oil,</td> <td style="text-align: right;">300</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Cranberries,</td> <td style="text-align: right;">90</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Furs and fox skins,</td> <td style="text-align: right;">250</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Feathers,</td> <td style="text-align: right;">150</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td></td> <td style="border-top: 1px solid black; text-align: right;">£12,490</td> <td style="border-top: 1px solid black; text-align: right;">0</td> <td style="border-top: 1px solid black; text-align: right;">0</td> </tr> </table>	Seal oil and skins, . . .	£4000	0	0	*12000 quintals dry cod-fish, at 12s. per quintal,	7200	0	0	1000 quintals green fish, at 10s. per quintal,	500	0	0	Cod-fish oil,	300	0	0	Cranberries,	90	0	0	Furs and fox skins,	250	0	0	Feathers,	150	0	0		£12,490	0	0	<p style="text-align: center;">(<i>Average annually.</i>)</p> <table border="0"> <tr> <td>Seal oil, over 100 ton, at 2s. per gallon.—7 to 8000 seal skins, at 2s. per skin.</td> </tr> <tr> <td>From 8 to 9000 quintals of cod, at 10s. per quintal,—store price 14s.</td> </tr> <tr> <td>30 to 40 ton cod oil, at 1s. 6d. per gallon.—1000 bushels of cranberries, at 3s. 6d. per bushel.</td> </tr> </table>	Seal oil, over 100 ton, at 2s. per gallon.—7 to 8000 seal skins, at 2s. per skin.	From 8 to 9000 quintals of cod, at 10s. per quintal,—store price 14s.	30 to 40 ton cod oil, at 1s. 6d. per gallon.—1000 bushels of cranberries, at 3s. 6d. per bushel.
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Besides the foregoing, which may be considered as disposed of for the benefit of the islanders, are the following items, in the profits of which they do not appear to participate,

1000 barrels of herrings, caught by vessels from and belonging to the Bay of Fundy, at 10s. per barrel,	£500	0	0
14,000 barrels of herrings, caught by American vessels, at 10s. per barrel,	7000	0	0
	£7500	0	0

The whole amount of exports from the Magdalen Islands Mr. Colbeck computes to be a little under £20,000 currency. Mr. Cormier considers it to be between 10 and

* Colonel Bouchette states the quantity of cod-fish caught annually at 300 quintals only, but this is obviously erroneous; he does not give, also, the amount of seals by at least one half, if the above statement be correct.

£12,000, but the latter does not include the herring fishery in his estimation, as the inhabitants are not engaged in it, consequently the two estimates nearly agree. Mr. Bruce, in confirmation, observes, that “the trade carried on at the Magdalen Islands may be taken a little under Mr. Colbeck’s statement.”

The reason assigned why the herring fishery experiences neglect, is because there are not more than a sufficiency of hands on the islands to attend to the other more profitable branches of the same business; but as this fishery occurs in the interim between the seal and cod fisheries, there is little doubt that the islanders might follow it to their advantage were they industrious, which, however, they are accused of not being. According to Mr. Bruce, there were no less than 65 American schooners in Amherst and House Harbours this spring (1831) engaged in the herring fishery, —their places would be well supplied by British vessels.

One of the subjects of complaint in the petition to His Excellency, which will be found at the end of this report, is, that the inhabitants of the Magdalen Islands have not received the same encouragement as foreign fishing vessels, including those from other British ports, which being in a more sea-worthy trim than those from these islands, are better capable of sustaining the rough weather which is met with, particularly in the autumn, and that, in consequence, they are enabled to keep the sea, when the latter are often obliged to seek a port, and thus lose much time. This advantage is attributed to the circumstance, that the owners of favored vessels receive encouragement, in the shape of a bounty in the first instance, and a reward subsequently, in proportion to the quantity of fish caught, from their respective governments, by which they are stimulat-

ed to greater exertion, and enabled to build better vessels for the trade.

An order has been recently issued by the Board of Customs, highly favorable to the fishing interests of these islands. By this order, which has been recently confirmed by Act of Parliament, they are allowed to receive flour and salted provisions from the warehouse at Quebec, duty free; and Mr. Bruce, and other gentlemen of commercial authority, think if the same order extended to all articles necessary for the fishermen, as is the case in Nova Scotia and New Brunswick, it would prove still more beneficial in its effects.

No direct trade is as yet carried on with the West Indies, although there the produce of these islands is in much demand. Of West India merchandize is consumed, annually, here, about 50 puncheons of rum, 50 puncheons of molasses, 25 barrels of sugar, and 20 barrels of coffee; the whole of which comes principally by way of Québec, Halifax and Pictou.

There are six stores on the Magdalen Islands, three at Amherst Island, and three at House Harbour. Articles of consumption are sold within them, at least 20 per cent. above their cost at Quebec. It has been thought that these articles are disposed of to the inhabitants at too high a price; but it should be considered, that the storekeeper advances his goods at considerable risk (and without the power of enforcing payment for them) to a needy, and often *unconscionable* debtor, nor is the former at liberty to withhold fresh supplies from the latter, because in that case his family might be reduced to the greatest distress, depending upon him probably for the means of subsistence. It is often the mortification of the storekeeper to see the

labours of the fisherman, whom he has supported through a long winter, carried to the Americans and French at the opening of the navigation. Be it also remembered, that to leave prices to the result of competition is, in general, a sound commercial axiom.

There are only two, or at most three, extensive fishing establishments on these islands; one belongs to Mr. Cormier, of Amherst Island; another to Mr. Muncey, of House Harbour, whose winter residence is at Halifax; the third belongs to an American or Americans.

Mr. Cormier, to whom I am indebted for much information on this subject and others connected with these islands, informs me that the fish are on the decrease, while the number of fishermen is increasing: the latter, however, is no proof of the former. Colonel Bouchette says, that these fisheries were described in 1821 to have been reduced to one-third of what they were fifteen or sixteen years before that period. It is thought that the French injure the fisheries much by throwing overboard, upon the fishing grounds, the heads and offals of the fish.* A good day's fishing at the present period, yields from 1500 to 2000 fish per schooner. The proportion of fish to oil is 100 quintals of the former to 60 gallons of the latter: one seal yields upon an average four gallons of oil.† The salt necessary for preserving the fish is obtained from Quebec, at the rate

* It is not supposed that by doing so the fish are driven from their grounds by any sympathy in their nature for their species, or by their dread of a "raw head and bloody bones;" but by feeding on their own kind it is imagined that a species of atrophy is induced, which first reduces them to a skeleton and then destroys: it is also said that they choke themselves with the heads.

† Bouchette says seven.

of 13s. per hogshead, and it is used in proportion of one bushel per quintal of fish. When prepared the fish and seal oil is distributed as follows: the cod-fish is carried for the most part to Quebec, Halifax, and New Brunswick; the herrings (a very inconsiderable quantity of these are disposed of by the inhabitants) to New Brunswick, and indirectly to the West Indies; while the seal and cod oil is sent to Quebec.

Besides the establishments mentioned, some of these fisheries are, according to Bouchette, conducted on shares, which are divided among five, six, or seven men, who are employed in one vessel.

The price of labour, according to Mr. Muncey, is usually paid in kind (specie being rare), at the rate of about seven quintals of fish* per month, which is considered equivalent to nearly £5. Mr. Cormier says, however, that it varies from 3s. to 5s. per diem with food, which is much higher—it is evidently fluctuating.

The gypsum which occurs here in such abundance, is not made an article of trade by the residents, though vessels from Halifax remove it thither, where it sells at from 10s. to 11s. per ton. Red ochre of a very superior quality is also procured on these islands, from whence it is sent to Quebec.

As intimately connected with commerce, I now proceed to enter upon the subject of the revenue and evasion of its laws by the contraband traders. That smuggling has been and still is carried on to some extent in these islands, there appears to be little reason to question, although the fact of

* A quintal of fish costs 14s. store price—10s. cash.

its present existence to an amount exceeding £50 a year is denied by some of the principal residents; but as they very candidly acknowledge having been engaged in it, we cannot expect perhaps that they would admit it to be extensive, even if it were so. Both Mr. Colbeck and Mr. Bruce have expressed themselves positively on the subject, and complaints against this smuggling and upon the incapacity of the former to check it, forms the almost exclusive matter of ten pages of his reports. Since my return to Quebec, I have been informed by a mercantile gentleman that its existence to a great extent, comparatively, was admitted in his presence by one of the parties concerned. Captain Rayside, on one occasion, by boarding a French and British schooner, prevented the smuggling at the moment of a quantity of rum, but there is no doubt that upon his departure, it was landed.

Could the revenue be collected, it is thought that it might amount to £300 currency per annum; the expence of collecting it, however, would greatly exceed that sum, the consideration of which has induced the collector to recommend that the situation of sub-collector at the Magdalen Islands, vacated by the death of Mr. Colbeck, should be abolished. No revenue was collected during the time this gentleman held the office, for want of the necessary assistance, nor does it appear that his receipts were ever equal to his salary. In his report he describes the smuggling trade carried on with the islands as considerable, not only in French and American bottoms, but also by vessels either from or to all the three Provinces, Lower Canada, New Brunswick, and Nova Scotia—even Quebec, that immaculate city, is implicated in his charge, and he believed “that thirty puncheons of rum, twenty-two of molasses,

tea, tobacco, and other merchandise, to a considerable amount, were smuggled into the Magdalen Islands in the summer of 1830." Provisions, wine, brandy, coffee, cottons, shoes, &c. are among the articles introduced in this way, for which fish, oil, and sometimes cash, are exchanged.

Mr. Bruce observes in his report, "upon the supplies received from Quebec the duty is already paid. The duties might be collected on that portion which is imported by the resident merchants trading to Halifax and Miramichi, but it is very doubtful whether any at all could be obtained from the transient traders, and it appears next to impossible to prevent smuggling by the Americans and French fishermen without the aid of a large and expensive establishment;" and he further observes, that in the latter opinion he is supported by that of Capt. Walpole, of H. M. ship *Ranger*, an opinion, of the accuracy of which, any person will be convinced who casts his eye over Des Barres' chart of these islands.

It has been suggested that a coast officer would have a better chance of collecting the revenue, and of carrying into effect generally, the navigation laws for the accommodation and advantage of the trade, than an individual acting in any other capacity, and at less expence. The appearance of an armed vessel upon the coast is said to have a very beneficial effect, in many respects; and the same fear, which is said to induce many of the islanders to discharge their debts upon the approach of the *King Fisher*, would probably induce them in a great measure to desist from smuggling, were an officer afloat round the islands constantly.

I cannot better conclude this report, perhaps, than by introducing the following statement of those advantages

which, possessed by all others of His Majesty's subjects similarly situated, are as yet denied to those of the Magdalen Islands, and which to grant, will be to introduce a memorable and important epoch in their history, the favorable results of which would not be long in shewing themselves—these advantages are:

- 1st. The establishment of schools.
- 2d. The wholesome exercise of the laws.
- 3d. The encouragement of the fisheries.

