

by reason of the copious showers of honey-dew which were ejected. Sidewalks and seats beneath such trees were made both unsightly and disgusting. Later, the trees themselves took on a dirty black appearance from the copious growth of the fungus *Fumago salicina*, which always develops under similar conditions.

Another attack which requires mention was by a large and previously undescribed Aphid, the Destructive Pea-louse, which not only did considerable harm to Sweet Peas in Gardens at Ottawa, but was a most serious pest to crops of Field Peas in many parts of the Dominion as well as in the United States. This insect has been named *Nectarophora destructor* by Prof. Johnson of College Park, Md. Several species of its enemies were collected in the field or bred from Ottawa individuals. Among these the following have been identified: *Praon cerasaphis*, *Aphidins Fletcheri*, Ashmead (N. sp.); *Syrphus ribessii*, *Coccinella 9-notata*, and *C. transversoguttata*.

In conclusion, the Leaders again invite all interested in the study of insects to make the fullest use of them during the season 1900, whether they should be re-appointed as Leaders or not.

W. H. HARRINGTON, }
JAMES FLETCHER, } *Leaders.*

REVIEWS.

REPORT ON THE GEOLOGY AND NATURAL RESOURCES OF THE AREA INCLUDED BY THE NIPISSING AND TEMISCAMING MAP SHEETS, COMPRISING PORTIONS OF THE DISTRICT OF NIPISSING, ONTARIO, AND OF THE COUNTY OF PONTIAC, QUEBEC. By Alfred Ernest Barlow, M.A. Geological Survey of Canada, Pt. I, Annual Report, Vol. X, 1899, p. 302.

This report, accompanied by two well executed maps on a scale of four miles to the inch and covering an area of 6912 square miles of the northern protaxis of the Dominion of Canada, is a valuable addition to the literature of the pre-Cambrian of North America, and is a further instalment of the work which is being systematically carried forward by the Dominion Geological Survey

on these older rocks. The two maps, constituting what are known as sheets Nos. 131 and 138 of the Canadian Series, lie in the Upper Ottawa district along the border of the two provinces of Quebec and Ontario, and comprise portions of both. Lake Nipissing and Lakes Temagami, Temiscaming and Keepawa, as well as many smaller bodies of water, are included in the area, and afford along their shores especially good opportunities for the prosecution of geological work.

After presenting a general account of the early explorations in this region, some of which date back almost to the time of the earliest settlement of the country by the French, and of previous surveys, the physical features of the country are described. The area is a great uneven or gently undulating rocky plateau, sloping somewhat to the east and northeast, having a general elevation of of 900 to 1200 feet above sea-level, the level being so nearly uniform that hills 50 to 100 feet higher are conspicuous topographical features. This peneplain is traversed in a north and south direction along one line of a very deep and rocky gorge, in which lie Lake Temiscaming and the Ottawa River. The hills, or cliffs, rise to a height of 400 to 600 feet from the water on either side, while the water of the lake is 400 feet deep, the bottom of the gorge being filled with a fine silt. The depression is thus 1000 feet deep and represents a great canon similar to those which are found on the margin of the northern protaxis at so many other points. Several smaller rivers also occupy similar depressions. "The detailed examination of the region, however, amply demonstrates that the sculpturing to which the surface owes its present configuration was practically completed long before the advent of the glacial epoch, and that the main valleys, especially those of the Ottawa and Mattawa rivers, were in existence long prior to the deposition of the Palæozoic sediments." With the exception of some comparatively small areas occupied by Palæozoic outliers, ranging in age from Black River to Niagara, the district is underlain by rocks of Laurentian and Huronian age. The Laurentian, with the exception of a few small occurrences, is represented exclusively by the Fundamental Gneiss, a mass of granitic and dioritic rocks, usually possessing a foliated structure in which are many streaks, bands or inclusions of basic character, allied to

diorites or diabases in composition and representing either basic segregations from the granitic magma or portions of basic intrusions caught up in it. This Fundamental Gneiss, it is believed, probably represents the original crust of the earth which has undergone successive fusions and re-cementations before reaching its present condition. In placing these rocks at the base of the series it is not intended to assert that they stand for any distinct or prolonged period of geological time, nor to affirm that these rocks in their present condition and with the foliation which they now possess antedate those of the Huronian system. This, as is shown, is not the case in many, or even probably in most, instances.

The chemical and mineralogical composition of the gneisses, as well as the character and origin of their foliation and the genetic relation of their associated pegmatites, are considered at length and many interesting facts brought forward which cannot here be further discussed.

The Grenville Series, so extensively developed further south, in this northern area represented only by a very small and unimportant occurrences of highly crystalline limestone and a single occurrence of gneiss. They occur isolated from one another and surrounded by Fundamental Gneiss on every side, and are referred to the Grenville Series on account of their identity in petrographical character with the areas of this formation immediately to the south.

