

PROCEEDINGS

OF THE

Nova-Scotian Institute of Natural Science.

VOLUME II. PART 3.

ANNIVERSARY MEETING, OCT. 12. 1864.

IN accordance with the Rules of the Institute, the Anniversary Meeting, of which due notice had been previously given to all the members, was held on Wednesday, Oct. 12, 1864, when the following gentlemen were elected by ballot, to fill the various offices for the ensuing year:—

President.—J. M. JONES, F. L. S.

Vice-Presidents.—Capt. HARDY, R. A., Dr. B. GILPIN, M. D.

Treasurer.—Capt. LYTTLETON.

Secretary.—WM. GOSSIP.

Assistant Secretary.—A. S. FINNIE.

Council.—Dr. DEWOLF, Professor LAWSON, Dalhousie College, Colonel MYERS, W. C. SILVER, J. H. DUVAR, P. S. HAMILTON, JOS. BELL, Lieut. DEANE, 17th Regiment.

Mr. C. E. BROWN, proposed at a previous meeting, was duly elected a member of the Institute.

It was *Resolved*,—That any gentleman duly elected a member of the Institute, and desirous of becoming a Life Member, may be admitted as such on payment of————.

[At a meeting of Council, Oct. 24, it was *Resolved*,—That the blank be filled with *Five Pounds*.]

ORDINARY MEETING, NOV. 7, 1864.

Capt. KING, R. A., proposed at a previous meeting, was duly elected a member of the Institute.

Dr. B. GILPIN read a paper on a species of *Salmo*, found in some of the Lakes of this Province. (*See Transactions*.)

Conversation ensued relative to the habits of the *Salmo* family. It was stated that they assume, in a greater or less degree, the prevailing colour of

the locality they frequent. The difference in colour between the fish of warm climates and those of northern or temperate waters, was noted—the tints of the former being warm and bright—the latter generally sombre and subdued; it was also remarked that the colours of southern fish become modified when, as is sometimes the case, they travel northward. The species described by Dr. GILPIN were stated to weigh about 3 lbs. full grown, but they have been taken weighing 6 lbs. The opinion of the meeting was in favour of the fish being considered a new species. [This opinion has not been sustained on further enquiry and research.]

Dr. GILPIN read a paper—"On some of the Mammals of Nova Scotia"—being a continuation of papers under his name, in the published Transactions of the Institute. The paper described the *Condylura cristata*; also the only two species of Bat known to exist in Nova Scotia—*Vespertilio subulatus*, and *V. pruinus*. (See Transactions.)

In the conversation on these subjects, some doubts were expressed as to the *Condylura cristata* being the only species of mole in Nova Scotia. It was stated that *V. pruinus* was found occasionally, but rarely, in Canada,—that one had been taken in Bermuda, brought from other parts in the sail of a ship,—that a similar instance had occurred, of one being found in the sail of a ship belonging to Mr. West, lying at his wharf in this city, which had just arrived from the West Indies.

The President read some notes on the Great Auk, (*Alca impennis*), a very perfect skeleton of which was produced. It had been procured through the kindness of the Bishop of Newfoundland, (the Right Rev. Dr. FIELD,) from the Funk Islands off that coast, and was one of the only two specimens that remained of the bird, which like the Dodo had become extinct. (See Appendix.)

Various speculations were hazarded on the causes which may have led to the extinction of the Great Auk, once so numerous on the coast of Newfoundland and adjacent islands—the principal of which was supposed to be the destructive agency of man. Some doubt was also expressed as to the total extinction of the species.

ORDINARY MEETING, DEC. 5, 1864.

A note was received from His Excellency the Lieut. Governor, PATRON of the Institute, regretting his inability to be present, owing to previous engagements.

Professor JOHNSON, of Dalhousie College, proposed at a previous meeting, was duly elected a member of the Institute.

Lieut. WEBBER, R. A., proposed at a previous meeting, was duly elected a member of the Institute.

Dr. B. GILPIN read a communication from the Essex Institute, Mass., calling attention to a proposal to publish a Naturalist's Directory. It was accompanied by a blank form to be filled up with Naturalists' names, and their special departments of study. [The publication has since been received, and is a very useful book of reference.]

