No. 1. 1897-98.

TRANSACTIONS

OF THE

Ottawa Literary and Scientific Society

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1898.

Contents.

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INTRODUCTION.

In issuing the first publication of the Ottawa Literary and Scientific Society a few words are necessary :—

The position occupied by the Society in the community is unique, and its development is bound up in the history of Ottawa (formerly Bytown.)

Up to the present the city of Ottawa is without a public library, a regrettable fact which, it is hoped, may be remedied soon ; and the Society, therefore, from its inception felt the necessity of endeavoring to supply the place of that much needed institution.

Passing over the historical part which will be given later, and considering the Society of recent years, it is desirable to state that, besides providing a library and reading room, it has annually furnished a course of lectures.

These lectures, while of a popular nature, in many cases embodied original work, and for the presentation of such work this publication is intended, the Society considering that in this matter it has a duty to perform,—to add its mite to the world's fund of knowledge, upon which we all so freely draw.

Heretofore the course has not been arranged with the especial object of furnishing material for publication, and hence our present issue may probably be regarded as somewhat meagre. However, it is hoped that hereafter, annually, more material will be available and a more extensive publication issued,

It may perhaps be interesting to give the last course of lectures:

1897-8.

Nov. 12.—Fridtjof Nansen, - - - "North Pole."
" 19.—B. Sulte, - - "The Meaning of Ottawa."
" 19 { A. Lampman, - - - - - - Reading
{ W. J. Sykes, "Plea for higher type of literature."
(Literary and Musical Evening.)
Dec. 3.—George Johnson, - "Place names of Canada."
" 17.—Professor S. W. Dyde, - "Paradise Lost."
Jan. 7.—Rev. Dr. J. B. Saunders, - - "Anthropology."
" 21.—Joseph Pope, - - - "Samuel Pepys."
Feb. 1.—J. M. Macoun, - - - "The Fur Seal."
" 18.—Wm. Ogilvie, "The Yukon and its gold resources."
Mar. 1.—Thos. Macfarlane, "The utilization of moss lands."

As the range of the publication now initiated covers the whole field of science there is no reason why it should not become the medium for the record of much of the original work carried on by the scientific branches of the government, which otherwise might not see the light of day.

When the library of the Society is established upon its proper basis, it will probably become one more for reference than for general reading.

That social element, the attrition of thought and intellect by intercourse among the members, requires fostering, for neither the library nor the reading-room affords such opportunity. Thinking men without some social tie are starved intellectually.

We may perhaps hope that in future it may be possible to have two courses of lectures, one of a popular nature, the other more technical.

Historical Sketch.

(Compiled from the minute books of the Society.)

—

Bytown Mechanics' Institute.

"At a meeting, called by public notice, held in the Oddfellow's Hall, (Chaudiere Lodge), 20th January, 1847, in order to form a Mechanics' Institute, and at which a lecture on the "Importance of knowledge to the working classes" was delivered by the Rev. James T. Byrne:—

1st. It was resolved—That it is expedient to form a Mechanics' Institute.

2nd. It was resolved—That a committee be now appointed to frame a constitution, aud that the following persons comprise that committee, viz:—Messrs. Henry Bishoprick, Horatio Blaisdell, Edward Campbell, William Bowles, Francis Thomson, Michael McDermott, Rev. Mr. Wilson, Rev. Mr. Byrne, Elkanah Billings, James Mathews and William Harris, and that seven do form a quorum for the transaction of business.

3rd. It was resolved—That the annual subscription be not less than five shillings.

4th. It was resolved—That the admission of apprentices be left with the committee.

5th. It was resolved—That a subscription list be now opened to receive necessary subscriptions to the Institute.

On Feb. 17th, 1857, a constitution was presented and adopted. Immediately thereafter the election of the first officers of this embryo organization for the diffusion of knowledge in Bytown took place. And it was resolved that all the resident clergymen of Bytown be honorary members of the Institute.

It was resolved (March 5, 1847) that the room (Odd-fellows' Hall) be opened every Saturday evening from seven to ten o'clock for the purpose of allowing members to read and exchange books.

On the evening of the above date the Rev. Mr. Byrne delivered a lecture on "Female Education." We see that at early date this subject, which has so wonderfully developed and taken so practical a form in our day, had already occupied and enlisted the serious attention of thinking men.

On April 2, 1857 the Rev. Mr. Durie gave a lecture on "Phenomena of the atmosphere."

On April 9, 1847, it was resolved—That Mr. Robert Hill be appointed Librarian, and that he be paid one shilling and sixpence for each night the room is occupied by the Mechanics' Institute, and that he provide fire whenever required, and also keep the books and accounts thereof, as well as the room in proper order."