The district also includes large tracts of country underlain by pyroclastic and epiclastic rocks, forming a northeasterly extension of the development of the "typical" Huronian area on the north shore of Lake Huron. At one place on Lake Temiscaming, these Huronian rocks are found resting upon the floor of Fundamental Gneiss on which they were originally deposited, and of whose detritus they are made up; everywhere else the Fundamental Gneiss has been re-fused or softened and penetrates the superincumbent Huronian. The total thickness of the Huronian in the area is about eighteen hundred feet, made up as follows:

1. Breccia Conglomerate, 600 feet.
2. Shales and slaty greywackes, 100 feet.
3. Quartzose grit or Arkose, 1100 feet.

Associated with these Huronian sediments are numerous intrusions of

gabbro and diabase, some of which pass over gradually into flesh-red granites, representing, it is believed, portions of one and the same magma.

No attempt is made in this report to correlate the Grenville Series and the Huronian of the area, as the facts are insufficient to warrant the attempt. And it may be remarked incidentally in this connection that a statement made on page 415 of the current volume of the *Journal of Geology*, in reviewing some other recent papers on the Canadian pre-Cambrian, is scarcely correct. The statement is as follows :

“The succession and correlation proposed in the above papers by Adams and Barlow and by Ells are fundamentally different from the traditional one which has been held in Canada for many years. The first departure is in placing the Grenville and Hastings Series as equivalent to the Huronian.”

In the papers in question this correlation was not definitely made, but it was stated in reference to the Hastings Series that “Both lithologically and stratigraphically the rocks bear a striking resemblance to the rocks mapped as Huronian in the region to the north and northeast of Lake Huron, and it seems very likely that the identity of the two series may eventually be established. The two areas, however, are rather widely separated geographically and the greatest care will have to be exercised in attempting such a correlation.”*

The further statement made by the Reviewer that “Ells places with the Huronian all the sedimentary rocks of Eastern Canada” is also manifestly inaccurate, seeing that while it might terminate the controversy concerning the upward extension of the Huronian to include in that system the whole Palæozoic succession, Ells certainly did not advocate this course.

The Palæozoic outliers in this area, and especially that of the Niagara age, are of exceptional interest. Geographically this outlying patch of Niagara is so widely separated from any other locality where rocks of this age are known to exist, that it has been a question as to whether it was formerly connected with the occurrences about Hudson Bay or with those about Lake Ontario.

**American Journal of Science*, Vol. III, March, 1897, p. 177.

The strata are highly fossiliferous and the palæontological evidence presented seems to prove that the seas in which the Niagara sediments of the Winnipeg basin and of Hudson Bay were deposited were practically continuous, while both were separated from the Temiscaming basin and the region to the south west.

The Pleistocene history of the region seems to consist of a period of glaciation by a great ice sheet followed by profound submergence, during which time the ocean invaded a large portion of the Ottawa Valley forming a marine gulf rivalling in extent the similar invasions of the sea in Palæozoic times. The direction of motion of the ice varies from S. 7° W. to S. 18° W.

The report also contains much information concerning the fauna, flora and timber resources of the district, and has appendixes giving lists of elevations and catalogues of the Palæozoic fossils.

F. D. ADAMS.

CANADIAN GEOLOGICAL NOMENCLATURE. By Dr. R. W. Ells.
Trans. Roy. Soc. Can., Vol. V, 2nd Ser., Sec. IV, pp. 3—38.

In this important contribution to the Science of Geology, Dr. Ells, as president of Section IV of the Royal Society of Canada, discusses the problems still existing in Canadian geology, the new names added to the geological nomenclature of Canada, the history and development of the present classification employed in this country, followed by a discussion of the nomenclature in "the Great Archæan Complex with its vast series of overlying palæozoic sediments reaching upward in the geological scale to the Triassic formations" included in that portion of Canada, east of the Red River of Manitoba. Dr. Ells indicates clearly the various terms used in Nova Scotia and New Brunswick as well as in Ontario and Quebec.

It may not be deemed out of place here however to point out that, for instance, such names as "Dadoxylon sandstone," "Cordaile shales" and "Mispec group," as applied to the Devonian formations, are not, in the strict acceptance of the word, for-



Adams, Frank Dawson. 1900. "Report on the Geology and Natural Resources of the Area Included by the Nipissing and Temiscaming Map Sheets, Comprising Portions of the District of Nipissing, Ontario, and of the County of Pontiac, Quebec, by Alfred Ernest Barlow [Review]." *The Ottawa naturalist* 13(10), 247–251.

View This Item Online: <https://www.biodiversitylibrary.org/item/28930>

Permalink: <https://www.biodiversitylibrary.org/partpdf/370020>

Holding Institution

MBLWHOI Library

Sponsored by

MBLWHOI Library

Copyright & Reuse

Copyright Status: NOT_IN_COPYRIGHT

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.