Dr. B. GILPIN read the following letter from Dr. DAWSON, Principal of McGill College, Montreal:—

NOTE on a Species of *Gemellaria* from Sable Island.

Among some specimens from the above locality collected by Mr. J. R. WILLIS, and kindly sent to me by that gentleman, is a large tuft of a *Gemellaria*, which I regard as new. In Busk's Catalogue of the Polyzoa in the British Museum, only one species is noticed, *G. loriculata*. Dr. Stimpson* has described a second from the Bay of Fundy, under the name *G. dumosa*; but Mr. WILLIS's specimen differs from both. I have therefore prepared a detailed description of it, and desire to dedicate it to Mr. WILLIS, its discoverer, as a testimony of my appreciation of his services in the investigation of the Marine Zoology of Nova Scotia.

GEMELLARIA WILLISII, S. N.

General Appearance.—Coenæcium branching in dense tufts from a stout stem (attached to a sea-weed). Height of largest specimen, 2½ inches. Fibres flexible, but somewhat brittle; membranous in texture, but effervescing strongly with an acid and leaving a very delicate membranous skeleton. Colour brownish white or light fawn.

Microscopic Characters.—Pairs of cells seen in profile have at top and bottom a breadth of about one-fifth their length. From the top they increase in width to the base of the aperture, which is a little above the middle of the cells, where the breadth is equal to about one-third of the length, decreasing regularly toward the base. Single cells seen in front are broadest at the top, where the aperture occupies nearly the whole breadth. Aperture oval-ovate, covered with a flat membrane having a semi-circular slit at top. In branching, the highest pair of cells give off from their sides a pair of branches, and usually also one or two stems from their upper ends. This gives to the Coenæcium a densely tufted character.

The species differs from *G. loriculata* of Britain in its narrower and less inflated cells and longer apertures, and in its more dense habit of growth, arising from the mode of branching above indicated. It differs from *G. dumosa* of the Bay of Fundy, in so far as can be ascertained from the short description of that species, in the form of the aperture.

In my collections from Nova Scotia I have only the following additional species of *Polyzoa*, all of them found also in the Gulf of St. Lawrence:—

Membrampora pilosa,
Lepratia armulosa,
L. trispinosa,

Lepratia pertura,
L. variolosa.

This very short list might no doubt be largely increased by a little attention to the subject, and these curious and beautiful little organisms are well worthy of the notice of collectors, especially of those who take an interest in microscopic objects.

J. W. DAWSON.

Capt. HARDY read a paper on Provincial Acclimatization. (*See Transactions*.)

Professor LAWSON read a paper entitled—"Notice of the Occurrence of Heather (*Calluna vulgaris*) at St. Ann's, Cape Breton Island. (*See Transactions*.)"

In the after conversation it was stated by a gentleman present, that *native* heather had been found on the Halifax peninsula,—[which however is not sufficiently substantiated.] It is frequent in gardens as an exotic. Evidence was adduced to prove that it had been known in Newfoundland for a long period, and is generally supposed to be an indigenous plant. An opinion seemed to prevail however, that the instances remarked upon, of its being found in Massachusetts, Cape Breton, or on the Halifax peninsula,

* Marine Invertebrata of Grand Manan.

may have been propagations from plants brought to those countries by emigrants.

Dr. LAWSON also made some observations on *Lemania*, an aquatic plant found in the United States, and more recently in Canada; and which he had also met with, adhering to stones, in the Sackville River, at the head of Bedford Basin. (*See Transactions.*)

ORDINARY MEETING, JAN. 9, 1865.

The President noticed the receipt of several donations since the last ordinary meeting, viz. :—

1. By Capt. HARDY. Vol. V. of the Natural History of the State of New York.

2. By Miss WILLIS. A Collection of Nova Scotia Ferns.

The President noticed the receipt of Letters, Transactions and Publications, as follows:—

1. A letter from the Smithsonian Institute, informing that the Nova Scotian Institute of Natural Science had been placed upon their List for exchange of publications.

2. From the Essex Institute, Salem, Mass., acknowledging receipt of Vols. I. and II. of Transactions of the Nova Scotian Institute, and sending their Proceedings in return.

3. From the Academy of Science, of St. Louis, Missouri, with Part I. Vol. II. of their Transactions, and notifying that the Nova Scotian Institute had been placed upon their exchange List.