All of which are set forth in the petition to His Excellency before alluded to, with a copy of which I now terminate this report.*

* It may be considered somewhat surprising that the petition does not contain a word of complaint against the interference with the Magdalen fisheries by the Americans and French; the fact is, it is not felt generally by the inhabitants as a grievance, the reason of which has been given. The petition should also have contained some allusion to the uncertainty of tenure on the islands at present, with the view to get it removed; because there appears still to exist a doubt as to the right of Sir Isaac Coffin to the islands, and consequently of his agent, Mr. Doucet, to grant land upon them. For although we understand that judgments have been lately given in favor of Sir Isaac's claims, they are not considered by the other party as deciding the question. This doubt should be removed as soon as possible, either in favor of one side or the other, as its existence has an injurious tendency, by inducing the inhabitants to neglect properties in the possession of which they do not hold themselves to be secure, as well as by preventing individuals from making a permanent settlement upon the islands.

To His Excellency Matthew Lord Aylmer, K. C. B. Captain General and Commander in Chief of His Majesty's Forces in British North America, Governor of Lower Canada and its Dependencies, &c.

The Petition of the Merchants and principal Inhabitants of the Magdalen Islands, most humbly sheweth,

That your Excellency's Petitioners, in consequence of their being so remote from the seat of Government, feel to a great extent the want of a proper system of jurisdiction upon these islands, and beg leave to state that, although the trade

SECOND REPORT.

AGRICULTURAL.

READ BEFORE THE SOCIETY 21ST DECEMBER, 1821.

The soil and agricultural capabilities of any country depend upon three great causes, its geographical position, its

of one year alone amounts to about ten thousand pounds, yet, in consequence of the said want, there is so little confidence in all mercantile transactions, and so much difficulty in the collection of debts, that it does not exceed one half of what it might amount to under proper protection, and your Excellency's Petitioners are convinced that, unless the Government be pleased to take their case into consideration, and direct such measures to be taken as may secure the interest of all concerned, no improvement can take place in this way.

Another want under which your Excellency's Petitioners labour is that of common schools; for although a few persons have paid teachers, yet the sum so raised has never been sufficient to support a competent person, and in consequence they are now without one of the greatest advantages which it would be possible for them to enjoy.

Your Excellency's Petitioners beg leave further humbly to state that, in consequence of the local position of the Magdalen Islands, they are most advantageously situated for prosecuting a very extensive fishery, yet, with surprise, they observe that vessels owned in Nova Scotia, New Brunswick, and even in the United States, St. Pierre and Miquelon, although not better manned, make better fares on the same grounds than the vessels owned in these islands, and attribute this to the encouragement which they receive from their respective Governments, which enables them to fit out their vessels superior to those of these islands, by means of which they are able to remain engaged, when the said vessels are obliged to retire to a harbour, and thus lose in the course of a season a considerable quantity of fish, and this, together with other circumstances, tends very much to depress the spirits of the fishermen, than which nothing can be more injurious to the interests of these islands.

Your Petitioners would, therefore, most humbly pray that your Excellency would be pleased to take their case into consideration, and direct such steps to

meteorological influences, and its geological formations; their consideration, consequently, should precede that of the former, to which it is at once necessary and introductory.

I. GEOGRAPHICAL POSITION.

Mr. Jones, of H. M. ship *Hussar*, places the northernmost portion of the Bird Islands in latitude $47^{\circ} 50' 28''$ north, longitude $61^{\circ} 12' 53''$ west; and the southernmost portion of Entry Island in $47^{\circ} 16' 7''$ north, longitude $61^{\circ} 47' 26''$ west.* Between these parallels of latitude, and for the most part to westward of a line joining the places of observation, lies that group of islands to which the name of Magdalen has been given.

be taken as your Lordship in your goodness may think proper and best calculated to relieve their necessities, and your Excellency's Petitioners, as in duty bound, shall ever pray.

Here follow fifty-four signatures or marks, as many as could be conveniently collected in the time.

* As these observations form only a small portion of a series undertaken recently by order of the Admiral on the Halifax station, to determine accurately the position of several ports, &c. between that place and Quebec, they may be relied upon. They are somewhat at variance with Des Barres' charts, published in 1778; but, when we consider the improvement of astronomical instruments since that period, and particularly the introduction of the chronometer into all correct operations of this nature—that test of their accuracy and of most calculations founded upon them—we shall be rather disposed to commend its approach to correctness than to condemn its departure from it. The magnetic variation on these islands was made by Des Barres in 1778, $17^{\circ} 45'$ west; in 1829, Mr. Jones determined it to be $22^{\circ} 25'$ west; the increase westward since the former period is therefore $4^{\circ} 40'$.

Ships entering the Gulf of St. Lawrence, on their way to Quebec, usually pass to northward of these islands. They are situated about 180 leagues eastward of Quebec; 18 leagues north westward of Cape Breton; the same distance northward of Prince Edward's Island; 36 leagues distant from the nearest point of Newfoundland; and about 75 leagues from the French settlements of Miquelon and St. Pierre.

II. METEOROLOGICAL INFLUENCES.

The climate of the Magdalen Islands appears to differ from that of Quebec principally in the following particulars: the summers, owing to the modifying effect of the surrounding seas, are less ardent—the winters less severe; it seems, however, that the duration of these seasons at the two places is much the same, as, although the winter here breaks up earlier than at Quebec, it also commences earlier. In common with other parts of the gulf, fogs* prevail and the atmosphere is often loaded with moisture, another point of difference between it and that of the capital of Canada, where the occurrence of this phenomenon is somewhat rare. It is impossible to afford any details under this head

* Capt. Bayfield attributes these fogs in a great measure to the coldness of the Gulf waters, which is believed to be constant a few feet below the surface as well as at great depths; every gale, by agitation, brings this cold water to the surface, which then reduces the temperature of the air below the dew point or temperature at which suspended vapours become visible and precipitated.

Capt. Bayfield and Dr. Kelly, have been engaged the last two or three summers making observations which will throw considerable light on the meteorology of the Gulf.

which shall bear upon them the impression of scientific observation, as the islands appear not hitherto to have been made the subject of it;* the following information, however, was obtained from Mr. Cormier, who, to fifteen years experience, joins the character of an intelligent observer.

In June, July, and August, the prevailing winds are from the southward of west; after August the wind is either northward or easterly. Strong gales† happen, as in other places, in the spring and autumn; also about January and February, but are not unusually common, and less so than in Nova Scotia where my informant was born. Rain is frequent in April and May, when it is sometimes accompanied by hail storms; also towards the fall of the year. Thunder storms are not common, and arise generally in the south; no instance is either recorded or remembered of injury to property or to person from the effects of lightning, which is, moreover, rare in its occurrence. No earthquakes. Ice forms in the harbours and bays in the beginning of January; its thickness is about one foot six inches; breaks up in the beginning of April. Snow about two feet deep in the woods—*verglas* common—many persons are frost bitten in the course of the winter.‡ Wild geese arrive about the 15th March. Many icebergs in the Straits of Belle Isle, even as late as last month (August 1831), but they are never seen in the vicinity of the islands.

* It has been asserted, however, upon the authority I believe of the former Missionary of these islands, the Rev. M. Béland, that the thermometer never rises above 76°.

† During strong *continued* gales the shores exposed to them often experience a species of salt blight, which either injures or destroys the crops.

‡ The inhabitants who pursue the seal fishery in the spring, are liable to a species of chopped hands, which they call *la marine*.

My visit to the Magdalen Islands was too short to enable me to afford any original information upon their meteorology, although, under the impression that it would have been longer, both barometers and thermometers were taken; no useful or interesting inference, however, could be drawn from the few observations which were registered, and, in consequence, they have been omitted.

III. GEOLOGICAL FORMATIONS.

I now pass to the consideration of that third cause, not the least influential among them, which, totally neglected by agriculturists before the latter end of the last century, became suddenly a subject of absorbing interest among them, and forms at this day a necessary part of their knowledge.

On the agricultural condition of the Magdalen Islands, the effect of this cause is strikingly apparent; its discussion, therefore, in this place becomes peculiarly appropriate: in entering upon which, however, I shall not confine myself to that part of the subject which bears merely upon agricultural capabilities, but shall give also a somewhat detailed account of that portion of the geology and mineralogy of these islands, which my short visit to them, and imperfect knowledge of those sciences, will permit me to offer.

The first features of a country which naturally attract the eye of an observer at a distance are its hills and its mountains; and it is from their form, that the geologist may often pronounce, with considerable accuracy, upon the rock formations, &c. which characterize them long before they come within the influence of his hammer. The topo-

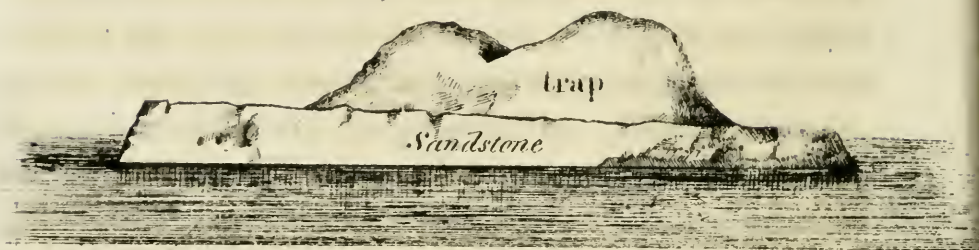
graphical* outline of the Magdalen Islands is far from not affording considerable assistance to the geological observer in this respect; and he would, we think, be disposed, upon beholding it, to suspect that its numerous conical rounded (or dome shaped) and semi-insulated projections above the horizon were owing either to accumulations of sand forming sand hills, or to that eruptive agency, which, even at this moment,† is producing similar appearances in some portions of the world; which, in remote periods, there is great reason to believe, was much more active and general, and to which geologists of the present day, almost without an exception, ascribe many of those peculiar aggregates known by the appellation of trap rocks. The appearances to which I allude, did not escape the notice of Des Barres, who, in his excellent chart of these islands, has represented the hills on them as rounded and semi-insulated. Equally characteristic as the form of the hills in the interior is the usual brick red colour of the cliffs on the shore, with their remarkable capes and headlands,—here, through the chiselling power of the waves scooped into caverns and arches,—there detached in tottering insulated and peninsulated masses, occasionally assuming grotesque forms. The upper surface of these cliffs, which in altitude above the sea varies from 20 to 120 feet, is either tabular or gently undulated, stretching away to the foot of the hills, the highest of which *may* be 400 feet.‡ Upon landing and ex-

* See Third Report.

† The recent emergence of a volcanic island in the Mediterranean will occur to most of our readers.

‡ I ascertained barometrically the height of the Demoiselle, and that of another hill in the interior of Amherst Island, to be 260 feet above the sea; the land on Entry Island is, however, more elevated.

Outline of Entry Island. -



Outline of Land about Cape Wright.



amining more closely these cliffs and hills, the former are usually found to consist of sandstone, accompanied by clays and gypsum, and the latter of trap.

The outlines are introduced merely to assist the description, and, in the absence of better, they may be considered as rough geological sections, which were taken nearly at the same moment, while sailing through Pleasant Bay, towards Amherst Island, from the eastward.

