

PROCEEDINGS
OF THE
Nova Scotian Institute of Science

SESSION OF 1921-1922
(Vol. XV. Part 4)

60TH ANNUAL BUSINESS MEETING.

*Physiological Lecture Room, Dalhousie College, Carleton St.,
Halifax, 14th November, 1921.*

THE PRESIDENT, DR. JOHN CAMERON, in the chair. Other members present: PROF. C. B. NICKERSON, D. J. MATHESON, PROF. D. S. MCINTOSH, DR. A. H. MACKAY, DR. D. FRASER HARRIS, DR. S. G. RITCHIE, DR. H. L. BRONSON, DR. J. H. L. JOHNSTONE, P. R. COLPITT, DR. F. W. RYAN, E. W. TODD, DR. A. G. NICHOLLS, DR. J. A. DAWSON, H. PIERS, and others. The meeting was honoured by the presence of HIS HONOUR LIEUT.-GOVERNOR GRANT and a number of ladies.

THE PRESIDENT, DR. CAMERON, delivered a presidential address entitled "Our Present Knowledge regarding the Ancestry of Man." On motion of the Lieut.-Governor, a vote of thanks was presented to Dr. Cameron.

The general public then withdrew, and the members proceeded with the current business.

THE PRESIDENT referred to the loss the society had sustained during the past year, in the death of DR. GEORGE MURRAY CAMPBELL, on 12th December, 1920, and of WALTER HENRY PREST, on Christmas Day, 1920.

It was announced that ROBIE WILFRED TUFTS, of Wolfville, had been elected an associate member on 3rd October, and H. R. CHIPMAN, B. A., Dalhousie University, Halifax, an ordinary member on the same date.

The Treasurer, D. J. MATHESON, presented his financial report, dated 12th November, 1921, showing that the receipts were \$1,363.63, the expenditures \$54.99, and the balance in hand (in current account) \$1,308.64, while the balance at credit of the reserve fund was \$134.39, and the permanent endowment fund was \$1,500. It was pointed out that there was chargeable against the balance, the cost of printing the Transactions, vol. 15, pt. 1.—The report was received and adopted.

The Librarian's report was presented by MR. PIERS, showing that 1,199 books and pamphlets had been received through the exchange-list during the calendar year 1920. The total number of books and pamphlets received by the entire Provincial Science Library (with which that of the Institute is incorporated) for the same year was 1,507. The total number in the Science Library on 31st December, 1920, was 64,050. Of these, 47,048 belong to the Institute and 17,002 to the Science Library proper. 138 books were borrowed in 1920, besides many consulted in the Library. No binding or purchasing had been done by the Library directly, there being no money grant for that purpose for a number of years past.—The report was received and adopted.

It was resolved that DR. MACKAY and MR. PIERS be a committee, with power to add to their number, to interview the Government with the object of having a grant of money voted for the purchase of books and for the binding of parts of Transactions in the Provincial Science Library, which institution has been without a regular grant since 1907.

The following were elected officers for the ensuing year (1921-22):

President—PROF. JOHN CAMERON, M.D., D.Sc., F.R.S.E., *ex-officio* F.R.M.S.

First Vice-President—PROF. CARLETON BELL NICKERSON, M.A.

Second Vice-President—FREDERICK C. CHURCHILL (Wolfville).

Treasurer—DONALD J. MATHESON, B.Sc.

Corresponding Secretary—PROF. DONALD S. MCINTOSH, M.Sc.

Recording Secretary and Librarian—HARRY PIERS.

Councillors without office—A. H. MACKAY, LL.D., F.R.S.C.;

PROF. D. FRASER HARRIS, M.D., D.Sc., F.R.S.S.E.&C.;

E. CHESLEY ALLEN; STEPHEN G. RITCHIE, B.A., D.M.D.;
WILLIAM W. Woodbury, B.Sc., D.D.S.; PROF. HOWARD
L. BRONSON, Ph.D., F.R.S.C.; PROF. J. A. DAWSON, Ph.D.
Auditors—PARKER R. COLPITT; JOHN H. L. JOHNSTONE, Ph.D.,
M.B.E.

FIRST ORDINARY MEETING.

*Physiological Lecture Room, Dalhousie College, Carleton St.,
Halifax, 9th January, 1922.*

THE PRESIDENT, DR. CAMERON, in the chair.

