

P R O C E E D I N G S
OF THE
Nova-Scotian Institute of Natural Science.

VOLUME II. PART I.

ANNIVERSARY MEETING, OCTOBER, 3, 1866.

IN accordance with the Bye-Laws of the Institute, the Anniversary Meeting was held on Wednesday, October 3, 1866, at 8 p.m., when the following gentlemen were elected office bearers for the ensuing year:—

President.—J. M. JONES, F. L. S.

Vice-Presidents.—Lieut.-Col. C. HARDY, R. A., J. BERNARD GILPIN, M. D.

Treasurer.—Capt. LYTTLETON.

Secretary.—WILLIAM GOSSIP.

Council.—Colonel W. J. MYERS, F. M. S., J. R. DEWOLF, M. D., *Edin.*, JOS. BELL, J. H. DUVAR, W. C. SILVER, P. S. HAMILTON, Capt. KING, Royal Artillery, Professor LAWSON, L. L. D.

ORDINARY MEETING, NOV. 5, 1866.

J. M. JONES, *President, in the Chair.*

Dr. J. B. GILPIN, (*Vice-President*), exhibited a very carefully prepared drawing of a large sized specimen of the Brook Trout (*Salmo fontinalis*) in nuptial tint of bright vermilion beneath, and sides spotted of the same colour. The specimen from which the sketch was taken, had been procured at River Bank, Preston, by W. C. SILVER, Esq.

Dr. GILPIN next read a paper "*On Nova Scotian Mammals—Part 3,*" which treated of the *Mustelidæ* known to the Province. Several life-like drawings illustrating the figure and habits of the different species, accompanied the paper. (*See Transactions.*)

The PRESIDENT read a paper by EDGCUMB CHEVALLIER, Esq., of H. M. Naval Yard, Pembroke, entitled, "*Suggestions on the importance of continuous Meteorological Observations.*" (*See Appendix.*)

Mr. J. D. NASH, exhibited a specimen of Sulphur Ore from Cape Breton, the purity of which was tested and proved by experiments.

Mr. J. R. WILLIS exhibited two phials containing samples of chalky mud brought up by the lead from a depth of two miles, during the sounding process for the laying of the Atlantic Cable. The substance partook somewhat of the character of the Bermuda chalk mud, though of darker colour, and appeared to be perfectly free from siliceous matter.

ORDINARY MEETING, DEC. 3, 1866.

J. M. JONES, *President, in the Chair.*

Lieut.-Col. HARDY, R. A., read a paper "*On the Beaver in Nova Scotia.*" (*See Transactions.*) A model of a beaver house and drawings of beaver dams, tended to illustrate this very interesting paper. The model and drawings, at the request of the Nova Scotian Commissioners, were allowed by Colonel Hardy to form part of the collection forwarded by the Colony to the Paris Exhibition, where they attracted considerable attention.

A piece of wood of large diameter, cut through by Beavers, which had been procured in Shelburne Co., by R. G. HALIBURTON, Esq., F. S. A., was exhibited.

The Rev'd. D. HONEYMAN, F. G. S., read a paper "*On the Geology of Gay's River Gold Fields.*" (*See Transactions.*)

The PRESIDENT exhibited several species of Nova Scotian and Bermudian sponges, and explained the mode of growth of this interesting class, particularly those of the Bermudian waters.

ORDINARY MEETING, JAN. 7, 1867.

J. M. JONES, *President, in the Chair.*

The Rev'd. D. HONEYMAN, F. G. S., read a paper "*On the Geological Features of the Londonderry Iron Mines.*" (*See Transactions.*)

The conversation which followed the reading of this paper, had reference to the various kinds of iron ores found in Nova Scotia, and several localities were mentioned where they existed in large quantities.

Dr. How, Professor of Chemistry, King's College, Windsor, read a paper entitled, "*A Descriptive Catalogue of the Mineralogical Collection forwarded to the Paris Exhibition.*" (*See Transactions.*)

ORDINARY MEETING, FEB. 4, 1867.

Mr. P. S. HAMILTON, Chief Commissioner of Mines, read a paper "*On the Tides of the Bay of Fundy.*" (*See Transactions.*)

In the discussion which followed several members alluded to the gradual filling up of harbours and inlets by sand or alluvial mud, in different parts of the Province.

Professor LAWSON, of Dalhousie College, read a paper "*On the Trichina,*" and exhibited specimens of internal parasites. (*See Transactions.*)

A member instanced the case of the Porcupine of Nova Scotia, (*Hystrix dorsata*, Lin.) which he had opened and found to have its stomach filled with a large sized species of *Tænia*.

The PRESIDENT read a paper entitled "*A Fortnight in the Backwoods of Shelburne and Weymouth.*" (*See Transactions.*)

ORDINARY MEETING, MARCH 4, 1867.