The sandstones are all of them composed of the most siliceous materials, and being in general extremely friable, they yield, with considerable facility, to the abrading action of the atmosphere and of the sea. Although the prevailing colour of these sandstones and clays is a deep red, sometimes it is yellowish, greenish white, bluish white and grey. The structure of the former also is not always arenaceous; occasionally it is scaly, in which case it is usually joined to a yellowish white colour, and considerable infriability. It is doubtless to the presence of iron in these rocks, in the state of the peroxide, that their prevailing redness and friability is owing, assisted, as has been before said, by atmospheric and maritime influences, and their combined action has covered a large portion of the islands, on and towards the shores, with a deep infertile soil, of which I shall speak further, under the head of Agricultural Capabilities.

In those places where stratification is very distinct, the sandstone occurs usually in horizontal strata, but the immediate vicinity of trap rocks appears always to be characterised by displacements and conglomerations. These displacements seem to have had the effect of throwing to the surface the beds of clay and of gypsum which are frequent-

ly met with, and of redeeming for short intervals the prevailing barrenness of the soil.

The clays are usually of a red colour, sometimes bluish or greenish white; they are also stiff and indurated. The shade of red, unlike that of the sandstone, resembles more the tint communicated to earths by manganese rather than iron; they hold imbedded deposits of gypsum and red ochre. Three varieties at least of gypsum are met with,—the crystallized or selenite,—the fibrous,—and the earthy. The selenite usually occurs in hollows and druses in the earthy varieties, while the fibrous traverses the clay in seams and veins, from which they often protrude in intersecting ribs, forming a sort of network, and giving a singular appearance to the cliffs.

The colours of the gypsums vary; the selenite in thin laminæ is colourless,—in mass it is yellowish. The fibrous is snow white internally, or upon a fresh fracture; externally it is yellowish, the effect of weathering; the earthy varieties are grey, brown and blackish; they have all of them, except the selenite, occasionally a reddish tinge, which they owe evidently to their matrices.*

The fibrous varieties differ among themselves in the arrangement of their fibres, which are sometimes straight, at others contorted or curved, but always parallel to one another, and nearly at right angles to the direction of the seam or vein in which they occur. All the gypsums possess some degree of translucency, and yield to the nail; in the earthy varieties, however, the passage of light is only

* A bright light snuff-coloured variety of gypsum, with a structure intermediate between laminar and fibrous, and very resinous lustre was also observed traversing the earthy variety in seams.

upon the edges. The earthy gypsums are met with in considerable abundance at Amherst Island, Entry Island, and at House Harbour. At the last mentioned place, where it occurs associated with clays, conglomerates and traps, there is a blackish earthy gypsum on the shore, the surface of which is studded with crystals of, as I think, a new mineral substance. (See Appendix.) In positions where rocks of gypsum, as in the above mentioned localities, are exposed to the action of the sea or its spray, they are easily distinguished by the glazed or dissolved aspect of their surfaces.

It is a question of considerable interest and difficulty in geology, whence are derived the beds of gypsum which are met with, but no satisfactory answer has yet been afforded. That sulphuric acid and lime must have been present at the time of their formation, admits, perhaps, of no dispute, but whence came the acid, or even, in this instance, the lime, as there does not appear to be any limestone whatever on the islands; nor could I, with few exceptions,* detect the presence of lime as a carbonate in any of the rocks, gypsums, or soils. Sulphuric acid, it is well known, is the product of volcanoes; it is also spontaneously formed by the decomposition of iron pyrites; obtained any way, by acting

* The excepted instances are as follows: 1st, crystals of calcareous spar, principally of the dog tooth variety, form veins in some of the sandstones; 2d, minute rhomboidal crystals of the same mineral, either grouped together in bo-loyoidal clusters, resembling phrenite, and filling the pores of amigdaloidal trap, or intimately mixed with carbonate of manganese, forming a cement, by means of which the loose joints of a very rubbly trap are retarded in their separation; 3d, as a marle coloured by and intermixed with the peroxide of iron, forming a red ochre.

on the calcareous portion of either a mineral substance or animal exuvia, a gypsum would be formed. That such has been its origin, we are far from asserting or believing; the conjecture is not without some support, however, and particularly in the present instance, derived from the presence of rocks which are supposed to have undergone the action of subterranean heat—from the fact of the occurrence on the island, of beds of iron pyrites in a decomposed and decomposing state—from the absence of marle, a deposit characteristic of this formation in other places; and from the absence or *obliteration* of all testaceous remains or impressions, which absence here, as well as elsewhere, is also characteristic of it.

The almost constant association of rock salt with gypsum, suggests, perhaps, a more reasonable supposition as to the derivation of the lime, which in the state of a muriate, forms a component part of the ocean. May not the decomposition also of the sulphates of magnesia and soda by heat furnish the sulphuric acid; conjectures which appear to have their origin with Dr. Murray, who, according to Dr. Thompson, supposes that all the constituents of sea water are muriates, except sulphate of soda; and that when the salts are concentrated by evaporation, the muriate of lime and magnesia decompose the sulphate of soda, forming sulphates of lime and magnesia.

Aware of the frequent association of rock salt with gypsum, I made many enquiries respecting the existence of any traces of a mineral, which, for fishing establishments in particular, is so much in request; but with the exception of a salt spring or two, and a few streams, the waters of which are described as brackish, particularly during the

dry season, nothing satisfactory as to its probable occurrence on these islands was heard of.*

As I did not visit any of the localities of red ochre, I cannot speak confidently respecting them, but believe they occur for the most part at Entry Island, and that it is found in crevices, seams, and veins, in the clay. W. Green, Esq.† who obtained the Gold Isis Medal from the Society of Arts, Manufactures and Commerce, for a description, (accompanied by samples of the raw and manufactured article of certain colouring materials, products of Canada,) has introduced into it a notice of this ochre, which may be seen in the first volume of the Literary and Historical Society of Quebec, page 44: with the single exception of Indian red, Mr. Green considers all the red ochres, native or artificial, as inferior to this; and its superiority to many has been acknowledged by the best judges in London.

The geological position of the sandstone he described, is undoubtedly that of the *new* red sandstone; the accompanying beds of clay and gypsum—its prevailing loose arenaceous structure—the absence of organic remains from the series—are characters which distinguish it from the *old* red sandstone, the only rock it could be mistaken for. This formation is the more deserving of notice as it has not before been recognised in Canada, with the exception of the

* Mr. Doucet has informed me, subsequently, that there is said to be a salt lake somewhere in the interior; but there is no reason to suspect that it is accompanied by salt in a concrete state. In low portions of the island such an occurrence is to be expected, and should be attributed to a mere oozing of the sea.

† This highly talented individual, who possessed more general information upon literary and scientific subjects than perhaps any other in the colonies, died of spasmodic cholera in June last.

doubtful case of Lake Huron, the gypsums of which, like those of Niagara, are probably associated with rocks of much older date.*

The trap rocks which form the hills in the interior of these islands, and sometimes abut upon the shores in cliffs, as in the instance of the Demoiselle† at Amherst Harbour, are usually distinguished by the following mineralogical characters. Like the sandstones, they are usually of a red colour, but of a much darker shade, similar to the porphyries,* the structure of which they frequently assume. It is only externally, however, that they are red, as a cross fracture exhibits tones of grey, green, and blue; when neither porphyritic nor porous, their structure is close grained, approaching to compact, and when most so, their specific gravity is 2'6. They yield to the knife a light coloured streak; exhale generally the argillaceous odour when breathed on—sometimes they effervesce *slightly* in acid. In the interior flame of the blowpipe they usually fuse into a black globule, which is magnetic; some, however, are infusible.

The general aspect of these traps is dry, parched, and imperfectly compact, bearing in some instances a striking resemblance to fragments, the refuse of a lime-kiln; not that it is to be understood that they have a fused or glazed appearance, but as if they had been subjected to a heat below that point. This aspect, which is joined often to a

* Either transition or the oldest of the secondary.

† A hill probably so called from its two remarkable summits which bear some resemblance in form to the breasts of a female.

‡ In a strict mineralogical sense porphyries were not seen—they probably exist, however.

texture in which ovular pores or vesicles are very frequent, causes them to resemble some recent lavas, from which I think it would not be always easy to distinguish them in hand specimens. The pores or vesicles in these traps are sometimes entirely empty, at others entirely or partially filled; in the latter case they are amigdaloidal and contain minerals, the names of all of which, it requires better specimens than I had time to collect, to determine; they are, however, *not* geolitic (as far at least as my observations have been carried as yet) being infusible, and with one exception (calcareous spar) insoluble in acid. In a sort of appendix at the end of this report, I shall give the characters of those few minerals met with, when sufficiently distinct, if uncertain of their names or provided there exists a possibility that I may have misnamed them; a method which should be generally adopted by all writers on the subject more ambitious to describe correctly and to convey *certain* information, than to display a questionable knowledge, fearing to be thought ignorant. The science is both new and difficult, and requires to be handled with hesitation and caution, particularly by persons who, like myself, can pretend to no proficiency in it; but I fear that the eye alone, and that an unpractised one, has been often made to decide questions which should have been submitted to the test of the knife, the hydrometer, the acid, and the blow-pipe. In this field of natural history, it requires but small positive knowledge to be an useful labourer, particularly in a new country, provided the proper implements of tillage be actively and judiciously employed—without them no man succeeds.

The traps are often both rubbly and conglomerated; the fragments, however, are usually angular and rhomboidal,

hanging together by their natural joints, which occasionally lying somewhat open, have in some instances admitted the infiltration or introduction into them of some foreign mineral substance. In one case, at Amherst Harbour, this substance was found to be a mixture of carbonate of lime and carbonate of manganese, which either in distinct crystals or forming an indistinct assemblage of them, like granular lime stone, filled the interstices between the natural joints of a trap, the dark purplish red colour of which, contrasts strongly with the whiteness of the carbonates. Breccias are also seen, the fragments of which, both large and small, are cemented together by the same minerals; and, indeed, fragmentary rocks and *local** conglomerates are very common on these islands.

The peculiar rounded form of the hills, wherever the trap rocks prevail, in contradistinction to the tabular or gently undulated outline of the country where the sandstones, &c. abound, has been before pointed out; so much is this the case, that if in the midst of table land a rounded mound or hill appear, which it often does, that eminence is invariably found to be composed of trap; several of these insulated mounds or hills are seen on Amherst Island.

* By *local* conglomerates I mean such fragmentary aggregates as are composed of the broken or abraded materials of older deposits in the immediate vicinity. Both soils and rocks have an untravelled aspect in general, and I do not remember to have seen a single large boulder on the islands. Towards the East Point, beyond Entry Harbour, we met with an accumulation of ovular water-washed pieces of a reddish sienite, not exceeding a foot in length, and evidently thrown up upon the beach by the violence of the breakers. On the shore, not far to northward of this place, there is a shallow lake, shewn in Des Barres' charts, which although now inaccessible, is said formerly to have admitted vessels of some burthen.

It has been also before remarked, that the position of the sandstone, when apparently undisturbed, is horizontal; but that in contact with trap rocks they seem to have suffered a displacement, by means of which their strata are made to dip considerably; this may be seen at the eastern foot of the Demoiselle at Amherst Harbour, and its converse is best observed on Bryon Island, one of the Magdalens, where no trap rocks occur, and where the sandstone is in distinct nearly horizontal strata from one end of the island to the other—a fact well deserving attention.*

There is another feature which appears to characterize these trap rocks, at least at House Harbour; it consists of certain crater-shaped hollows which are met with; I counted four of these in the space of a few acres surrounding Mr. Colbeck's house, and was informed they are frequently to be met with in the interior, particularly on Grosse Isle, where trap, I believe, abounds, and no gypsum occurs.