It was reported that the following had been elected members on 1st December: H. HOPE BLOIS, principal of Bloomfield School, PROF. W. A. PECK, PROF. GEO. F. SLEGGs, DR. J. STANLEY BAGNALL, all of Dalhousie University; DR. FRANK WOODBURY, DR. ALDEN W. FAULKNER and DR. ALLAN R. CUNNINGHAM, all of Halifax.

DR. STEPHEN G. RITCHIE delivered a lecture on "Diffusion Experiments in Gelatine; with an introduction on Colloids," illustrated by lantern-slides. The subject was discussed by DR. BRONSON, PROF. NICKERSON, DR. HARRIS and DR. DAWSON.

POPULAR LECTURE.

*Physiological Lecture Room, Dalhousie College, Carleton St.,
Halifax, 23rd January, 1922.*

THE PRESIDENT, DR. CAMERON, in the chair. There were also present a large number of members and their friends.

PROF. A. G. NICHOLLS, M.D., D.Sc., F.R.S.C., delivered a popular lecture on "The Struggle for Life," illustrated by lantern-slides.

SECOND ORDINARY MEETING.

*Physiological Lecture Room, Dalhousie College, Carleton St.,
Halifax, 13th February, 1922.*

THE PRESIDENT, DR. CAMERON, in the chair.

It was reported that the following had been elected ordinary members on 9th January: E. R. HAMILTON, of N. S. Tramways and Power Company, and HAROLD LARNDER, W. J. JACKSON, H. W. McCURDY and PROF. HAROLD R. THEAKSTON, of Dalhousie University.

On motion it was resolved that the Institute learns with deep regret of the death of its member, DR. FRANK WOODBURY.

THE PRESIDENT, DR. CAMERON, delivered a lecture on "The Physical Characters of the Eskimo Skull," which was followed by one by DR. STEPHEN G. RITCHIE on "The Dentition of the Eskimo," illustrated by some twenty-four skulls obtained from the Mackenzie River and westward by the Arctic Expedition of 1913-18.—The subject was discussed by DR. BAGNALL, DR. RYAN, DR. MACKAY, MR. PIERS, PROF. COPP and DR. FRASER HARRIS.

POPULAR LECTURE.

*Room 19, Science Building, Dalhousie College, Studley, Halifax,
27th February, 1922.*

THE PRESIDENT, DR. CAMERON, in the chair, and a large number of members and their friends present.

It was reported that HORACE E. READ, B.A., Halifax, had been elected an ordinary member on 13th February.

PROF. JOHN H. L. JOHNSTONE, Ph.D., M.B.E., delivered a popular lecture on "The Smallest Things in Nature (the Atom, Electron and Proton)."

THIRD ORDINARY MEETING.

*Physiological Lecture Room, Dalhousie College, Carleton St.,
Halifax, 13th March, 1922.*

THE PRESIDENT, DR. CAMERON, in the chair.

FREDERICK W. CHURCHILL read a paper on "The Effects of Glaciation in the Vicinity of Wolfville, N. S." (See Transactions, p. 161.)

A paper by PROF. H. J. M. CREIGHTON, D.Sc., Swarthmore, Penn., U. S. A., on "A Relation Between the Fluidity and the Temperature of Liquids" was read by PROF. NICKERSON. (See Transactions, p. 165.)

POPULAR LECTURE.

*Physiological Lecture Room, Dalhousie College, Carleton Street,
Halifax, 27th March, 1922.*

THE PRESIDENT, DR. CAMERON, in the chair. A large number of members and their friends were present.

It was reported that the following had been elected ordinary members on 13th March: G. N. STULTZ, D.D.S., JOHN K. REDDEN, GEORGE A. CHUDLEIGH, D.D.S., GORDON R. HENNIGAR, D.D.S., F. W. DOBSON, D.D.S., ARABELLA MACKENZIE, D.D.S., and F. HUBERT DENTITH.

PROF. J. A. DAWSON, Ph.D., Dalhousie University, delivered a popular lecture on "Modern Aspects of Heredity," illustrated by lantern slides.

FOURTH ORDINARY MEETING.

*Physiological Lecture Room, Dalhousie College, Carleton St.,
Halifax, 10th April, 1922.*

THE PRESIDENT, DR. CAMERON, in the chair.

THE PRESIDENT read a paper on "The Skull of Fossil Man recently unearthed in South Africa, and its Bearing upon the Ancestry of Man." The subject was discussed by PROF. MCINTOSH, DR. FRASER HARRIS, MR. TODD, MR. PIERS, and DR. ARABELLA MACKENZIE.

POPULAR LECTURE.

