

been enormous and may account to a great extent for the diminished height of the Island. At the same time I think we are justified in concluding, that while the Island has traversed a certain portion of this distance, its changed position as here indicated by those admiralty surveys, is mostly due to submergence.

Of course an Island so constituted, exposed to the unobstructed violence of the whole Atlantic, could not long resist the terrible abrading force of the breakers, aided by swift currents, and the denuding effects of wind and rain.

Already we have seen that within a comparatively short space of time, dating back but a few years previous to the founding of the life saving station, it has decreased in length from 40 miles to 22; in breadth from $2\frac{1}{2}$ miles to something less than 1 mile; in height from 200 feet given in 1808 to 80 feet, according to the latest observations.

The future of this Island to the navigator is everything but cheering. Should those destructive forces now in operation continue, we might easily calculate on a period, and not a remote one, when the sea will claim it as its own.

ART. VI.—GLACIAL ACTION, AT RIMOUSKI, CANADA, AND LOCH ECK, ARGYLESIRE, SCOTLAND. BY REV. D. HONEYMAN, D. C. L., F. S. A., &c., *Curator of Provincial Museum.*

(Read. 10th March 1884.)

ON the 3rd of last November I made an observation near the I. C. R. Station at Rimouski, which I regard as interesting. On both sides of the Road I found and examined boulders, many of which were of large size; one had been blasted to make way for a fence. Others were evidently undisturbed, being, doubtless, in the positions in which they had been deposited during the glacial epoch. They are of crystalline rocks, of the Archæan (Laurentian,) formation. There are no exposures of rocks in the vicinity

From what I have seen of the rocks in the district I have no hesitation in regarding the boulders as travellers from a distance. The Laurentian Formation lies on the north side of the river (St. Lawrence,) at a distance of 20 miles from the position of the boulders. They have travelled a distance, of at least 27 miles. Specimens of the boulders before you are, first, a beautifully banded gneiss having black mica (muscovite) and white quartz; second, also beautifully banded having black mica and reddish quartz; third, is of black mica and yellowish quartz; it is also banded but not so beautifully as the other two. On two other occasions I was in this locality, but without time to make any observations. The transportation observed was not unexpected. In Sir W. E. Logan's table on glaciation, I found that at Kempt Road near Metapedia Lake, Lat. $48^{\circ} 32'$, Long. $67^{\circ} 43'$, there is glaciation having a course of S. 80° E. On the admiralty chart I had also observed that the glaciation of Point Pleasant extended N. E. passes through Rimouski at a distance of 310 miles. The longitude of Rimouski is $68^{\circ} 32'$, and the latitude is $48^{\circ} 28'$.

The striation at Metapedia Lake, if extended in the direction of Rimouski would pass considerably to the north of the boulders, as the latitude of the one is 6' north of the latitude of the other, and the longitude 49' less. In my last paper on Glacial Transportation I observed that the extreme points of my observations were George's Bay, Antigonish, N. S., Long. 62° , and Kingston, Ontario, Long. $76^{\circ} 29'$. Two other extreme points are Halifax, N. S., latitude, $44^{\circ} 44'$, lat. $48^{\circ} 22'$, and Rimouski, Quebec.

LOCH ECK, ARGYLESHIRE, SCOTLAND.

In the month of July I had an opportunity of making some geological observations in the West of Scotland, especially in a corner of Argyleshire, at the Firth of the Clyde and Loch Long. My headquarters there were Blairmore. On the shore are interesting exposures of strata which are evidently near the Geological horizon of our own Cambro-Silurian formation. These are b^1 , b^2 , b^3 , b^4 , Silurian, Clay, Chlorite, Mica, Slate, and Gneissose rocks, based on quartzose, flagstones, quartz rock, &c. Vide Murchison & Geikie's First Sketch of a New Geological Map of Scotland, 1861. From Blairmore I proceeded to Kilmun, thus passing

farther along b^3 . Then taking a course N. E., towards Loch Eck, I passed through b^c and into b^4 , going beyond Ben More, at the beginning of Loch Eck my attention was attracted to a rock on the right side of the road. This was furrowed by familiar glaciation, unfortunately I did not have my compass to take the course of the striation. It was apparently towards the S. E. The rock itself is a micaceous schist. We followed the course of the River Echaig, as far as its falls. The water was low at the time and gave an excellent opportunity of examining the magnificent exposure of schist. It is wonderfully worn and excavated by the action of the water, which passes through a narrow gorge. The rock is replete with pot holes, some have had sides worn and the boulders have escaped. Looking at the lofty hill ridges on either side of the valley, and beyond the falls, one is impressed with the adaptation of the position for an Alpine glacier. Of course other geologists have noticed this, although I have failed, on enquiry, of learning the fact.

ART. VII—NOTES OF A POLARISCOPIIC AND MICROSCOPIC EXAMINATION OF CRYSTALLINE ROCKS OF NOVA SCOTIA AND CAPE BRETON. BY REV. D. HONEYMAN, D. C. L., F. R. S. C.

(Read 11th Feb. 1884.)

INTRODUCTION.

1. Basalt.....of Blomidon, N. S.
2. (boulder).....Weymouth.
3. Basalt.....Jebogue Point, Yarmouth.
4. Diorite.....St. Peter's Canal, Cape Breton.
5. Diorite.....Cranberry Head.
6. Diorite.....Nictaux.
7. Diorite.....Cobequid Mountains.
8. Porphyrite.....Sunday Point, Yarmouth.
9. Porphyritic & Amygdaloidal..Cobequid Mountains.
10. Porphyrite.....Cobequid Mountains.
11. Hornblendic rock.....Yarmouth Harbour.