From this it would appear as if the Librarian had to furnish the wood himself. However, the market price of fuel was very low at that time.

The first magazines secured for the Institute were "Hunt's Merchants' Magazine, The Eclectic Magazine, and Silliman's Journal."

The first donation of money for the Institute was given on April 16, 1857, by Stewart Derbishire* and amounted to £65 currency ($260).

One of the first purchases of books was that of the 22 volumes of the Encyclopedia Britannica, 7th edition, for £25 currency.

On August 6, 1847, "It was resolved—That the books of the Library taken out by members for the purpose of reading be returned to the Library in two weeks from the time they were taken, and the parties neglecting to comply shall be fined sixpence for the first week, one shilling for the second, two shillings for the third, and doubled every week it may be kept after the period for its return."

This was undoubtedly dealing in heroic measures. An unfortunate member retaining a book—say ten weeks—over time would be liable for more than £25!

*Mr. Derbishire filled the office of Queen's Printer for many years under the old government of Canada.

On Nov. 8, 1847, the Mechanics' Institute rented "the basement story of the Congregational Church on lot 28 on Sparks street, near Sappers' Bridge," at twelve pounds ten shillings per annum, for two nights in the week. (This is the place where the Journal office now stands.)

In the minutes of March 14, 1848 we read: It was resolved—That Messrs. Hervey, Main and Lett be a committee to prepare a petition to the Provincial Parliament for aid to the Institute, and that John Scott, Esq., M.P.P. for Bytown, be respectfully requested to present the same. It is also recorded that "the secretary reported the receipt of a portrait of the Queen, donated from Christopher Armstrong, Esq., Judge of the Dalhousie District Court, which was ordered to be framed with black walnut."

This picture is still in possession of the Society.

On the same date is entered: "It was resolved—That a soiree in connection with the Institute be held on Wednesday evening, 22nd inst. Admittance to be by ticket; single tickets two shillings and sixpence, double tickets, three shillings and nine pence."

For this social gathering under the auspices of the Institute Mr. Francis Thomson agreed to furnish "tea, coffee, pastry and refreshments at one shilling nine pence each ticket."

"It was resolved—That tea be on the table ready to commence at seven o'clock." As a soiree this first entertainment may have been a success, but financially the secretary reported a "deficiency of five pounds sixteen shillings, and seven pence, for which J. B. Lewis, Esq., had undertaken to make good such deficiency whenever called upon to do so."

From the Treasurer's accounts it would appear that tallow candles were used in the rooms of the Institute.

There are no entries in the minute book after 1849, from which it appears that the first Mechanics' Institute became defunct in that year.

Bytown Mechanics' Institute and Athenaeum.

In January, 1853, a public meeting was called "for the purpose of taking measures to re-organize this highly important Institution." At this meeting Judge Armstrong presided, Elkanah Billings acting as Secretary, and a provisional

committee was formed, which shortly afterwards issued a prospectus in which is found :—"It is a matter within the knowledge of all and it is deeply to be regretted, that, although Bytown contains a population of 8,000 souls and is one of the most wealthy and flourishing commercial towns of the Province with respect to its facilities for diffusing useful information, it is far behind most other places of equal note in the country. While all other large towns of Canada, and even many of the small villages in the new settlements, can boast each of its Debating Club, Circulating Library or Mechanics' Institute, no Association of an intellectual character, not even a Reading Room exists in a place that will in all probability, within a very short period, be elevated to the dignity of a city. This deficiency, while it deprives the adult members of the community of all those pure mental enjoyments that flow from the cultivation of the mind, either by reading, or by listening to discourses on literature, science or art, is when viewed with reference to its influence upon the youth of the town productive of consequences of a much more painful and destructive nature. . . . . As there is no public library from which well selected books upon different branches of science can be procured, and as no provision whatsoever has been made for the delivery of instructive lectures, it is difficult to perceive how a young man can obtain knowledge in this town, either by reading for himself, or by having it imparted to him by others. . . . . Between the time of leaving the Common School and that period of life, when the full age of discretion is arrived at, there are from five to ten years during which the character of the future man is formed, and during which the greater portion of the knowledge that is to serve him through life is to be acquired. If a store of general information is not laid up in this period the individual must pass through existence without it. When the cares of business and the struggle for subsistence commence, the time for education is past, and he who has not obtained it before, will most likely never possess it.

In this prospectus, which commands our admiration, an appeal was made to the citizens for subscriptions and as a result £130 7s. 6d. were collected, thereby founding the Bytown Mechanics' Institute and Athenæum on January 29th, 1853, of which the present Ottawa Literary and Scientific Society is a direct descendent.