My leaning towards the igneous hypothesis, must not induce me to withhold the information that these hollows are said to be characteristic of places where gypsum is found in abundance, and particularly of its localities in Nova Scotia; a circumstance which may be explained by supposing that the deposits of salt which so frequently accompany gypsum, have, in such instances, been dissolved

* Since writing these Reports, I have perused the "Mineralogy and Geology of Nova Scotia," by Messrs. Jackson and Alger, by which work it appears, that the formations so characteristic of the Magdalen Islands predominate in that division of British North America. These gentlemen, however, describe the new red sandstone there met with, as always underlying the trap, whereas, that here alluded to, seemed to be always uppermost.

and the pits they occupied, left vacant. This explanation seems extremely plausible, when these hollows are situated in gypsum, or in clay, and to the operation of such a cause may be attributed several well or bath-shaped concavities in gypsum which are also seen in the neighbourhood ; but those hollows I particularly allude to at present, are much larger, of the form of the reversed frustrum of a cone, and situated in trap, in which salt, I believe, has never been observed, and into which gypsum may enter in seams, but never in masses. That salt should not have been noticed in trap rocks is, I think, rather remarkable, as it is precisely in such rocks, or at all events in such as have been subjected to heat, that this mineral might be expected to occur. The theory is this : by the aid of subterranean heat, rocks are thrown above the level of the sea—their cavities, perhaps, contain sea water—by the agency of the same heat the water is evaporated, and beds of salt formed. In the crater of an extinct volcano, near Burgos, in Spain, salt has been noticed ; also in a volcanic mountain in Sicily ; but I am acquainted with no instance of its occurrence in rocks, which can be classed under the head of traps. Some of the traps contain small nests of specular iron ; and the same mineral was met with in some profusion eastward of Amherst Harbour, where, intermixed with either iserine or titaniferous oxide of iron, it forms an alluvial deposit on the sides of a small stream, descending a clayey cliff, not far from the eastern foot of the Demoiselle. In a small bay near this spot, a fine chalybeate spring was noticed jetting out of the ground.

Magnetic sand, in some abundance, forms a loose horizontal stratum on the eastern shore of Bryon Island, and in one of its numerous small bays situated near the northern

extremity. It consists of black glistening particles, of a rounded form, like grains of coarse gunpowder, mixed with ruby and amethystine coloured grains, either translucent or semi-transparent, and white quartz. The black magnetic particles appear to be iserine—the ruby coloured grains may be spinelles, zurcons, or simply garnets; but they are too small to admit of easy examination in order to determine these points—an objection common to all sands, and a circumstance to be regretted, as otherwise the mineralogy and geology of a country might be often very nearly determined by the inspection of a mere handful of sand; at least, in cases like most of those which apply to the Magdalen Islands, in which the sands are composed of the abraded particles of rocks in *situ*.

The only mineral characteristic of amigdaloidal trap which could be recognised is green earth, which fills some of the pores of that rock on these islands; nor have we here any more facts of either a geological* or mineralogical nature to communicate; a deficiency which must be attributed to our short visit and little acquaintance with such subjects, rather than to a dearth of materials for observation; as I feel confident, that a leisurely tour round these islands, would afford the geologist considerable amusement, and the public interesting information.

In taking leave of the trap† rocks, I will sum up the vi-

* See my third report.

† In my report on the geognosy of the Saguenay country, inserted in the first vol. of the Transactions of the Literary and Historical Society of Quebec, I have called the predominating rock there met with, a trap; but it differs essentially, both mineralogically and geologically, from the one here alluded to—the former is probably primary, the latter is undoubtedly secondary—the first is prin-

dence upon which is mainly built their igneous origin: first, the form of hills they compose; second, their porphyritic, amigdaloidal, vesicular, or lava-like structure; third, the geological influences they appear to have exerted upon the accompanying sandstones, clays, &c. shewn in their displacement, in their redness, and even in their friability.

To conclude, it may be permitted to offer an opinion as to how these islands were formed—it is given allegorically.

Neptune, *warmly* pressed by Vulcan, conceded, in remote ages, these, at that period, submarine territories, into the hands of the latter, who lifted them from their marine abyss to excite, at once, the caution, curiosity, and commercial speculations of the future navigators of the Gulf. Tired of possession, he has long since abandoned them to the effect of atmospheric and maritime influences; in consequence of which, they are now gradually returning under the dominion of their former monarch, and Neptune is recovering in detail what he surrendered in the gross.*

cipally composed of a very crystalline hornblende, and from the easy fusibility of the second into a black magnetic globule, it is, probably, also amphibolic; but with the exception of its fragments, which are usually rhomboidal, it possesses very little of a crystalline structure—however, a common origin for both, at very distinct epochs, is a reasonable conjecture.

* Not exactly, but correct enough for an allegory. This sort of wear and tear has a tendency to destroy itself, by accumulating at the foot of the cliffs a barrier of loose materials, against which the waves dash themselves in vain attempts to resume, *permanently*, their former dominion over them; and the fact is, that the disintegrating agents at this moment in action around these islands, are rapidly adding to their extent by diminishing their height; and it may be said, metaphorically, that this *malleability* is given to the friable rocks by the beating of the waves, the rushing of the currents, and the sweeping of the winds.

IV. AGRICULTURAL CAPABILITIES.

Having touched upon the three principal causes by which the agricultural characters of countries in general, and the Magdalen Islands in particular, have been influenced, I proceed to describe the actual state of the soil resulting from their combined operations.

It has been already stated that, owing to the great predominancy on and towards the shores of the very friable and siliceous sandstone described, the soil covering it is, in most places, composed of little besides its abraded particles. Above a deep deposit of these, remarkable, like the rock beneath, for intensity of colour, a thin stratum of a very fine siliceous earth,* of a chalky whiteness, is observed; and above this occurs a thin brown covering, principally composed of the fibres and roots of grass, whose lively green surface, notwithstanding its meagre sustenance, supports, in some instances, a few head of well favored cattle, particularly sheep, which vie in appearance with our Hampshire South Down: a thin black soil, the result of vegetable decomposition, also occurs here and there. The uplands or hills have no sandy deposit whatever upon them, but appear all to be composed, to within an inch or two of their surfaces, of trap rocks. Some of these hills are covered with trees, principally the spruce fir, while others are bare of them to the summit, and afford (particularly in the vallies between) fine pasturages for cattle,

* When I first saw this earth, it struck me that it might be a powdered gypsum, nor am I yet certain that that mineral is not mixed with it: it is too soft for pure siler, and yet certainly contains no lime in the state of a carbonate.

the scarcity of which surprised me ; but no branch of farming has hitherto experienced a fair trial on these islands, as all the inhabitants are more or less engaged in the fisheries, for the convenience of attending which, they reside near or on the shores, and precisely in those places where the worst soils prevail. Although the foregoing description is grounded principally upon a visit to Amherst Island, it will apply *essentially*, more or less, to all these islands ; in casting our eyes over which, one fact is strikingly obvious, viz. that in few places can the soil be disturbed ; the plough, that useful implement of husbandry elsewhere, can here rarely be employed—irredeemable barrenness would follow in its track, the materials of which exist a few inches below the surface ; in the vallies and plains they are ferruginous and siliceous sands ;* on the hill tops and sides they are rocks.†

On the western side of House Harbour, the land is, for a short interval, of a better description than that generally met with, which may be accounted for by the fact that clays, gypsums, and trap rocks there abound, to the *exclusion* of the sandstone.

The soil of Entry Island is *described* (for I did not see it) as being still superior, yielding very fine crops of wild grass, which support a few head of cattle in the finest condition :

* The red marle, or new red sandstone formation, which is unquestionably the one which characterizes the Magdalen Islands, is, in England, remarkable for the fertility of its accompanying soils ; but, to explain this apparent anomaly, it must be stated, that the marly beds to which those soils are indebted for their fertility, have not been observed in the formation in question.

† Trap rocks, in a state of decomposition, often furnish good soil ; but, as in the present instance, they do not always yield easily to the action of weathering.

the flesh of an ox from hence we tasted, was found to excel in flavor any we had before met with in Canada.

The north eastern portion of Coffin Island, beyond Grand Entry Harbour, is reported to be extremely unproductive, low, and swampy, and our own observations, as far as they extend, are in confirmation. Des Barres' chart represents the land alluded to, as being a low flat, of a circular form, with several small lakes, probably of brackish water. Upon landing on its southernmost shore, in Grand Entry Bay, we found cliffs of red sandstone, and ridges of sand, covered by a thick matting of juniper in some places, and by a meagre grass in others.

The soil of Bryon Island is better than that usually met with in other portions of the group; it is, however, light and sandy; it also possesses an outline more favorable to agriculture, being nearly parallel to the horizon. The island is girted round by cliffs of red sandstone, which on the eastern side, do not attain a greater elevation than twenty feet, while on the western, it usually amounts to fifty; the land dips away from the latter towards the former, and bears more analogy to a writing desk than a table. Its most elevated parts are free from trees, but are covered with a thick crop of wild grass, which would support a hundred head of cattle during the summer season; the opposite, or eastern side, is covered with a dense thicket of stunted timber, principally spruce fir: cranberries abound here. Little appears to be known of the Bird Islands, beyond the facts, that they consist of high cliffs, having summits of a tabular form, partly covered with the dung of birds, which looks at a distance like a mantle of snow: the eggs of these birds are collected for food by the fishermen.

Although called islands, they are, in fact, mere islet rocks, and occupy the northernmost position in the group.

All my enquiries and observations tend to satisfy me, that, with few exceptions, the Magdalen Islands offer no inducement for the farmer to settle upon, as there is only one branch of his business which he could hope to follow with any tolerable success, viz. grazing; and even that is doubtful, as all the expences of keeping the cattle through a long winter, and exporting them to a distant market, (there being no demand for them within the circle of the islands,) must be incurred.

The grazing of cattle, the stacking of wild hay, the raising of potatoes, cabbages, and a few pot herbs, is the extent to which farming has been hitherto carried on in these islands; nor is this state of things likely soon to experience a change, for, as long as the interior remains uninhabited, (and that will be the case while fishing is a more lucrative occupation than farming,) no alteration is to be expected.

It is useless to enter into the consideration of how much an improved system of tillage might ameliorate the soils—what benefit they might derive from the judicious intermixture among them of the gypsums and clays met with—the bare thought of such a mode of improvement would frighten the Canadian settler, and indeed, I fear, in the present instance, it could not be generally adopted.

There exists a doubt in England, whether gypsum, employed as a manure, is of any service to the soil.* In the

* In the instructive and detailed account of the mineralogy and geology of Nova Scotia, by Messrs. Jackson and Alger, recently published, it is observed, page 64, that the native gypsum does not in the least appear to add to the fertility of the soil, but rather the contrary.

United States, it is largely employed, and held in high estimation generally. Sir Humphrey Davy remarks, in his "Agricultural Chemistry," that "the reason why gypsum is not generally efficacious, is, probably, because most cultivated soils contain it in sufficient quantity for the use of the grasses." He is of opinion, further, that its action on soils is neither to be explained by supposing it to render them more absorbent, nor by assisting the putrefactive process; but he does not explain in what the action does consist.

