GEN. XXXVIII.—PYRENULA (*Arch., Nœgke, Nepp. Tuck.*)

103. *P. punctiformis* (*Ach.*), *Neg.* On the bark of maple trees, N. Dal., P.

104. *P. glabrata* (*Ach.*) *Mass.* On the bark of the birch, N.)al., P.

ART. XI.—NOTES ON THE GEOLOGY OF POINT PLEASANT.

BY A. CAMERON.

FORMATIONS.

The formations described in these notes may be stated thus:

I. Cambrian Metamorphic, belonging to the great gold formation of Nova Scotia.

II. Post Pliocene, or glacial drift.

ROCKS.

I. *Cambrian Metamorphic.* The rocks of this series are slates, which extend over the whole peninsula.

The first exposure we notice is at the old "Lime Kiln," Pleasant Street. In this we note the following points:—

1. Lines of bedding.
2. Slaty cleavage.
3. Jointed structure, result of metamorphism.
4. That the dip is to the south, and the strike approximately east and west.

In the shore exposure of the bank below the old three gun battery we find the most interesting exposure of the series. Before we reach this the strata dip regularly to the south, but here we find the strata much disturbed, and just a little to the south we find the synclinal axis, with strata having northerly and southerly dips, the argillite strata in the middle being bent, the lines of strata being shown by a number of parabolic curves. Proceeding farther to the south we find the series dipping regularly to the north.

LIFE OF PERIOD.

No remains of life have been found in these rocks. On "Black

Rock" are marks, supposed to have been made by Annelids, [illegible]. The tracks are called Helminthites.

GLACIAL DRIFT.

The most interesting subject connected with the geology of this district is the glacial drift. There is a beautiful example of striation in rear of Prince of Wales' Tower. The lines are distinctly marked and remarkably uniform in direction. The average course of a number measured is S. 20 ° E. A very few have a different course, S. 35 ° E.

COURSE OF STRIATION.

That the direction was from north to south may be inferred in the following way:

We notice several deep grooves which abruptly break into small ones. These keep the same course as the larger ones. Now it is much more likely that the "graver" was broken and formed a uniform large one. Hence we infer that the course was from the larger towards the smaller grooves.

Following the course of striation we reach the shore near the N. W. A. Battery, and proceed to examine the bank below the old fort. One of the most interesting objects to be seen here is a large quartzite boulder, a scarred veteran, of the glacial drift, bearing the marks of the difficulties it has gone through, on its face. That it has been moved over another stone surface can easily be seen. We see on it a sharp edge that has been produced by being rubbed first one side and then the other on another surface. The lines of abrasion are quite distinct. The boulder weighs over half a ton.

DRIFT ROCKS.

The drift rocks collected here include Gneises, Granites, Sijenites, Diorites, Quartzites, Porphyries, Schists and Amygdaloids. The region they have come from is the shores of the Bay of Fundy. The magnetic course of striation, as we have have seen, is S. 20 ° E., which added to 20 ° var. gives a direction of 40 ° from the true meridian, This just grazes Blomidon. They have come from here or from some point on the shore of Cobequid Bay and in the Cobequids as far east as Economy Point, the

Londonderry Iron Mines and I. C. Railway at Blomidon and in the Cobequids we find the rocks *in situ*.

Art. XII.—Notes on the Geology of Bedford, Sackville and Hammond's Plains. By Alfred Hare.

Read May 9, 1881.

During the course of the last Session, I have been engaged in an examination of the rocks of Bedford, Sackville, and Hammond's Plains, on the days that were not class days. I found three formations, namely Archæan, Cambrian and Pleistocene.

1. Archæan.

The Archæan or what is believed to be Archæan, extends from the Birch cove lakes westward, crossing the Margaret's Bay road about three quarters of a mile below Pulsifer's and continues to below Wright's lake, westward to Saint Margaret's Bay. I have not followed it any further. The granite appears to be unstratified. It is very feldspathic ; some of the crystals of feldspar are very large, so that we are quite safe in calling it porphyrytic. I have only traced it so far as Indian River, but it appears to extend much farther.

This formation also extends north-west of Halifax; Pockwock lake being about the most northerly point.

2. (*a*) Cambrian.

This formation includes the gneissoid rocks, quartzites and argillites, it runs close up to the archæan. The gneissoid rocks are the only ones that touch the archæan in this part of the county. It contains *pyrite* in such quantities as to colour the soil in some places where there is a wash from the hills. At this season of the year it forms quite a deposit of iron oxide, so much so as to induce some to search for iron beds north of the gneissoid rocks, the argillites come in and continue much farther north than I have examined ; next to the gneissoid rocks the