*Room 2, Science Building, Dalhousie College, Studley,
Halifax, 28th April, 1922.*

THE PRESIDENT, DR. CAMERON, in the chair, and a large number of others also in attendance.

PROF. CARLETON BELL NICKERSON delivered a popular lecture on "Colour Photography," illustrated by lantern slides.

FIFTH ORDINARY MEETING.

*Physics Lecture Room, Science Building, Dalhousie College,
Studley, Halifax, 26th May, 1922.*

THE PRESIDENT, DR. CAMERON, in the chair.

The following papers were read by title:

1. Phenological Observations, Nova Scotia, for 1921. By A. H. MACKAY, LL.D., F.R.S.C. (See Transactions, p. 189.)
2. Diatoms of Nova Scotia collected about thirty years ago by DR. A. H. MACKAY, and named and distributed in slides by Tempere and Peragallo of Paris, 1907 to 1915. By A. H. MACKAY, LL.D., etc. (See Transactions, p. 175.)
3. List of a Small Collection of Ants obtained in Queen's County, N. S., by the late Walter H. Prest. By HARRY PIERS. (See Transactions, p. 169.)

 POPULAR LECTURES.

*Physics Lecture Room, Science Building, Dalhousie College
Studley, Halifax, 26th May, 1922.*

THE PRESIDENT, DR. CAMERON, in the chair, and a large number of others also present.

R. LETTS, of the Marconi Wireless Telegraph Company of Canada, delivered a popular lecture on "The Mechanism of the Wireless Telephone," followed by a practical demonstration of the transmission of music by wireless.

HARRY PIERS,

Recording Secretary.

OBITUARY NOTICE OF WALTER HENRY PREST, GEOLOGIST, 1856-1920.—By
H. PIERS.

By the death of Walter Henry Prest, which occurred at Halifax on Christmas Day, 1920, Nova Scotia lost an unassuming man who possessed native ability of the highest degree, and science a geologist of marked attainments.

Mr. Prest was born at Mooseland, Halifax County, N. S., about 1856. His opportunities for attending school were very slight. He did not receive regular instruction for more than a year or two, so that his learning was self-acquired. He possessed, however, an insatiable thirst for knowledge, which overcame all obstacles, so that by hard application he taught himself, while earning a living, and soon became a persistent and discriminating reader and a deep thinker—characteristics which he retained till the last.

When but a mere lad he worked in the Mooseland gold mines, and acquired an interest in geology which rapidly developed, and which became of service when he engaged in mining operations on his own account. At the age of about twelve years he made a compass survey of the district about his home, and mapped it. At that time he had no books on geology, and had to think out causes and effects for himself. A juvenile geological essay which he sent to the "Nova Scotian" newspaper, brought a highly appreciative note from the editor, and his regret that he could not publish it, as it was not in accord with theological beliefs.

As a youth he came to Halifax, and frequented the poorly-equipped Citizens' Free Library, which to him contained undreamed-of treasures. Then for some years, after about 1875, he engaged in prospecting and gold-mining, while adding to his knowledge at every opportunity.

During the summers of 1892 and 1893 he ably assisted Dr. L. W. Bailey in his survey of southwestern Nova Scotia, for the Geological Survey of Canada, and that gentleman gives the highest credit to Prest's knowledge of geology, prospecting and mining, and his enthusiasm and powers of endurance. His great zeal in this work for his country caused his health to break down. In 1901 he explored parts of the Labrador coast and collected plants there. In 1904 he was assistant to Mr. Faribault on the geological survey of Lunenburg County, and that geologist also refers to the especially valuable and useful nature of his services. During the intervening and later years he was engaged in land surveying and mining, and would make a survey in weather which would keep other men indoors. In 1914 he was employed in the Mines Office, Halifax, and prepared an excellent report on our metalliferous mines for the annual report of that department. For a time he was connected with the Crown Lands Office. During the Great War he volunteered for service, but not being suitable for overseas work, he served with the home-defence forces till the end of the war.

In 1892 he published his first paper on a geological subject in the Transactions of the N. S. Institute of Science, and his notable paper of 1894 on "Deep Mining in Nova Scotia" was very widely read and quoted. Since then that journal has had numerous valuable contributions from his pen, mostly relating to our gold measures and glacial geology, but some dealing with anthropological subjects. He also contributed many articles to the

mining pages of the late "Industrial Advocate" of Halifax. In 1915 he published a bound volume on the "Gold Fields of Nova Scotia: a Prospector's Handbook," a useful work which contains a very great amount of original information and which has been much praised. He always possessed great stores of systematic notes on his observations in the field, from which he could always draw.