Towards the Institute the Government made a grant of £50.

The annual fees levied were on a graded scale; for Mechanics 5 shillings, for Clerks 10 shillings, and for Merchants 20 shillings. Lectures were delivered in the Temperance Hall, formerly Congregational Church, already alluded to. It is related that one Scotch divine expounded some theological subject for six hours, from 7 p.m. to 1 a.m.—and without any respite—"between the acts." On another occasion "The Geography of Canada" occupied the lecturer four hours. It was perhaps fortunate for the audience that Canada was not then more fully explored.

During the summer of 1853, the Governor-General, Lord Elgin, visited Bytown, and, besides the reception tendered to him by the Institute, an exhibition was held. In commemoration of both events the Committee issued through the Ottawa "Citizen" the following address. It was got up in the best style of the printer's art,—letters, ornamentation, coat-of-arms, everything in gilt.

VIVAT REGINA.

1853.
Knowledge
is Power.

1853
Bytown
Industrial Exhibition.

OTTAWA CITIZEN.

Amongst the many Agencies employed for the advancement of our race

Exhibitions of Natural & Industrial Productions of Countries,

ARE PECULIARLY CHARACTERISTIC OF THE TIMES;

And it is pleasing to observe that in Diffusing Useful Knowledge, and inducing General and Permanent Benefits, they are eminently successful.

Prompted by a laudable feeling, the Committee of the **BYTOWN MECHANICS INSTITUTE AND ATHENAEUM** *determined to improve the occasion of* **the Visit to Bytown of His Excellency Lord Elgin, Governor General of British North America,** *to have an Exhibition of*

The Products of the Ottawa Country.

However humble such an Exhibition may appear, when compared with those to which all the nations of the Earth are contributors, it is not the less valuable, nor are those who are instrumental in its creation the less entitled to credit.

The occasion of the visit to this place of His Excellency LORD ELGIN, who is distinguished for learning and talents and for the interest taken by him in such Exhibitions, and in Science and Industry, has been most appropriately and happily chosen: and while the Exhibition will not be without interest to the Noble Visitor and other strangers, the visit will be characterised by this pleasing feature, and be identified with the

Industrial Progress of our Country.

In accomplishing the great object of this and similar Exhibitions, and all kindred efforts in the same cause,

The Press takes it's place as a Co-worker in the Field

It labours in the improvement of Arts, and the Arts gratefully repay by increasing its capabilites and power.—thus presenting an example of most important mutual benefits, resulting from

GENEROUS PURPOSES AND UNITED EXERTIONS.

Bytown, July, 1853.

Coat of Arms,
Town Council of the
Town of Bytown.

View of the Locks on
the Rideau Canal at
Bytown, at its entrance from the Ottawa.

Coat of Arms,
Town Council of the
Town of Bytown.

Of the original members of the Institute there are now living only the Hon. R. W. Scott, George Hay and C. R. Cunningham.

In those early days candles were used, for on August 2nd, 1854, it is found recorded that a conversation took place on "the best means of furnishing the rooms with oil."

In the annual report for 1854 we find that "the present flourishing state of the Institute is chiefly due—and acknowledged with pleasure by the Committee to be due—" to the cordial and generous co-operation and assistance of those ladies, who, on this occasion as on all others, have been the foremost in lending the most active and successful aid in promoting the best interests of the community; and from the proceeds of a bazaar held in the end of October, presented to the Institute a munificent donation of £200 6s. 6½d. To these ladies the Committee cannot adequately express the grateful sense which it entertains of their noble exertions and the magnificent result of these exertions for the Institute."

The Institute took active steps for building up a Museum, and in 1855 offered the following prizes :—

Best collection		Coleoptera and Hemiptera.....	£2 10s.
"	"	Lepidoptera and Neuroptera.....	2 10s.
"	"	Hymenoptera, Diptera and Aptera..	2 10s.
"	"	Snakes, Frogs, Proteus and Crayfish..	2 10s.
"	"	River and Land Shells.....	2 10s.
"	"	Indigenous Botanical Specimens....	10 10s.
"	"	Mineralogical Specimens.....	10 10s.

The trustees of the Institute proposed to make it a central Institution for this part of the province including the counties of Leeds, Grenville, Lanark, Renfrew, Carleton, Prescott, Russell, Pontiac, Vaudreuil and Argenteuil, and for this purpose addressed a memorial to each municipality. Although sympathy was expressed for the movement, the plea of want of funds prevented carrying out the project.

Almost from the beginning there was an agitation for the erection of a building for the society, and many a time the object seemed on the eve of being realized, yet up to the present it has not been accomplished. The problem is one which the friends of the society should resolutely grapple with in the near future.