The timber on the islands is, for the most part, pine (spruce), birch (black), and juniper; the inhabitants procure it of sufficient size to build and mast their small vessels. Juniper berries, strawberries, raspberries, and cranberries, are among their wild indigenous fruits.

The *myrica Carolinensis*, or broad leaved wax-tree of Carolina, is met with, I believe, in some abundance on the Magdalen Islands, where it has been already converted into a vegetable tallow or wax, by some of the inhabitants.

Their sandy soils, their maritime position,* are circumstances favoring its growth; and it appears probable, that the cultivation of it on them generally, might be successfully pursued. It is a shrub that yields, when most productive, about seven pounds of berries, which, by infusion in boiling water, give twenty-eight ounces of wax: it is considered a very valuable vegetable production, and one which might become of commercial importance. There is an article in the first vol. of the Transactions of the Lite-

* According to Mr. Sheppard, of Woodfield, it grows naturally in no other: it is said to have been noticed as high up the river as Hare Island.

rary and Historical Society of Quebec, page 231, which affords some valuable information upon plants of this genus. The Gardener's Magazine, vol. i. page 403, may also be consulted on the subject; and Mr. Sheppard, so well known to all of us by his valuable botanical contributions, has inserted a notice of this shrub, at page 64, of the second vol. of the before-named Transactions, just published.

On the subject of the concession of land on these islands, I received the following information from Mr. Doucet, the agent employed by Admiral Sir Isaac Coffin, to whom a grant of them was made in 1797.

Sir Isaac made no endeavour to obtain rent until 1806, in the summer of which year, he passed two months on the islands, and was generally acknowledged their proprietor. On this occasion, an arrangement was made with the inhabitants, to pay at the rate of twenty shillings currency, or two quintals of fish yearly, in perpetuity, for every lot; which rent was paid regularly until 1816, at which time they discontinued payment, on grounds upon which has been founded, subsequently, a legal question; but judgments have been obtained already in it, in favor of the Admiral's claims, although an appeal to a higher court still lies with the other party.*

No rent has been received up to the present period, since 1816; but Mr. Doucet has made arrangements to grant land, in perpetuity, or otherwise, according to the wishes of the grantee, at the rate of from 10s. to 30s. per lot, depending upon its extent, quality, and locality.

* The importance of having this question set at rest finally, has been pointed out in my first Report.

No very precise method has hitherto been adopted in describing the boundaries of the different lots conceded, in consequence of the want of a land survey (that on which Des Barres' chart is constructed having been a coast survey), the custom having been to lie them entirely out by the eye, the evil of which is not felt at the present day; but, as these islands become settled, it will increase, and may give, ultimately, if persevered in, a great opening to litigation. Mr. Doucet intends to make immediate application to Sir Isaac, to obtain his permission that the islands, at least the inhabited portions, should be regularly surveyed; it being the wish of the islanders, who, in that case, have agreed to become rentees.

*Statistical table of the Magdalen Islands, taken from
Bouchette.*

Horses	100
Cows	316
Sheep	550
Swine	360
Home made Cloth	1275 yards.
Some fowls and other poultry.	

It is said that no reptile has hitherto been seen upon these islands, a fact which their sandy soils and detached position may account for.

MINERALOGICAL APPENDIX.

Mineralogical character of some of the minerals met with on the Magdalen Islands.

The mineral which occurs, studding the surface of the gypsum, at House Harbour, possesses the following characters.

It is crystallized in small dodecahedrons, the faces of which are triangles, (scalene?) or its form is that of two six-sided pyramids joined base to base. It cleaves, in smooth polished planes which yield readily to division, parallel to the common base of the pyramids, which appears to be oblique to their axes; it may have other cleavages, but they were not seen. The colour is hair brown or brownish. It is semi-transparent, or rather the crystal, otherwise transparent, appears to contain a nucleus of some dark opaque substance. It yields readily to the knife; and its specific gravity appears to be that of an earthy mineral, about 2'6. It is insoluble in the mineral acids, even when assisted by heat, by exposure to which, it immediately becomes black, opaque, and magnetic; if the heat be continued, a pavonine tarnish, such as is often perceived on steel, is observed; but it is infusible at the highest temperature of the blowpipe. With borax, it fuses easily into a transparent glass, which is yellowish while hot, and greenish or bluish when cold.

I am inclined to think this is a new mineral, as I can find no mineral, the description of whose character agrees with it.

Carbonate of Manganese.

This mineral occurs in small, but distinct, white translucent crystals, of a rhomboidal form; also in masses, composed of the assemblage of such crystals, but smaller and less distinct. It yields easily to the knife—is soluble in cold muriatic acid with effervescence—specific gravity of mass 2'7.8—turns brownish black in the exterior flame of the blowpipe, but not magnetic—infusible in the interior flame. With borax it forms, with considerable effervescence, a glass of an *amethystine hue*. This specific gravity of this mineral, in *mass*, is low for carbonate of manganese; but this I attribute to the circumstance, that carbonate of lime, under the form of calcareous spar, is probably mixed with it.

Its position has been already described, and it appears to occur in some abundance. When first observed, it was mistaken for one of the white zeolites, in consequence, chiefly, of its association with trap.

From the crevices and natural joints of a trap rock on the shore of House Harbour, is taken a mineral, in close association with crystals of ferruginous quartz, of which, the following are some of its characters.

Colour yellowish, white, or greenish,—translucent to semi-transparent—structure confusedly laminar and crystalline, generally; but some tolerably distinct crystals, of a rhomboidal form, were observed. It *appears* almost to pass into the substance of the quartz, with which it is associated, and from which it is sometimes with difficulty distinguished

by the eye alone; the lustre on the faces of the laminæ is shining, and somewhat pearly—yields to the knife easily—specific gravity about 2·7—insoluble, or very slowly soluble, in cold muriatic acid, although a slight effervescence is at first perceived. When the acid is heated, the mineral dissolves rather rapidly, with increased effervescence. It turns brown and friable before the blowpipe; but does not fuse nor burn to lime. With borax, it fuses with violent intumescence into a transparent glass, which is yellowish when hot, and colourless when cold. No phosphorescence—no magnetism.

I am much at a loss what to call this mineral; it seems to agree best with either phosphate of lime, or pearl spar, but differs essentially from both.

The quartz crystals it is associated with, are low hexagonal prisms, terminated by six-sided pyramids; they have a ferruginous coating, through which, when held to the light, they appear of a blood red colour. When this coating is removed by an acid, in which it scales off, the crystals are colourless and transparent.

In some specimens of porphyritic and amygdaloidal trap, collected on the shores of Amherst Island, and evidently detached from rocks, in *situ*, in the vicinity, were observed two distinct minerals, one red, the other green.

The red mineral occurs in small rhomboidal shaped crystals, of an indistinctly laminar structure and low lustre—opaque or nearly so—yields to the knife a white streak—insoluble in the mineral acids—infusible. It bears a resemblance to flesh coloured felspar; but wants its fusibility and

1871
The undersigned do hereby certify that the within and foregoing is a true and correct copy of the original as the same appears from the records of the Board of Health of the City of New York.

Attest:
J. C. [illegible]
[illegible]

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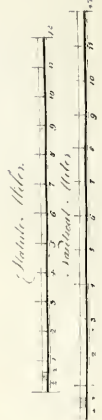
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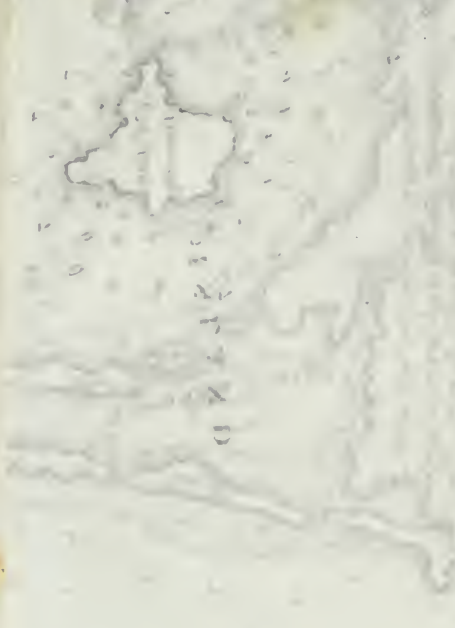


OFFICE OF DES BARRES CHART
OF THE
Magdalen Islands.

Published in
1778.

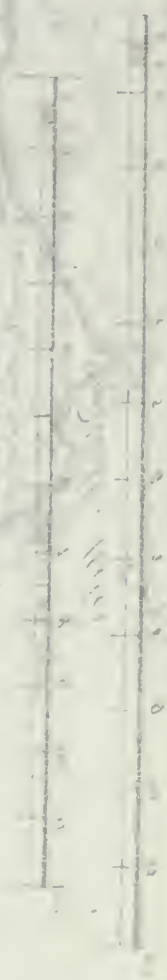
These nautical charts offered in 1783
drawn from those by name of Des Barres.





CHATELAIN

CHATELAIN



CHATELAIN

hardness. It is these crystals which give the porphyritic structure to the mass.

Green Earth.

The green mineral which fills the cavities of the amigdaloidal, consists of a fine soft earthy substance, yielding to the nail, and having sometimes a silky lustre and fibrous appearance, which I attribute to the action of weathering. It is insoluble in acid, and infusible.

THIRD REPORT.

TOPOGRAPHICAL.

READ BEFORE THE SOCIETY 21ST JANUARY, 1832.

A topographical description of the Magdalen Islands has been anticipated, in some measure, by the information which has been already given, respecting their agricultural capabilities and geological formations, and, indeed, it is at all times impossible to enter upon the discussion of one of these subjects without making some allusion to the others. I shall, however, avoid repeating as much as possible the same remarks, and only do so in instances in which convenience will excuse tautology.

The Magdalen Islands, with four exceptions,* form an

* The Bird Islands, Bryon Island, Entry Island, and Deadman's Island are the exceptions; other detached portions are mere islets, as, indeed, are the first and last of these.

almost continuous chain of land, about forty-two miles in length, and directed nearly N. E., S. W. This chain embraces all that is either politically or commercially of importance in the group, an advantage it is ever likely to retain, as long, at least, as its harbours remain open;* a maritime feature in which all other portions of the cluster are deficient.

The first, or southernmost portion of this chain, is Amherst Island; the second, in northerly succession, is Grindstone Island; the third, Alright Island; the fourth, that vermicular line of coast which, first stretching away to the north-eastward as far as the "north-east" point, suddenly rounds to the westward, forming Coffin's Island and Grosse Isle, then returning, on a nearly parallel course, encloses that singular interlockage of water, having Grand Entry Harbour at its north-eastern extremity, and Haywood and House Harbours at its south-western. Between Amherst Island and Grindstone Island there is a similar water interlockage, called Havre Basque, but, unlike the others, quite inaccessible to vessels.†

This chain, which may be considered as forming one island, into which the sea has made deep longitudinal inroads, (a remark substantially, though not positively, correct, as that element has probably thrown up the sand banks which now enclose it,) presents, on its eastern side, an outline of coast on which the flow of the tides, and the

* There is reason to suppose that they are gradually closing.