4. From Sir W. Jardine. The Address of the President of the Dumfries and Galloway Natural History Society. Also.—The Transactions and Journal of the Proceedings of the Dumfriesshire and Galloway Natural History and Antiquarian Society.

5. From Dr. Dawson, Principal of McGill College, Montreal. A paper "On the Fossils of the genus *Rusophycus*."

6. From Thomas Belt, Esq. A paper on Lake Basins, and the evidence of glacial action in their excavation.

Mr. A. DOWNS read a paper on the Land Birds of Nova Scotia, describing sixty-one species, of which sixteen were warblers. He purposes a continuation of the subject. (*See Transactions.*)

Rev. J. AMBROSE, of St. Margaret's Bay, read a paper on the Natural History of St. Margaret's Bay—with especial reference to the Sea Birds that frequent its waters. (*See Transactions.*)

The President read a letter from Professor OWEN, relative to remains found in the Kitchen Midden at St. Margaret's Bay, explored by the Institute on one of their Field Excursions last summer, and described in the Appendix of Vol. II. P. II. of their Transactions. (*See Appendix.*)

Colonel SINCLAIR, proposed at a previous meeting, was duly elected a member of the Institute.

Mr. SANDFORD FLEMING, proposed at a previous meeting, was duly elected a member of the Institute.

ORDINARY MEETING, FEB. 6, 1865.

Mr. DUVAR read a paper entitled—"Contributions to the Game of Nova Scotia." (*See Transactions.*)

In the conversation the necessity was recognized that measures should be taken to preserve the Game of the country, all varieties of which were fast decreasing, owing to the wanton destruction of species on the one hand, and the absence of precautionary measures, especially with reference to the river fisheries, on the other. The introduction of foreign species likely to thrive in this climate, was also strongly advocated—of the feathered tribe especially, which would enliven our forests and farm yards with their presence and melody.

The Secretary read a paper sent by Mr. BELT, "On the Formation of Lake Basins by Ice action." (*See Transactions.*)

It was urged in after conversation on the subject, that the conformation of a country, independent of other causes, would be sufficient to account for the formation and direction of lakes and rivers; but that there was good evidence, especially on the Atlantic coast of Nova Scotia, that glacial action must have powerfully assisted their excavation there. The metamorphosed rocks at the bottom and on the shores of many of them, were worn smooth and covered with striæ, not by the action of the present waters or wintry ice, but by those of perhaps thousands of ages in the past; and the course of these Atlantic streams was generally in the direction of the glacial drift. Bedford Basin, at the head of Halifax Harbour, was instanced as perhaps partially formed by glacial erosion; and as probably a lake ere the icy pressure at the Narrows forced the barrier, and opened a communication with the sea. In connection with the subject, and in the course of explanation of lake phenomena, a centre of dispersion of erratics, commencing at the heights around Major's Lake, a few miles from Dartmouth, and spreading in a southerly direction towards Cole Harbour, was noticed.

ORDINARY MEETING, MARCH 6, 1865.

The President acknowledged a donation to the Institute by Lieutenant WEBBER, R. A., of a Geological Cabinet, containing specimens of minerals and fossils, including those of all formations from the Primary to the Tertiary inclusive.

The President read a paper sent by Professor How, of King's College, Windsor—"On some of the Brine Springs of Nova Scotia." (*See Transactions.*)

In the discussion that ensued, evidence was adduced of the occurrence of other mineral springs in various parts of the Province, and it was stated that the waters were used by the inhabitants in their neighbourhood for the purpose of curing various complaints. A sulphur spring at Cranberry Cove, Cole Harbour, was mentioned as situated near the site of a Kjoekken-moedding.

The Secretary read a paper "On the Antiquity of Man." (*See Transactions.*)

After the conclusion of the paper, some interesting remarks were made concerning the aboriginal inhabitants of Nova Scotia, who formed the Kjoekkenmoeddings of the coast, by which it appeared that the race was almost identical in their mode of life with those of the European coasts,—similar material being found in both; only the rude pottery of Europe differed somewhat in the colour of the clay of which it was made, from that found in Nova Scotia.