J. M. JONES, *President, in the Chair.*

Colonel W. J. MYERS, F. M. S., read a paper entitled "*Notes on the Weather at Halifax, Nova Scotia, during 1866.*" (*See Transactions.*)

In the discussion which ensued, the PRESIDENT remarked the scarcity of some kinds of insects, particularly grasshoppers, during the past summer, and attributed the circumstance to the severity of the preceding winter. The various species of butterflies and moths which in ordinary seasons were generally abundant, had been extremely

rare. The different warblers and other insectivorous migratory birds had also been scarce.

Professor LAWSON had also noticed the absence of grasshoppers last summer, about his residence at Sackville, and stated that during the previous summer, (1865,) they were so numerous in one of his wheat fields that he had to put in a flock of turkeys to destroy the pests, which they did effectually.

Mr. W. C. SILVER considered that some other cause than that of severe cold, must have affected the insects, for in New Brunswick and Canada, where the cold was much greater than ours every year, the insects named were always abundant.

The SECRETARY, believed that severe cold might affect some insects more than others, and although many insects of various kinds had been killed during the last winter, some had evidently escaped, for his crop of beans, as well as those of others in the city, had been entirely destroyed by a species of small caterpillar.

The PRESIDENT in answer to Mr. SILVER'S query stated that he observed it was only in severe winters when little snow fell, that the great mortality amongst insects occurred. It was not so much the severe frost, as the absence of snow to cover the earth to a depth sufficient to protect from its influence the larvæ of certain species, that caused their destruction. In Canada and New Brunswick much more snow fell, and remained a longer time than in Nova Scotia, and therefore the insects, although the cold was much greater in the former Provinces, would have greater protection.

The Rev'd. JOHN AMBROSE, Rector of St. Margaret's Bay, read a paper entitled, "*Some Observations on the Fishing Grounds and Fish of St. Margaret's Bay.* (See *Transactions.*)

Several Members took part in the discussion which ensued, especial reference being made to the change of colour in fish, which colours were stated generally to harmonize with those of surrounding objects. They were considered by some to emanate from the nervous system. Allusion was also made to a kind of natural photography which took place at times when fish rested perfectly still, and the rays of the sun reflected some contiguous object upon their sides.

Capt. L'ESTRANGE, R. A., had observed that large animals, even such as the Cariboo (*Tarandus hastalis*, Lin.) partook at times of the colour of the rocks and ground they frequent; while at the Mauritius he had frequently noticed that the tropical fishes partook of the gaudy colours of the animal and vegetable habitants of the coral reefs.

Mr. W. C. SILVER had noticed that Brook Trout, when dying, would take the colour of the object on which they rested.

Mr. P. S. HAMILTON, (Chief Commissioner of Mines,) read a paper "*On supposed submerged Forests in Cumberland Basin.*"

Mr. CAMPBELL mentioned some interesting facts in connection with the locality reviewed by Mr. Hamilton, more especially referable to the glacial period.

VICE-PRESIDENT GILPIN stated that an extensive land slip took place several years ago, near Annapolis, which presented a similar appearance to those mentioned by Mr. Hamilton.

The SECRETARY considered that changes were evidently taking place on our Atlantic coast, for the Eastern Passage had of late years rapidly filled up with sand. So had Cole Harbour, but whether the land was being submerged, or the sea forcing fresh matter to the land, it was hard to say. Oysters, judging from the quantity of shells found in the *Kjōēkkenmoedding* on the shore, had been abundant in Cole Harbour in remote times, but for the last eighty years or more, not one had been known

about the place, which proved that some change must have taken place, rendering the shores unsuitable to the propagation of those mollusks.

Mr. W. D. O'BRIEN, who was introduced by Professor LAWSON, described his impression of animal life at high altitudes on European mountains, from which it appeared that an almost total absence of all kinds of animals, birds and insects, occurred above a certain height.

ORDINARY MEETING, APRIL 1, 1867.

J. M. JONES, *President, in the Chair.*

Mr. J. OUTRAM read a paper "*On Sugar, its chemical composition, combinations, and products.*"

After the reading of the paper, Dr. JENNINGS made some remarks upon the disease called Diabetes, in connection with the production of sugar in the human system.

VICE-PRESIDENT GILPIN read a paper "*On the Food Fishes of Nova Scotia.—No. IV.*" (*See Transactions.*)

ORDINARY MEETING, MAY 6, 1867.

J. B. GILPIN, *Vice-President, in the Chair.*

R. G. HALIBURTON, F. S. A., read a paper entitled "*Notes on the Pictou Coal Fields,*" which was accompanied by a chart of the district. (*See Transactions.*)