† These natural canals may be considered the *links* by which the chain is united: in process of time these links will become filled up by the drifting in of sand, and what now, in plan, resembles a double chain shot, will then bear more analogy to shot united by a double bar.

beating of the waves, &c. have, as was to be expected, produced a much more sensible effect than on the opposite coast, which, instead of being, like the former, characterised by bays and harbours, is deficient in them almost altogether; a fact sufficiently obvious as regards the whole chain, but peculiarly so, if the eye be confined to a latitude southward of Cape Alright.*

First, in point of present importance in this chain, is Amherst Island, the form and size of which would be nearly that of an oval, having about $5\frac{1}{2}$ and $3\frac{1}{2}$ miles for its axis, (the former nearly east and west) were it not for a narrow isthmus and peninsula, the former of which, stretching to eastward, connects the main land with the latter, in which is situated the only harbour on the island. As this harbour is the best which is settled in the group, it becomes necessary to give a particular description of it, and of the surrounding country. The isthmus alluded to is caused by a *bight* of water, called Basin Bay,† which, encroaching on the southern shore of the island, forms a species of salt water lake, which nearly washes the foot of the “*Demoiselle*,” a remarkable insulated hill, 260 feet in altitude above the sea,‡ from the summit of which a fine commanding view may be obtained over the whole of the harbour, about 6000 feet to eastward, and of the anchorage ground in Pleasant Bay, about the same distance; while the only road into the

* It is worthy of remark, that the clays and gypsums on the islands are met with, principally, if not entirely, to the southward of the same place, and on the same shore. Observe that clay is readily diffused through water, and that gypsum is soluble in 460 parts of that element.

† Some of the oldest inhabitants on Amherst Island remember of seeing in this bay vessels drawing 15 feet water,—it is now inaccessible to boats.

‡ Barometrically measured.

interior (following the direction of the isthmus) crosses the side of the Demoiselle, near its southern and south-western base. This isthmus is about three miles in length, and half a mile wide; it leads from Amherst Harbour to the settlements* on the north-west shore, distant about seven miles.

Amherst Harbour is bounded on the west, south, and south-east by the peninsula before-mentioned, which, making a sudden turn to the north-east, terminates about four miles from the harbour, in that low sandy pit called "Sandy Hook." The channel into the harbour runs nearly parallel with this shore, at the distance of about 600 or 700 feet. The land, by falling away from the summit of the Demoiselle towards the harbour, secures it to the north-westward, while an arm of rock, elbowing into the sea, completes its circle of security to the northward. This arm,† or natural mole, has a variable altitude above the sea of from 30 to 60 feet, its length is about 2000 feet, and greatest breadth 450; its precipitous cliffs on the shore are surrounded by a narrow belt of sand, except in a few prominent parts where the sea washes their bases. The widest and highest portion of this arm is about the centre, from whence it falls away, both in height and width, towards the north-eastern extremity, where these dimensions are

* I measured with the barometer the height of a bald hill, immediately overlooking these settlements, and found it to agree nearly with that of the Demoiselle; another hill to north-westward was judged to exceed it by 20 or 30 feet, but certainly did not exceed 300 feet of altitude above the sea, and is probably the highest land in the *chain*. The highest land on Entry Island may be 400 feet, the loftiest in the group.

† Its shape is like that of the human arm: formerly it was an islet, indeed it is represented as such in Des Barres' chart, published in 1778; it is now joined to the peninsula by a sand bank.

30 and 100 feet respectively. The opposite, or south-eastern, side of the harbour, distant from this end of the mole about 1000 feet, is in general a low sandy ridge, with a few small insulated hills,* of a conical form, upon it; one of the nearest of these hills was found to be about 5000 feet from the mole. The rest of the country not described, immediately surrounding the harbour, is low and slightly undulated, with here and there a few scattered circular mounds; precipitous cliffs, however, are gradually formed on the shores as the foot of the Demoiselle is approached.

The entrance into the harbour is narrow, but straight, and vessels drawing from 11 to 12 feet water readily enter at high tide, and become secure against every wind; should they shake, which often happens, they can receive no injury, the bottom being a soft ooze. The channel runs about 300 feet from the south-eastern extremity of the mole.

It must not be understood, that all portions of the watery expanse within the mole will receive vessels drawing 11 feet water, as much the largest half is only fit to receive boats. No vessel must pass to northward or north-westward of the prolongation of a somewhat remarkable digilated sand spit, which will be noticed upon the right hand on passing within the mole. The rectangular space southward of this line of prolongation, although small, will hold sixty small craft at a time, and that number has been seen within the harbour more than once.† Secure against all

* I have no doubt that these hills are composed of trap; but they were not visited.

† Amherst Harbour, however, appears to be fast experiencing the fate of Basin Bay; even within the last twenty years its entrance is said to have been narrowed at least as many feet.

winds, vessels could ride at anchor in four or five fathom water outside the mole.*

Amherst Island is connected with Grindstone Island by almost continuous spits of sand,† which enclose between

* Mr. Cormier is of this opinion, but both Captain Bayfield and Captain Douglas think that a gale from the N. E. is to be dreaded. With deference to such good authority, however, the local experience of the first named gentleman gained during, I believe, a period of twenty-five or thirty years, carries with it much weight, and who, in advancing so opposite an opinion, assigns as a cause for the fact, that storms are not to be dreaded, the gradual shoaling of the water from shore, by which the waves are deprived of their force before they reach the anchorage ground; and this remark applies to the whole of Pleasant Bay. The two following facts are corroborative; first, wrecks, although common enough on other portions of the coast of this chain, never occur, or rather never have occurred, to my knowledge in this bay; the second fact, equally cogent, is, that no boulders of a large size, and, indeed, very few of a small description, are seen on the shores of Pleasant Bay, and rarely any other fragments of rock than such angular pieces as have been detached evidently from formations *in situ*; this is the more remarkable, because some of the islands met with in a passage to the Magdalen Islands have their shores crowded with foreign debris; Green Island for instance, where some of the boulders are of enormous size.

† These spits of sand are evidently recent formations, increasing daily, and were originally produced by the influence of the rocky islands upon the tidal waters and currents bearing with them their sedimentary deposits. It appears farther probable, that the bars or spits of land to westward were formed first by the *direct* force of the waves, and subsequently those to eastward by the recoil or back-water. The original rocky islands are boldly scarped, but the new creations are low and shelving. The eastern shore, from the northern extremity of Amherst Island to Grindstone Island, is one unvaried strip of the finest and smoothest sand, over which the waves gently ripple at the very moment they are in other places on this coast foaming against the rocky capes. Nothing occurs to relieve the quiet monotony of the scene but the half buried exuviae of the crab, the lobster, or of some of the molluscous tribe of animals, among the genera of which the *natua* and *solen* are most common: it is worthy of notice, that shells of the same species with those found in such abundance in the loose arenaceous formation on the left bank of the Beauport River are met with here and in other

them a shallow salt water lake, called Havre Basque, now (whatever it may have been) inaccessible to vessels; and it has been already observed that this feature is analogous to what is noticed between Grindstone Island and Coffin's Island, with this essential difference, however, that the lake in the latter instance is terminated at each extremity by a harbour, which *is* accessible to vessels. The southernmost of these harbours, or that situated between Grindstone and Cape Alright, to which the name of House Harbour has been given, is the one to which I am now about to direct my attention, as it claims precedence of Grand Entry Harbour, by being more central, by being settled, and by being at the present moment the resort of vessels.

House Harbour is situated nearly due north of Amherst Harbour, from which it is distant about twelve miles by water, and twenty by land. It lies between the hilly islands of Grindstone and Alright; the former and Amherst Island secure it, and the anchorage in the bay outside, from all winds from south to west, while the latter offers an equally secure cover against winds from the north and eastward. The entrance into this harbour lies open to the south eastward, with the exception, that the land of Entry Island, the most elevated in the group, and distant about nine or ten miles, assists in modifying the force of the waves and winds from this quarter of the compass, and, in co-operation with the

places in the Gulf. This formation is worthy of notice, and in a small pamphlet on the Organic Remains of Canada, compiled in the spring of 1828, to assist by its sale the funds of the Orphan's Asylum of Quebec, I introduced, in a note at the last page, some account of it, the only one hitherto published. But as this account is meagre, and I think the subject sufficiently interesting, it will probably form a separate article, to be submitted to the Society on some future occasion.

cause before mentioned, occasions gales from the south-east to be little dreaded by vessels in the bay.* Within the harbour they are not felt, owing to a spit of sand, or natural wharf, which, terminating at Grindstone Island, to northward on its sea board, forms on that side a sort of low terrace to the harbour at its entrance across, while a shoal also contributes towards the same effect; an advantage, however, which is more than counterbalanced by its not permitting vessels drawing over nine feet water to pass, on which account, and its not being so capacious, House Harbour is inferior to Amherst Harbour.

This harbour is commanded on the Cape Grindstone side by cliffs of from 20 to 100 feet in altitude, but the immediate shore on the opposite side is a low sandy beach, stretching away to the foot of a hill, in one level of about 400 feet or upwards. The land about Cape Alright is rather elevated, and abuts in precipitous cliffs (perhaps 50 feet in height) upon the shore, but as the harbour is approached, these cliffs are succeeded by the low sandy flat before-mentioned. Within the harbour, there are two or three small islets; the most remarkable of these (the others being mere sand banks) is one composed of red sandstone, whence the name of Red Island, having a natural scarp of about 30 feet in height all around it. It is long in proportion to its width, which, I believe, in no place exceeds 100 feet, and the channel passes longitudinally, close to it on its south-western side. However, as I did not land upon this islet, I cannot write positively concerning it.

* I have already elsewhere observed that Captain Bayfield and Captain Douglas are not of this opinion.

The form of Grindstone Island approaches that of the circle, whose diameter is about five miles, while that of Alright is irregularly elongated to the north-eastward, the greatest breadth, measured from Cape Alright westward, being about three miles, and length north-eastward about nine. Like most of these islands, they are hilly, and the hills are woody and cone-shaped, or rounded towards the interior; bare and tabular towards the coast.

Although the regular direction of this chain is N.E; S.W. that part of it embraced by Amherst Island points more northerly. The land beyond Grindstone Island, rounds suddenly to the eastward, and forming the south-easterly portion of Alright Island and shore of House Harbour Bay, subsequently bends north easterly, in a moderately concave line, as far as Grand Entry Harbour, distant about twenty miles from House Harbour.

No settlement has yet been effected on the shores of Grand Entry Harbour and Bay; a circumstance which the reputed infertility of soil will not account for, among a people whose occupations are almost exclusively maritime. Equally secure as are the two other harbours, against all winds, it much surpasses them in the number and size of the vessels it will receive. Brigs drawing from fourteen to fifteen feet water, may enter this harbour at high tide,* and anchor there in perfect security; the channel, however, is somewhat intricate, and would require buoying. The entrance is formed by two spits of sand, about six or eight hundred feet asunder, through which a strong current

* High tide is usually about four feet above low water—spring tides from six to eight.

passes as the tide lowers. Two or three miles to northward, within these spits, is situated the centre of the harbour, the water of which, continues to deepen from three to six fathoms, as the base of an elevated hill, with two rounded summits, is approached.