The President read a letter from Admiral Sir ALEXANDER MILNE, recently Naval Commander-in-Chief on this Station, communicating interesting information, the result of many years experience, on the extension of the Gulf Stream. (*See Appendix.*)

The Secretary reported, that in accordance with a Resolution of the Council of the Institute, he had forwarded to the Honble. the President of the Legislative Council, and to His Honor the Speaker of the House of Assembly, respectively, the invitation of the Institute to the members of both Branches of the Legislature to attend their ordinary meetings during the Legislative Session.

ORDINARY MEETING, APRIL 6, 1865.

Colonel MYERS read a paper entitled—“Notes on the Weather at Halifax, Nova Scotia, during 1864.” (*See Transactions.*)

During the discussion which followed the reading of this paper, the President read a letter from Professor HENRY, Secretary of the Smithsonian Institute, stating that the Institution would be glad to receive a daily telegram giving an account of the state of the weather, direction of wind, &c., at Halifax. It was the opinion of the meeting that such a request should be complied with, and the military authorities memorialized to allow such observations to be delivered to the Institute for transmission to the Smithsonian.

Dr. B. GILPIN read a paper—“On the Gaspereau” (*Alosa tyrannus*). (*See Transactions.*)

After the reading of Dr. Gilpin’s paper, some of the members made remarks upon the habits of this fish; and its rare custom of rising to a fly was placed beyond doubt by a gentleman present stating that he had caught one while trout fishing, with an artificial fly, last summer, on the Nine Mile River.

The Secretary read the following extract from a letter he had received from E. MARET, Esq., of St. John’s, Newfoundland, an Associate Member of the Institute:—

“ST. JOHN’S, March 21.

“I have not been able to do much in the way of investigation, but previous to leaving the west coast an arrow head of *flint* was given me by Mr. LeGallois, which he had just found in the course of one of his journeys. I have also obtained some handsome comb shells, as well as a very fine specimen of cockle.

“We have had a most extraordinary winter, exceedingly mild with occasional severe frosts. At present (March 21) there is scarcely any snow on the ground, an unusual thing for Newfoundland.

“Contrary to my former experience, I find that Frogs do exist in Newfoundland, and several colonies of them inhabit the ponds and lakes about St. John’s, though

whether introduced or indigenious, or whether the same as those of Nova Scotia, I cannot say. At all events they are not numerous.

“I also find that snails, similar to the common English snail, exist in certain localities.”

ORDINARY MEETING, MAY 1, 1865.

The PRESIDENT read a paper—“On the Reptiles of Nova Scotia”—illustrated by preserved specimens. (*See Transactions.*)

In the conversation that ensued, a doubt having been expressed with reference to the young of snakes passing for safety into the mouth of the mother, which had been stated of the *Coluber sirtalis*, a gentleman present (Mr. Nash) said that he had been a witness of the fact on more than one occasion, in the vicinity of Truro. He could not ascertain whether it was owing to inducement on the part of the parent, or instinct on that of the young. Nor had he ever seen the young snakes return from such a place of concealment or safety. [This statement by a gentleman of unquestionable veracity, may help to resolve the doubts of naturalists on the subject.]

The Secretary read a paper sent by Professor How, of King's College, Windsor, entitled—“Notes on the Economic Mineralogy of Nova Scotia.” It treats upon the Ores of Manganese and their uses. (*See Transactions.*)

An interesting conversation succeeded the reading of this paper. Mr. Nash, who is interested in the Teny Cape Manganese Mines, in Hants County, assented to the general correctness of the details which had been read, relative to that enterprise. He mentioned the occurrence of Manganese at other places,—at Wellington Mountain, Cape Breton,—also, at Falmouth, Hants County. He had been informed by Dr. Johnson that it occurred on or near to his land in Pictou. Mr. Nash stated that some hundreds of tons had been sold in Liverpool, England; and some also in Boston, where it is used for a particular purpose. The working had so far paid very well. He had in his possession Bog Manganese from Antigonishe, and some had been sent to him from Ship Harbour. He was firmly persuaded that the best Manganese the world could produce, was to be found in Nova Scotia.

The PRESIDENT made some appropriate observations upon the progress of the Institute, and its prospects for the future, and closed the ordinary meetings for the season. He also announced that a Field Meeting of the Institute would take place in each of the Summer and Autumn months until October next, when the Ordinary Meetings would be again resumed.

WILLIAM GOSSIP,

Secretary.