Although the lectures were held in Temperance Hall, yet the whilom Assistant-Librarian was not influenced much thereby, for it is recorded that "in consideration of ——'s promises to keep sober he be allowed to continue on trial."

In May, 1856, arrangements were made with the Gas Company for lighting the rooms. And in August of the same year it was resolved to change the name Bytown in the title of the Institute to Ottawa. At the same meeting (August) Dr. J. A. Grant became Curator, succeeding Elkanah Billings, the noted geologist, who removed to Montreal.

By a resolution of the Trustees all religious papers were excluded from the reading-room, except as donations.

On April 7th, 1858, we find for the first time the money recorded in dollars, instead of pounds, shillings and pence as heretofore.

On March 1st, 1863, the Institute moved its quarters to the two upper flats of the premises of Geo. Hay, lot 26, south side of Sparks street.

From its inception, the Institute did useful work and exerted a beneficial influence upon the community of far reaching effect. From it many rivulets of thought and action were born, which, with increasing years gained in strength, and bestowed manifold benefits on the community. There can be but little doubt that the Institute played a not unimportant part in the development of Ottawa. The names of those who especially identified themselves with the Institute are shown in the appended list of officers.

By an Act of Legislature the Mechanics' Institute and Athenæum and Natural History Society were incorporated December 24th, 1869, as the Ottawa Literary and Scientific Society.

Natural History Society of Ottawa.

From the minutes of this Society we find that it was formed to "develop the Natural History of the Ottawa, and general resources of the surrounding country."

A constitution and by-laws were adopted on October 3rd, 1863, and the Society entered upon an active career. At first monthly, and later, bi-monthly meetings were held, lectures were given and natural history specimens collected on the monthly Saturday excursions during the summer

season. In June, 1865, on request of the Society, room was granted in the library of the Mechanics' Institute and Athenaeum for the museum of the former. The Society was incorporated by act of the Legislature on August 15th, 1866.

On July 1st, 1867, the Dominion of Canada was born and shortly afterwards (July 16th) a committee of the Society waited "upon the Premier with a view of obtaining his opinion as to the feasibility of moving the Geological collection of Canada (from Montreal) to the metropolis." This was subsequently carried out (1881), and naturally had the effect of lessening the relative value of the small museums begun in Ottawa, while opening a wider field of comparative study to the members of the Society.

Addresses of welcome were presented by the Society to the Governors General, Viscount Monck, in 1867, and to Sir John Young (Lord Lisgar) in 1868, respectively.

Among the number of active and zealous workers the name of the curator, Dr. Van Cortlandt, stands out pre-eminent.

In time it became apparent to many members of the Society who were also members of the Mechanics' Institute and Athenæum, the parent organization, whose field practically included the field of the former, that an amalgamation was desirable. Several joint meetings of committees were held, and union was agreed upon. The Society held its last meeting on December 10th, 1869, and on December 24th, 1869, by Act of the Legislature, the two Societies were incorporated as the Ottawa Literary and Scientific Society."

Ottawa Literary and Scientific Society.

The beginning of the year 1870 saw the Literary and Scientific Society launched on the career of usefulness, which it has pursued up to the present day. In the Act of Incorporation the aim and object of the Society are set forth in the few, yet comprehensive words, "the cultivation of literature and science."

Those who had been active workers in the two organizations out of which this Society was formed continued to take that active interest so essential for the well-being and progress of any Association. The progress of the Society during these past 28 years has not perhaps been as great as could have been wished, still it has ever occupied an honorable and worthy place in the community; and there

can be no question that, apart from the influence of the library and reading room, its annual courses of lectures have exerted an elevating and cultivating influence that is difficult to measure in the intricacies of the social structure.

As with the Mechanics' Institute, the Society has at various times, attempted to secure a building of its own, but the money question involved has, unfortunately, up to the present time not been solved, although the amount involved is not large, not more than $10,000.00. It is questionable whether any public benefaction would confer so much lasting and increasing good as the erection of a home, so to speak, for the literary and scientific workers in our midst, a place where they and other thinking men could meet and exchange thoughts, where lectures both popular and technical could be delivered, and whence a humanizing stream could flow throughout all classes. Let us hope that the near future may plant such a monument for a generous benefactor.

The first general meeting of the Society was held January 11th, 1870, when a code of by-laws was adopted. A week later a second general meeting was held and the first election of officers took place. At this meeting the first life members, James Cunningham and George Kennedy, were elected "in consideration of their long and efficient services as Treasurer and Secretary respectively of the late Mechanics' Institute and Athenæum."