Beyond Grand Entry Harbour, the land again bulges suddenly to the eastward, enclosing Grand Entry Bay to south-eastward, and forming capes like Cape Alright, but not so elevated. After doubling these capes, the outline of the shore bends once more north-easterly, and terminates in that low rounded flat to which the name of Coffin's Island is affixed. This portion of chain is described to consist of a sandy alluvium, full of small lakes or ponds of brackish water. On the contrary, Grosse Isle, a portion of which forms the hilly back ground in Grand Entry Harbour before alluded to, is composed of rocky eminences, which, like those on Amherst Island, Grindstone Island, and Alright Island, were formerly groups, distinctly insulated, but whose insularity, in the present day, is almost (and will eventually be quite) destroyed, by those daily accumulations of sand before alluded to, which are gradually cementing these islands together by two broad barren bands.

As regards the other islands of the cluster, forming no part of the chain to which the foregoing observations bear particular allusion, I have merely to point out their relative position, form, and size; all other information which I possess respecting them, having been already given in my second report.

The Bird Islands, or rather islets, are situated in the prolongation of the chain to the north-eastward, from the most easterly portion of which, they are distant about eighteen miles: they are two in number, and mere rocks,

elevated from fifty to one hundred feet above the sea. The northernmost is placed, by Mr. Jones, of His Majesty's ship *Hussar*, in longitude $61^{\circ} 12' 53''$ west, latitude $47^{\circ} 50' 28''$ north.

Bryon Island is ten or twelve miles northward of the north-eastern extremity of the chain, its latitude is $47^{\circ} 48' 8''$ at the north-east point, (Mr. Jones,) from which it extends south-easterly from three to five miles: its breadth being about half a mile.

Entry Island, occupying the most south-easterly portion of the group, is, in form, nearly a circle, whose diameter is about two miles. It is ten miles from House Harbour, and six or eight miles from Amherst Harbour. Between it and Sandy Hook, there is a channel into Pleasant Bay, but seldom used.

Deadman's Island is an insignificant islet, about eight miles westward of Amherst Island. It has obtained its name, according to Mr. Adams,* from its resemblance, at a distance, to a body laid out for burial.

I shall now close this report, with a few more observations, generally upon the anchorages and soundings around these islands.

The only good anchorage ground to be met with among them, independently of the three harbours described, is in Pleasant Bay, from off Grand Entry Harbour to Amherst Harbour; and the usual and best entrance into this Bay from the westward, is round by the south-east, outside Entry Island. Any where within this Bay, a vessel may find good

* This gentleman presented, the winter before last, a manuscript to the Literary and Historical Society of Quebec, containing some interesting information respecting the Magdalen Islands.

anchorage, in from three to eight fathoms water, but the vicinity of the harbour affords the best; the gradual shoaling of the water from a distance, besides breaking the force of the waves, as before said, afford vessels plenty of time to select their respective anchorages, and is particularly favorable to them when involved in the fogs, which, in the spring and autumn, are so prevalent, and so frequently occasion wrecks* on other portions of the coast by concealing the land from the navigator, while his soundings do not intimate its proximity. Some places are mentioned on the western side of the chain, as affording anchorage ground, but it must only be understood during certain winds, as, strictly speaking, this shore, from north to south, is deficient in any secure harbour or bay: vessels sometimes find a temporary security at L'etang des Caps, L'etang du Nord, and L'Opital.

Although the general accuracy of the outline of Des Barres' chart is acknowledged, there are important differences in the present state of the soundings and those laid down on it, which, whether arising from their shifting nature, or from original errors in the chart, should be noticed. Some of these I may venture here to point out; but all details must be left to the well known professional accuracy of Capt. Bayfield, R. N. who, being about to visit these islands in the course of his hydrographic duties, will soon leave us nothing to desire upon this head.

In coming round this point, and nearly opposite Old Harry, the *King Fisher* struck upon a reef, at a distance of

* Four vessels were wrecked on some portion of this chain last year (1831). Colonel Bouchette states, that Captain Fougere, for ten successive years, brought off these islands about 200 shipwrecked persons (see his recent work); but this is evidently erroneous.

at least three miles from the shore. Capt. Douglas was taking soundings at the time, as fast as the man could draw and heave, and his last cry had been five fathoms. Upon mentioning this circumstance to Mr. Cormier, we were informed that a reef extended out from the point at least six miles.

From three to five miles S.S.E. of the eastern part of Cape Alright, a shoal exists, not introduced in any chart, on which there is only twelve feet water; it consists of white rocks, over which the sea breaks, in a storm, from the eastward.

About six miles south-west from L'etang du Nord, on the north-west coast, there is a rocky shoal, with only ten feet of water upon it.

The shoals, at the north-east point of the chain, are very dangerous, and extend much farther out than represented in Des Barres' chart, which, likewise, does not shew a sand bank, lying a short distance off Entry Island, to northward, called the Pearl Bank.

In the foregoing description of the topography of these islands, I have availed myself of Des Barres' chart, in those instances in which my own acquaintance with the *locale* is too vague to permit me to write confidently; this assistance, however, can obviously extend only to their mere outline and dimensions.

FOURTH REPORT.

POPULATION, HABITS, MANNERS, RELIGION.

READ BEFORE THE SOCIETY, 21ST JANUARY, 1832.

Whether these islands were, or were not, in part settled* by the French Government, before the conquest of Canada, is a disputed point on which has been, and still is founded, a legal objection on the side of some of the inhabitants to the claims of Admiral Sir Isaac Coffin, to whom they were conceded, by the British Government, in 1798, without the existence, as the complaining party asserts, of any right on the part of the Crown to make such a grant. Two or three judgments, however, having been given recently in the Law Courts of Quebec in favor of the Admiral, and a disposition to admit his claims is now as generally evinced as it was at the period of his visit to the island in 1806; such is the opinion, at least, of Mr. Doucet, the Admiral's agent. This gentleman asserts, upon the authority of some of the oldest residents, that the Magdalen Islands were first settled in 1767, by a Bostonian of the name of Graidly, who, introducing upon Amherst Island four Acadian families, from Prince Edward's Island, commenced, with their assistance, a fishery in seals, sea cows, and cod. Bouchette, however, says, in his recent quarto work, that as early as 1763, there were ten families on the islands, which had

* They were conceded to the Count St. Pierre, by the Duchess of Orleans, in 1720, but it does not appear at that period that any measures were taken to settle them.—(Hist. Gen. des Voyages, p. 676.)

only increased in 1791 to thirteen. It appears, on the authority of the former gentleman, that in 1793, twelve or fifteen families emigrated hither from the French settlement of Miquelon and St. Pierre; and that when Sir Isaac Coffin visited these islands in 1806, the population amounted to about 400; since which time it has continued to increase at the *average* rate of about twenty-six per annum, and amounts now (in 1831) to 1057, of which 580 are below the age of fifteen; 290 from fifteen to thirty; 162 from thirty to sixty; and 25 upwards from sixty to ninety-seven, the age of the oldest inhabitant.

This population is distributed into families or houses, as follows:—98 on Amherst Island, 48 on Grindstone Island, 38 on Alright Island, 5 on Entry Island, and 6 at the East Point on Coffin's Island, making 195 families; of these 20 are of British extraction, and 175 Acadian or French; about half the latter emigrated to these islands, from St. Pierre and Miquelon, in the years 1793 and 1802. In the last fourteen years the population has more than doubled itself, and appears to be now steadily on the rapid increase, wanting only the encouraging hand of Government, and of the proprietor, to make of the Magdalen Islands, notwithstanding their barren soils, a flourishing little colony.

The habits of these islanders are almost exclusively those of fishermen, to which they are accused of adding, occasionally, those of the smuggler and the wrecker; but, whoever believing these accusations, should imagine the former to resemble the habits of the bold, reckless, desperate, European smuggler; or the latter, those of the cowardly caitiff from the same quarter of the globe, who is accused of hanging out false lights to beguile vessels to their ruin,

would, in thought, injure a people as little addicted to desperate deeds of illegal enterprise, as to deeds of villainy.

Smuggling, on these islands, is scarcely a breach of the laws, for no law but the law of God is preached upon them; and were not that the case, their neglected and insulated state may well entitle the inhabitants to some indulgence in this respect, particularly, as without a contraband trade, they might sometimes want even the necessaries of life; as long as they are abandoned, therefore, to their own resources, it would be unjust to deprive them of the advantage which a *free* trade offers, it being well understood that precautions are taken to prevent these islands from being made the medium of introducing contraband articles into other parts of the Provinces.

Mr. Adams, in his interesting paper upon these islands, mentioned in my third report, contrasts, humourously, the activity of the Magdalen fishermen, when the tocsin of wreck is sounded on their shores, with the torpor which they exhibit in following their daily avocations. Did no other causes exist for this difference, than the excitement which novelty affords, in opposition to the tedium induced by monotonous repletion, they would, perhaps, be sufficient to account for it; but a more substantial reason will be found in the cargo of some well freighted outward bound merchantman, which, stranded on the coast of Anticosti, or, perchance, *nearer* home, presents to these fishermen the opportunity of making some very *interesting observations*, upon the kind of food and raiment with which their more civilized brethren of Quebec are wont to clothe their bodies, both inside and out. In following this occupation, when chance places it in their way, these islanders have never been accused of a want of humanity; and the wrecker

whose heart is alive to its dictates, is a valuable member of society, as his pursuits carry him often to the relief of the shipwrecked on desolate uninhabited coasts, where no friendly assistance could otherwise be expected. How different would have been the fate of the crew and passengers of the *Granicus*, had a vessel in the search after wrecks, fallen in with them; to have been accessory to their deliverance, would expiate a whole life of the *wrecker's* illegal appropriations.*

* On our return from the Magdalen Islands last summer, we touched at several places on the island of Anticosti; among the rest, we visited the spot where the tragedy alluded to occurred, and where we met with a solitary individual of the name of Godin, the same who had charge, formerly, of the provision post here, which he is accused of having plundered and left, and by so doing, of having caused the horrible event; the substance of which, it is proposed to introduce in this place, with no idea, however, of communicating information which is new, but with the desire to keep alive, as far as it is in my power, attention to the necessity of rendering the recurrence of such a transaction impossible, by adopting suitable precautionary measures, some of which it is my intention to suggest presently.

On the 29th October, 1823, the bark *Granicus* cleared out from the Port of Quebec, on her homeward bound passage to the Cove of Cork, and being wrecked on the coast of Anticosti, not far from the East Point, the crew and passengers are supposed (for their conduct subsequently, up to the period of their dissolution, is only probable surmise, founded on strong presumptive evidence, there being no living witness to the transaction) to have met, in their search along the shore, with one of the direction boards, under the guidance of which they proceeded to the north-westward, as far as Fox Cove, where a provision depot formerly existed, and where the board alluded to above, taught them to expect one still. This board, according to Godin, was brought by one of the unfortunate wretches to this place, where it was afterwards found. Upon arriving at this post, they found it deserted, the provisions removed, and nothing but an empty log-house and store to receive them; into these they entered, and yielding to deplorable necessity, they appear to have submitted themselves, gradually but deeply, to all the horrors of cannibalism; for, what other reference could be

It has been already observed, that the inhabitants of these islands are accused of a want of activity in their fisheries, and there appears to be too much reason to believe this is true; for, had they half the industry which their annual American guests display, they never would abandon to them the whole of the herring trade.

