

lay at one of the wharves alongside of piles of lumber. This was associated with other vessels. In a shipyard above the bridge another barque was on the stocks. This shipyard is a place of Geological interest. The ship stands on one of the outcrops of fossiliferous rocks already referred to. Its numerous churches and elegant houses are worthy of notice. A great charm is the prevalence of ancient and noble oaks, and great, beautiful and productive cherry orchards. The last was an important element in the pleasure of our visit. It was cherry time—there was bustle in cherry picking for export, and local enjoyment. The following Sunday was "Cherry Sunday." Visitors from distant towns and villages were expected to aid the robins, who were remarkably numerous and busy in enjoying and disposing of the cherries. Bear River is evidently a paradise for robin.

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ART. II.—GEOLOGICAL WAIFS FROM THE MAGDALEN ISLANDS.—BY  
REV. D. HONEYMAN, D. C. L.

THESE islands are situate in the Gulf of St. Lawrence, between long.  $61^{\circ} 23'$  and long.  $62^{\circ}$ , and lat.  $47^{\circ} 13'$  and lat.  $47^{\circ} 52'$ .

They have a trend N. 45 E., S. 45 W, corresponding with that of Nova Scotia and Cape Breton.

Amherst islands, Grindstone island, Entry island and Allright island, the south-west islands of the group, are all peculiarly elevated according to the Admiralty charts.

In Logan's Geological Map of Canada the formation of the island is indicated as Lower Carboniferous.

My attention has been specially directed to the geology of the Magdalen islands, by specimens brought from time to time to the Provincial Museum.

1.—I received, three or four years ago, two pretty large specimens of Manganese ore, Pyrolusite, from Mr. William Johnstone, of Halifax. These are identical in character with our specimens from the Lower Carboniferous Limestone of Hants, N. S., Teny Cape, N. S., and North River, Colchester, &c. From these I was led to infer the existence of Lower Carboniferous Limestones in the Magdalen islands, having Manganese.

2.—Specimens of Gypsum were subsequently received from Mr. John Boak, of Halifax. These are of character and quality identical with the Nova Scotia Lower Carboniferous Gypsums.

3.—Lately other specimens were received from Mr. John Tucker, of San Francisco. There are, first, a specimen of coarse agate, with cavities containing quartz crystals. Second, three beautiful jasper specimens, blood red, green and yellow.

These are all from Grindstone island; and are evidently trap minerals.

From these observations we are led to infer that the Magdalen islands are of some geological importance, and its minerals of possible economic value.

Their geology appears to indicate the existence of an enormous submerged area of Carboniferous strata lying between Gaspé, Canada, and Port au Port, of Newfoundland, extending to Cape Breton, Nova Scotia and New Brunswick.

On a part of this Prince Edward Island's Triassic Sandstones seem to rest.

Mr. Fox, the collector of customs, who has been a resident of the island for twenty years, informs us that the elevation of Amherst island, Grindstone island and Entry island is from five hundred to six hundred feet; that trap is prevalent, on these islands, that one of the specimens is undoubtedly derived from this.

The first looks like a specimen found in situ; the others may be transported boulders.

The Jasper pebbles are identical with some that I received about six years ago, with beautiful agate pebbles, from Gaspé bay, which lies to the N. E. of Grindstone island.

The Gaspé pebbles are thus referred to in Logan's *Geology of Canada*, 1863, page 404.

"Associated with these are others (pebbles) of agate and of red, yellow and green Jaspers, often brilliant in colour, which have probably been derived from the Conglomerates of the Gaspé Sandstones. These Jaspers and agates are known among collectors as 'Gaspé pebbles.'" Of course the conglomerates in this case can only be regarded as the secondary source of the 'Gaspé

pebbles,' just as the Carboniferous Conglomerates of the Cobequid mountains in Nova Scotia are the obvious secondary source of many of the rounded boulders and pebbles of Syenite, Diorite and Porphyries which are found in our post pliocene drift.

The Jasper pebbles are supposed to come from the post-pliocene, so that they may have come from Gaspé.

Gypsum was once an article of export to Canada. It is not now exported; Nova Scotian Gypsum is preferred.

ART. III.—ON THE SEMI-ANNUAL MIGRATION OF SEA FOWL IN  
NOVA SCOTIA.—BY J. BERNARD GILPIN, A. B., M. D.,  
M. R. C. S.

(*Read March 15, 1880.*)

IN this paper I wish to call the attention of the Institute to that part of the great semi-annual migration of sea fowl which passes the whole eastern coast of North America, belonging to the coasts of Nova Scotia; of the separate genera and species of which it is composed; of the monthly periods of their passing; and of the modifications both in time, in frequency and in species, which advancing civilization has produced. From the earliest writers and voyagers, not only along the New England coasts, but also of our own Province, we notice mention of these migrations, and are amazed by their numbers, darkening the air and blackening the shores along which they passed. With no enemy save those natural ones, which the economy of nature always provides, they passed north and south without fear or molestation. For the last three hundred years, an advancing population at almost every point on their passage, from Labrador to Florida, has thinned their numbers, altered their route, and perhaps, in one or two instances, changed their route entirely, or destroyed a species. The small part which the shores of our Province of Nova Scotia take in these migrations, or indeed the still smaller part that has come beneath my own personal observation, aided by one or two friends, will be the subject of this paper.

List of water fowl and sea fowl personally noticed in Nova