The first annual meeting of the Society was held on April 29th' 1870, and the Librarian's report showed that there were 971 volumes available for circulation. The number at the present time is 3,861. During its first year three lectures were delivered, the first by W. D. LeSueur on "The Greatest Critic of the Age;" * the next by William Kingsford, the historian, on "Copper Coins of England;" and the last by J. H. Rowan, on the "Great Pyramid."

From the beginning a small museum was connected with the Society, but since the removal of the Geological Museum from Montreal to Ottawa, the former has lost its interest, and no efforts for its maintenance are now being made. Many of the specimens it possessed have been sold or otherwise alienated; and an organization—the Ottawa Field Naturalists' Club—was formed (1879), mainly through the

*Afterwards enlarged and published in Westminster Review for April, 1871, under title of "Ste. Beuve."

efforts of James Fletcher and other members of the Literary and Scientific Society, which has since been active in the prosecution of natural history studies. This club held its first meetings in the rooms of the Society.

We find in the annual report of 1871 that the following gentlemen subscribed $50.00 each towards the funds of the Society:—Lord Lisgar (Governor General), Edward M. McGillivray, Thos. C. Keefer, Thomas Reynolds, George Hay, Hon. J. Skead, Alonzo Wright, M.P., J. M. Currier, M.P., H. O. Burritt, J. G. Whyte, H. V. Noel, Nicholas Sparks and Robert Skead.

The first honorary member elected was Goldwin Smith on November 25th, 1871.

On October 8th, 1874, the Council passed resolutions for the formation of evening classes. They were thereupon organized and put in charge of the Rev. T. D. Phillipps, W. D. LeSueur, A. Smirle and J. Heyslop. Amongst the prizes offered to the classes was a gold medal by the Mayor, which was won by F. R. Latchford.

The Society participated in the former annual Provincial Exhibitions by making exhibits from its museum, and was privileged to name some of the judges in "Chemical Manufactures, Machinery, Natural History and Ladies' Work."

Since the founding of the Royal Society of Canada the Literary and Scientific Society has been represented by a delegate at the annual meetings of the former; and it has always embraced the opportunity of presenting an address of welcome to every Governor General on his arrival in Ottawa.

The Society owes a great deal to the liberality of the late Col. Allan Gilmour, who, in addition to being a life member, gave it two donations of $500.00 each and one of $200.00, as well as a number of books. He suggested to the Society the desirability of opening the reading-room on Sundays.

The Ontario government, ever solicitons for the education and advancement of the people, has yearly supplemented the efforts of the Council by a grant of money.

The Society has a membership now of 325; its library has about 4,000 volumes covering the various fields of literature and science; and its reading-room is supplied with many daily papers, weekly publications and the well-known magazines of literature, science and art. This liberal supply of

periodical literature attracts many readers, and strengthens the hold of the Society on its members.

In the preceding narrative the evolution of the Society has been briefly sketched. Imperfect as it is, the salient points at least have been taken from the minutes and proceedings from the first effort at organization in 1847.

In the appended list of officers will be found the names of those who have especially identified themselves in the advancement of literature, science and art, from the days of Bytown to those of Ottawa, and up to the present time, through the different organizations above mentioned.

It is to be hoped that this first instalment of the "Transactions" of the Society may serve a useful purpose, and prove to be the prelude to a long series of substantial contributions to the scientific and literary work of the Dominion of Canada.

OTTO J. KLOTZ,

June, 1898. *President.*

Officers of the Mechanics Institute.

1847—Hon. Thos. McKay, President; G. W. Baker, 1st Vice-President; Hammett Hill, 2nd Vice-President; Elkanah Billings, Corresponding Sec.; H. Bishoprick, Recording Sec.; Andrew Drummond, Treasurer; Robert Hill, Librarian.

1848—Hon. Thos. McKay, President; John Scott, M.P.P., 1st Vice-President; J. B. Lewis, 2nd Vice-President; W. P. Lett, Corresponding Sec.; H. Bishoprick, Recording Sec.; Andrew Drummond, Treasurer.

1849—G. W. Baker, President; Robert Hervey, 1st Vice-President; Hammett Hill, 2nd Vice-President; W. P. Lett, Corresponding Sec.; S. C. Keir, Recording Sec.; Andrew Drummond, Treasurer.

Officers of Bytown Mechanics Institute and Athenæum.

1853—Dr. Hammett Hill, President; Alex. Scott, 1st Vice-President; Gilbert Heron, 2nd Vice-President; H. J. Friel, Recording Sec.; Elkanah Billings, Corresponding Sec.; J. Cunningham, Treasurer; Dr. E. Van Cortlandt, Librarian; Elkanah Billings, Curator.