Quarrelsome and deceitful dispositions have been laid to their charge; the former shewn in the use of abusive lan-

drawn from finding the beams of their dwelling places shambled with human subjects, half carcase, half skeleton; from which the flesh had undoubtedly been removed, to a pot which was found resting upon the ashes of the extinct fire, the whole of its disgusting contents not *quite demolished*—from the discovery of a pile of “well picked bones” and “putrid flesh”—from the circumstance that money, watches, and gold rings, &c. &c. were found upon the premises, together with a pencilled note, signed B. Harrington, desiring that forty-eight sovereigns in his hammock (which were found) should be sent home to Mary Harrington, (probably his poor mother or wife,) Barrack Street, Cove, “as they are the property of her son.” This man, the only un mutilated form among them, was found dead in his hammock, being the last to survive the cold, and the poisonous effects of this infernal feast.

Some fishermen from the Magdalen Islands, probably searching after wrecks, were the witnesses to these closing sorrows, and collecting them together, they were buried in a small piece of ground adjoining, now enclosed by a wooden fence. It was thought that the remains of three children, two women and eight men could be distinguished. The skeletons of two men were also found in the woods, to which they are supposed to have retreated, with the view of avoiding such a scene, and flattered by the hope of reaching a place of safety.

It is said, the boat of the *Granicus* was found on the shore of Fox Cove, when visited by the Magdalen fishermen, about the middle of May 1829, and hence it has been considered a subject for surprise, that when the crew and passengers found the post deserted, they did not return on their course and seek another, situated at the East Point, not far from the spot where they appear to have suffered shipwreck.

Whether blame does or does not attach itself to any person or persons in this unfortunate affair, is a question which there appears to be no evidence to determine, although much inquiry was instituted into it at the time. It is certain,

guage to one another, unaccompanied, however, by any more decided act of hostility; pugilism, being rare among them, as among the Canadians in general; the latter, in their transactions with the resident merchants and store-keepers.

Extravagance displayed in the use and consumption of articles above their means, is said to be another failing; one, however, which is common enough every where.

that Godin himself was under imprisonment for debt at the period in Quebec, to which place he unluckily proceeded in the autumn; the post, as he says, having been withdrawn by authority, and the provisions having rotted. (Does salt pork or biscuit easily rot?) I understand, upon authority far better than Godin's, that the post had been withdrawn, and that he is correct in this respect; should he be correct also in his assertion respecting the direction board, a great oversight appears to have been committed in leaving on the ground such an *ignis fatuus* of destruction. However I must repeat, that there appears to be no evidence, which can be relied upon, of blame attaching to any one, and it need not be stated, that without such evidence, there would be injustice in attaching it. Not one of the public offices appears to contain a single document or deposition relating to the affair, which is extraordinary.

The Provision Posts on this island should, like the direction boards, be situated on the most conspicuous capes and headlands, so that it should not be necessary, as it is at present, to seek them at the bottom of some deep bay or indentation on the coast, in which obscure spot, one low unobscured dwelling may not only be found with difficulty, but is very liable to be overlooked, particularly by persons in the anxious position of shipwrecked mariners. Nor are the direction boards sufficiently numerous; instead of being placed at intervals of forty miles and upwards, one for every four leagues would not be too much. The materials also, of which they are constructed, are not of sufficient durability to resist the obliterating and decaying action of a boisterous coast. I should recommend that an iron rod, about 10 or 15 feet in length, be drilled into the limestone, which every where abounds, to the depth of two or three feet, having on its summit a well tarred direction board, or (better still) a plate of metal, with all the necessary information upon it, as to distance, &c. The expense cannot be made a reasonable ground of objection to this proposal, when the object is to

Though abusive among themselves, they are allowed to be unassuming and polite to strangers—of sober habits in general, they allow themselves a little licence in this respect after a successful fishery in seals—they are poor without pauperism, and independent without pride.

Robbery, murder, and other capital offences, appear to be unknown on these islands; there being no record of the occurrence of any such crimes upon them.

prevent the recurrence of such a tragedy as the *Granicus*, besides permanently constructed direction boards will, in the end, prove most economical, requiring, as they would, neither repair nor superintendance.

The residents who have charge of the Provision Posts receive a salary of from £40 to £50 currency, but no provisions: it would be better to reduce this salary, and allow them a certain proportion, as an equivalent, out of the supply; but better still, make the allowance without any reduction,—it would be, probably, only granting graciously, as an indulgence, what their necessities may oblige them often to assume as a right, and, after all, they would not be overpaid for the sacrifice of passing their time in such a dreary place.

Fox Cove is situated towards the north-eastern extremity of Anticosti, on a sort of peninsula. At the bottom of the cove are erected the house and store, the theatres of the bloody deeds, with which the surrounding landscape is little in unison, being picturesque, calm, and sequestered. We found, however, a multitude of fine cranberries, whose mature blood red hue served to remind us of the event which had given such a sanguinary and savage notoriety to the spot. So intense was their colour, that it did not require much provocation, to an imagination already excited, to compare them to drops of the coagulated blood of the victims.

It has been rumoured abroad, that it was the intention of the Colonial Government to employ in the summer season a steamboat instead of the *King Fisher* for the purpose of carrying on its necessary communications with different parts of the Gulf, &c. There appears to me much to recommend in such an arrangement, particularly as regards the saving of time and expense. With respect to the former consideration, the advantage which a steamboat possesses over every other description of craft is too obvious to be insisted upon; and as to the latter, if a steamboat were paid by the trip, and not by the season, the ex-

Mr. Burnet, the Catholic Missionary, a gentleman highly respected on the islands, and to whom I am indebted for a memoir respecting them, which he politely drew up at my request, describes the manners of these people to be “doux et bien faisants, ils exercent volontiers l’hospitalité a l’égard des étrangers ; ils ont de la religion,* des mœurs purs, de la droiture et de la docilité a l’autorité† civile et religieuse.”

I cannot presume myself to offer any opinion upon the manners and habits of these islanders, having seen so little of them, but what I did see, was of a very favorable description, and quite unexpected. I entered several of their houses, and found courtesy, contentment, cleanliness, and comfort, conspicuous. To the question, frequently put, “Avez vous de quoi vous plaindre,” the same answer was always returned, “rien,” accompanied by the characteristic shrugging up of the shoulders, which so perfectly indicates their origin. One individual, however, informed me, that he had the desire to abandon fishing in favor of farming, but that the uncertainty he was in, respecting his rights as a tenant to the land he occupied, prevented him, and his disappointment was considerable, when he found that the object of my visit was not connected with the survey of his and his neighbour’s lands preparatory to giving them a deed

penses under this head of service would be very materially diminished, particularly if she had permission to receive passengers or tourists on board, to which I can see no objection, but, on the contrary, the additional advantage of serving to make us better acquainted with the different settlements on the shores of the Gulf, and of facilitating commercial intercourses with them.

* Of this I had a proof, in the difficulty experienced to procure a guide into the interior one Sunday, of the probability of which, I was informed before hand.

† I know, however, of no civil authority on the islands.

of occupation. Sir Isaac Coffin has been written to by his agent on this subject, who expects an answer from the Admiral, authorising him to make such surveys as appear to be necessary: this the inhabitants have a right to expect, and its execution is quite as conducive to the interests of the landlord as the tenant.

The religion of nine-tenths of the inhabitants is Roman Catholic, and two churches on the islands are consecrated to its religious observances; one is situated at Amherst Harbour, the other at House Harbour. They are visited by the Missionary alternately. In the present neglected state of these islands, this gentleman's influence is highly important, not only in a religious point of view, but civil also, and he appears to be every way worthy of the confidence reposed in him. It is thought that the introduction of school-masters on these islands would not meet with his encouragement; but such an opinion, as far as efficient men are concerned, is probably erroneous, for the necessity of establishing one or more schools here is obvious; and pressing it must be done, however, either by the Colonial Government or Proprietor, as the inhabitants are much too poor to do it effectually themselves.

There is no medical man on the islands, and, I am informed, no encouragement for one, the inhabitants being remarkably exempt from disease and sickness. Bouchette describes them as being "in general, remarkably hale and healthy, with light complexions and sandy hair;" he also adds, "they are cheerful in disposition, and the females particularly modest and ingenuous." My own observations, as far as they extend, confirm this.

There are clergy reserves on these islands, but no military ones.

PIGMENTS OF CANADA.

Note by the Publishing Committee, respecting the Canadian Pigments sent to the Society for the Encouragement of Arts, &c. by the late W. Green, Esq.

The 47th vol. part 1, of the Transactions of the Society of Arts, contains, at page 39, a note by Mr. Cornelius Varley, upon the red lake sent to the Society from Canada, an account of which forms the most important part of the second article in the 1st vol. of our own Transactions. When specimens of the manufactured materials alluded to in that article, were submitted to the examination of the above mentioned artist, he reported so favourably upon the red lake, as to occasion the award by the Society of Arts of its Gold Isis Medal to Mr. Green. After a more minute examination of the red pigments in question, Mr. Varley conceived that he had not fully done it justice, in consequence of which another communication was made to the Society upon the subject, which was inserted in a subsequent number of its Transactions. The following are extracts from these communications.

Extract from a communication by Mr. C. Varley, inserted in Vol. XLVI. of the Transactions of the Society for the Encouragement of Arts, &c. page 141.

February 20, 1828.

“I have compared the colours sent by Mr. Green from Canada, with those in common use, and find them generally very good. The dark reddish brown, No. 1,* is a very useful colour, being nearly the same tint, but richer than madder brown. The lake, No. 2,† is a very valuable colour; it is a little flesh coloured or yellowish, when compared with Mr. Field’s madder pink, and therefore not quite equal to it, but is as often wanted: it is much higher in tone than vermilion.”

* No. 1 is that portion of the colouring matter of the root of the plant Tsavooyan, which is soluble in water.

† No. 2, that portion of the same which is insoluble in water. (See Lit. and Hist. Society’s Transactions, vol. I. p. 45.)

Extract from a further communication by Mr. Varley, inserted in Vol. XLVII. of the Transactions of the Society for the Encouragement of Arts, page 39.

March 12, 1830.

“When the Committee requested me to make trial of Mr. Green’s lake from Canada, I examined it in reference to what had been a great desideratum till accomplished by Mr. Field in madder-lake, namely, to obtain the brightest permanent red quite free from any bias to yellow. Now this being effected in the brightest madder-lake, which has rather a bias to purple, renders it very valuable for mixing with blues, by which a brighter permanent purple is obtained than formerly. Therefore, in my note in Vol. XLVI. I said it was not quite equal to the best madder, but I should have added, for this particular purpose; for since writing that, I have found it to be as much superior to madder for an orange tint, as madder is for a purple, rendering the two lakes quite equal and equally to be desired, as neither of them is a substitute for the other. Being desirous of obtaining the brightest possible glow, for representing a sunset in water colours, which is generally done by mixing red and yellow, I took all the reds and yellows I possessed, to try which mixture destroyed the least light and could be laid the clearest; the result was, that the golden coloured chromer with Mr. Green’s lake gave the brightest colour, and may be said quite clear; thus rendering it every way as much to be desired in the market as the madder was formerly.”