In 1919 and 1920 he devoted some time to collecting ants, with the view of eventually publishing a paper on the subject; but this he did not live to accomplish. (See Trans. N. S. Inst. Sc., vol. 15, pt. 4, p. 169.)

In the year of his death he spent some months in the libraries of Boston, studying daily from early morning till late at night; and as a result left a voluminous manuscript nearly ready for the printer, dealing with the origin of religions, etc., which evidences much research into all literature bearing on the subject.*

Probably next to Dr. Faribault, of the Geological Survey, he had become recognized as a high authority on problems relative to the Gold Measures of this province, and also an authority on local glacial geology; and his name and writings are known to most of the foremost geologists of America, with many of whom he corresponded.

In November, 1894, he was elected a member of the N. S. Institute of Science, and he became a constant reader of the technical journals in that society's library, and his reading embraced most of the very latest and best monographs on geological and anthropological subjects. He had acquired a knowledge of some foreign languages, such as French and German, and was not daunted in extracting information from a paper in those languages.

Although unable to secure a college education himself, he was an advocate of the great advantage of such a training, and deeply regretted his own inability to take a collegiate course. His self-education was a form of laboratory training, in which he had to find out things for himself, and his laboratory was the realm of nature. He never failed to take advantage of all the best that scientific men made public, and therefore was thoroughly modern in technical ideas. Of late years he lamented that he was denied the leisure to keep up his reading of the latest contributions to knowledge. In his demeanour he was modest and unassuming to a fault; but when he used his pen he compelled attention.

That his country did not show its appreciation of his merits in a monetary way, is a matter we may have to reproach ourselves with. Among students of Nova Scotian geology, he will not be forgotten, for his writings will always have to be reckoned with. His life was a long, brave struggle with adverse circumstances, against which he nobly bore up; and his achievements show what can be done by persistence and intense application.

*This manuscript, closely written in two volumes, is at present in the custody of Mr. Fred P. Ronnan, of Halifax.

Published Writings of W. H. Prest

1892. Evidence of the post-glacial extension of the southern coast of Nova Scotia. *Trans. N. S. Inst. Sc.*, vol. 8, pp. 143-147.
1893. *See extracts from his notes in* Bailey's Preliminary report on geological investigations in southwestern Nova Scotia. *Rept. Geol. Survey Canada*, vol. 6, for 1892-3, Ottawa, 1895, report Q.
1894. Deep mining in Nova Scotia. *Trans. N.S.I.S.*, vol. 8, pp. 420-434.
1896. Glacial succession in central Lunenburg. *Trans. N.S.I.S.*, vol. 9, pp. 158-170.
1896. *See extracts from his notes in* Bailey's Report on geology of southwest Nova Scotia. *Rept. Geol. Survey Canada*, vol. 9, for 1896, Ottawa 1898, report M.
1897. Measurements of two Beothuk skulls. *Proc. N.S.I.S.*, vol. 9, pp. lxxxviii-xc.
1901. On drift ice as an eroding and transporting agency. *Trans. N.S.I.S.*, vol. 10, pp. 333-344.
1902. Supplementary note on drift ice as an eroding and transporting agent. *Trans. N.S.I.S.*, vol. 10, pp. 455-457.
1905. Edible wild plants of Nova Scotia. *Trans. N.S.I.S.*, vol. 11, pp. 387-416.
1911. A suggestion for anthropological work in Nova Scotia. *Trans. N.S.I.S.*, vol. 13, pp. 35-39.
1911. Prospecting in Nova Scotia. *Journal Mining Soc. of N. S.*, vol. 16, pp. 73-91, with ills.
1912. Report on cave examination in Hants County, N. S. *Trans. N.S.I.S.*, vol. 13, pp. 87-94, with ills.
1914. Report of the metalliferous mines of Nova Scotia for year ended September 30, 1914. In *Annual Report of the Mines, Dept. Pub. Works and Mines, 1914, Halifax, 1915*, pp. 86-112, with ills.
1915. The gold fields of Nova Scotia: a prospector's handbook. Halifax, Industrial Publishing Co., 1915, 158 pp., with original illus., also map.
1918. On the nature and origin of the eskers of Nova Scotia. *Trans. N.S. I.S.*, vol. 14, pp. 371-393.
1919. Esker excavation in Nova Scotia. *Trans. N.S.I.S.*, vol. 15, pp. 33-45, with ills.
- Also many articles in the mining section of "The Industrial Advocate," Halifax, up to the time it ceased publication about August, 1916.