1854—A. Workman, President; C. J. Ford, 1st Vice-President; Robert Lees, 2nd Vice-President; C. R. Cunningham, Recording Sec.; Elkanah Billings, Corresponding Sec.; J. Cunningham, Treasurer; Dr. E. Van Cortlandt, Librarian; Elkanah Billings, Curator.

1855—A. Workman, President; Robt. Lees, 1st Vice-President; Henry Horne, 2nd Vice-President; C. R. Cunningham, Recording Sec.; Elkanah Billings, Corresponding Sec.; J. Cunningham, Treasurer; W. A. Ross, Librarian; Elkanah Billings, Curator.

1856—Robt. Lees, President; H. Horne, 1st Vice-President; Dr. Garvey, 2nd Vice-President; James Dyke, Recording Sec.; Wm. Clegg, jr., Corresponding Sec.; J. Cunningham, Treasurer; Dr. Van Cortlandt, Librarian; Elkanah Billings, Curator.

1857—H. J. Friel, President; Dr. J. A. Grant, 1st Vice-President; Dr. Garvey, 2nd Vice-President; Robt. Lyon, Recording Sec., Robt. Lyon, Corresponding Sec.; J. Cunningham, Treasurer; C. J. Ford, Librarian; Dr. F. D. Loughlin, Curator.

1858—Dr. J. A. Grant, President; Dr. Garvey, 1st Vice-President; George Heubach, 2nd Vice-President; George Heubach, Recording Sec.; H. V. Noel, Corresponding Sec.; C. J. Ford, Librarian.

1859—Chas. Armstrong, President; J. McKinnon, 1st Vice-President; J. M. Currier, 2nd Vice-President; R. Waddell and J. Fraser, Recording Secretaries; J. M. Hannum, Corresponding Sec.; J. Fraser, Treasurer; Wm. Hay, Librarian.

1860—Dr. Van Cortlandt, President; P. P. Harris, 1st Vice-President; J. Cunningham, 2nd Vice-President; F. Schofield, Recording Sec.; J. M. Hannum, Corresponding Sec., J. Fraser, Treasurer; Henry Horne, Librarian.

1861—Henry Horne, President; H. V. Noel, 1st Vice-President; A. Scott, 2nd Vice-President; Wm. Duck, Recording Sec.; J. R. White, Corresponding Sec.; P. P. Harris, Treasurer; J. L. P. O'Hanley, Librarian.

1862—C. R. Cunningham, President; Dr. S. C. Sewell, 1st Vice-President; J. M. T. Hannum, Recording Sec.; P. P. Harris, Treasurer; Dr. Van Cortlandt, Curator.

1863—Dr. C. S. Sewell, President; Wm. Duck, 1st Vice-President; Henry Horne, 2nd Vice-President; J. Lindsay, Recording Sec.; J. Cunningham, Corresponding Sec.; P. P. Harris, Treasurer; Alex. Currie, Librarian.

1864—H. J. Friel, President; George Sutton, 1st Vice-President; Wm. Hamilton, 2nd Vice-President; Jas. Buchanan, Recording Sec.; W. P. Lett, Corresponding Sec.; J. Cunningham, Treasurer; Dr. Sewell, Librarian; A. Currie, Curator.

1865—H. J. Friel, President; Wm. Hamilton, 1st Vice-President; George Hay, 2nd Vice-President; J. P. Robertson, Recording Sec.; W. P. Lett, Corresponding Sec.; J. Cunningham, Treasurer; John Thorburn, Librarian; A. Currie, Curator.

1866—H. J. Friel, President; C. R. Cunningham, 1st Vice-President; A. S. Woodburn, 2nd Vice-President; E. P. Remon, Recording Sec.; W. P. Lett, Corresponding Sec.; J. Cunningham, Treasurer; J. P. Robertson, Librarian.

1867—H. J. Friel, President; A. S. Woodburn, 1st Vice-President; Wm. White, 2nd Vice-President; Robt. Hunter, Recording Sec.; W. P. Lett, Corresponding Sec.; J. Cunningham, Treasurer; J. P. Robertson, Librarian.

1868—Wm. White, President; A. S. Woodburn, 1st Vice-President; E. P. Remon, 2nd Vice-President; George Kennedy, Recording Sec.; D. Matheson, Corresponding Sec.; J. Cunningham, Treasurer; John Thorburn Librarian.

1869—Wm. White, President; A. S. Woodburn, 1st Vice-President; G. M. Rose, 2nd Vice-President; George Kennedy, Recording Sec.; D. Matheson, Corresponding Sec.; J. Cunningham, Treasurer; J. G. Whyte, Librarian; John Thorburn, Curator.

Officers of the Ottawa Natural History Society.

1863—B. Billings, President; Thomas Austin, Secretary; Dr. Laughlin, Treasurer; Dr. Van Cortlandt, Curator.

1864—N. B. Webster, President; George Hay, 1st Vice-President; John Thorburn, 2nd Vice-President; Thomas Austin, Secretary; James Ogilvy, Treasurer; Dr. Van Cortlandt, Curator.

1865—N. B. Webster, President; Thomas Austin, 1st Vice-President; Rev. T. D. Phillipps, 2nd Vice-President; Thomas Daniel, Secretary; James Ogilvy, Treasurer; Dr. Van Cortlandt, Curator.

1866—N. B. Webster, President; Rev. T. D. Phillipps, 1st Vice-President; John Langton, 2nd Vice-President; D. Codd and Wm. White, Secretaries; James Ogilvy, Treasurer; Dr. Van Cortlandt, Curator.

1867—John Langton, President; Rev. T. D. Phillipps, 1st Vice-President; E. A. Meredith, 2nd Vice-President; Arthur Harvey and William White, Secretaries; James Ogilvy, Treasurer; Dr. Van Cortlandt, Curator.

1868—John Langton, President; E. A. Meredith, 1st Vice-President; Dr. J. A. Grant, 2nd Vice-President; Arthur Harvey and William White, Secretaries; James Ogilvy, Treasurer; Dr. Van Cortlandt, Curator.

1869—E. A. Meredith, President; Dr. J. A. Grant, 1st Vice-President; John Thorburn, 2nd Vice-President; W. D. LeSueur and Wm. White, Secretaries; James Ogilvy, Treasurer; Dr. Van Cortlandt, Curator.

Officers of the Ottawa Literary and Scientific Society.

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The Name of Ottawa.

By B. Sulte, F. R. S. C.

(*Extracts from an address delivered Nov. 19th, 1897.*)

The easiest way to obtain accurate information concerning the term Ottawa, Outaouais, Outaoua, is by perusing the different works of the 17th Century mentioned below, and leave aside all other books for the moment, until you have digested the texts of those authors, for they actually saw what they write about. Whoever dealt with the matter subsequently could not be in a position to make a clear case of it.

Take the following authors as the only base of information Champlain, Sagard, Marie de l'Incarnation, Dollier, Perrot, La Potherie, the Jesuit papers, and the records of the Conseil Souverain of Quebec.

Champlain met the people in question (1615) and called them Standing Hair, because of the fashion they had to dress their hair upright. This was in Lake Huron.

The Hurons, who spoke a language totally different from the Standing Hairs, and who lived in open fields, designated them as the Men of the Woods, to indicate that they were roaming in the forests (county of Bruce and Manitoulin Island.) In Huron-Iroquois language this was Ondataoua. The French translated it into Gens des Bois quite correctly.

There is no indication of the name by which the Outaouas designated their own nation.

Champlain : Cheveux Relevés : Standing Hair. No other name.

Sagard, 1625 : Cheveux Relevés and Gens des Bois are like one nation he says.

Jesuit Relations, 1654-56 : Ondataouaouat, Outaouak ; 1669, Outaouac.

Journal des Jesuits, 1654 : Ondata8a8ak *alias* 8ta8ak, 8ta8at. (8 is the softest sound of w.)

Conseil Souverain de Quebec, 1663, 1670 : 8ta8au, 8ta8ak.

Marie de l'Incarnation, 1660 : Outaouak.

Dollier de Casson, 1665 : Outaoua.

Nicolas Perrot 1660-1715 : Outaoua.

La Potherie 1700 : Outaouak.

That writers who came after 1700, and who never had any intercourse with the nation before its dispersion, took upon themselves to modify the spelling and pronunciation of the name by making it "Ottawa" and "Outaouais," has no effect on the above authorities; but it puzzles everybody and makes us believe that there is yet a problem to be solved in that direction.

There is no doubt that Ottawa and Outaouais are both wrong.

The French made "Outaoua" out of "Ondatahoua." No other explanation can stand the test of the authors of the 17th Century. The plural took k.

The final sound is a broad and open note: oua, ouat, ouak, ouac, 8ack. In French (Normandy) letter a is broad, like aw in English. When you meet with ouak and ouac, rest assured that this is written to satisfy the pronunciation of some Frenchmen who use the flat a, such as in Gignac, Frontenac, Balzac (south west of France.)

Ondata, if corrupted into Outa as I believe, is less easy to explain. One would conceive that it was Oudata, but all the printed works and all the manuscripts of the 17th Century have On instead of Ou.

The figure 8 placed in the centre of the word is there to represent a soft w: 8anakong for Wanakong, Kaminisk8e for Kaminiskwe. Eight is "huit" in French and must be sounded with that particularly soft tone the letter u has in the north and west of France. It is not ou nor w; to pronounce it you must round your lips and try to whistle softly. It is not generally found practicable to any other people but those who have used it from the cradle. That sole letter in the mouth of a man suffices to detect how far his origin is French.

For instance, ask an Englishman to pronounce *Huron*—and hear the word from the tongue of a Frenchman, you will understand that the French u is not at all like the English one.

Now that we have said that Outaoua comes from Ondataoua, let us see the opinion of modern authors who have given a different etymology without consulting the true sources in this matter.

Some suppose that the expression, Grandes Oreilles applied to the Outaouas is a translation of the latter name. We have already shown that Ondataoua means the Men of the Woods. The French said Grandes Oreilles: Large Ears, for the same reason they qualified them also Cheveux Relevés,

those whose hair is tied up on the top of the head, those who expose their ears, by contrast with other races wearing long floating hair covering the neck, the ears and part of the cheeks.

The final sound ouais: Outaouais, is the result of pure ignorance, and is not more than eighty years old.

The form Ottawa did not exist during the French regime; it was created by the English evidently from Outaoua.

As to the history of those people we have so often seen modern maps and books which place them in our valley that it seems impossible to remove that belief from the minds of of readers.

They were principally located in Manitoulin Island when Champlain met some of them at the mouth of French River in 1615. Afterwards they took refuge in Wisconsin for fear of the Iroquois. In 1654 they opened a trade with Montreal by the route of Lake Nipissing and the Grand River, then a perfect wilderness without any Indians on its shores. Gradually the Grand River became known as the passage of the Outaouas, the Outaoua. This application of the name of a far away nation to a Canadian River can be followed in the manuscripts covering the period of 1670-1700.

In the localities where the Outaouas emigrated two hundred years ago there are now ten or twelve towns, villages, railway stations and counties called "Ottawa." This is only right, although somewhat overdone.

The books and maps published in our century caused the Canadians to consider the "valley of the Ottawa" as the ancient residence of the Outaouas, and that name was imposed in good faith upon young Bytown. It is the consecration of an error. The Capital of Canada stands before us under a foreign name.

The Violinist.

By A. Lampman, B.A., F.R.S.C.

[*Read Nov. 19th, 1897.*

In Dresden in the square one day,
With wheezy bow and proffered hat,
A face of parchment seamed and grey,
An old blind violinist sat.

Like one from whose worn heart the heat
Of life had long ago retired,
He played to the unheeding street
Until the the thin old hands were tired.

Few marked the player how he played,
Or how the child beside his knee
Besought the passers-by for aid
So softly and so wistfully.

A stranger passed. The little hand
Went forth, so often checked and spurned.
The stranger wavered, came to stand,
Looked round with absent eyes and turned.

He saw the sightless, withered face,
The tired old hands, the whitened hair,
The child with such a mournful grace,
The little features pinched and spare.

"I have no money, but," said he
"Give me the violin and bow.
I'll play a little, we shall see,
Whether the gold will come or no."

With lifted brow and flashing eyes
He faced the noisy street and played.
The people turned in quick surprise,
And every foot drew near and stayed.

First from the shouting bow he sent
A summons, an impetuous call;
Then some old store of grief long pent
Broke from his heart and mastered all.

The tumult sank at his command,
The passing wheels were hushed and stilled;
The burning soul, the sweeping hand
A sacred ecstasy fulfilled.

The darkness of the outer strife,
The weariness and want within,
The giant wrongfulness of life,
Leaped storming from the violin.

The reins of glittering carriages
Were checked and drawn from far and near,
And all with wondering countenances
Leaned from their cushioned seats to hear.

And then the player slacked his tone,
And wrought another miracle
Of music, half a prayer, half moan,
A cry exceeding sorrowful.

A strain of pity for the weak,
The poor that fall without a cry,
The common hearts that never speak,
But break beneath the press and die.

Throughout the great and silent crowd
The music fell on human ears,
And many kindly heads were bowed,
And many eyes were warm with tears.

"And now your gold," the player cried,
"While love is master of your mood;"
He bowed, and turned, and slipped aside,
And vanished in the multitude.

And all the people flocked at that,
The money like a torrent rolled,
Until the grey old battered hat
Was bursting to the brim with gold.

And loudly, as the giving grew,
The question rose on every part,
If any named or any knew
The stranger with so great a heart.

Or what the moving wonder meant,
Such playing never heard before;
A lady from her carriage leant,
And murmured softly, "It was Spohr."

Place-Names of Canada.

By George Johnson, F.S.S. (hon.)

[*Read December 3rd, 1897.*

When all are here and no by-elections on, 213 members of the House of Commons assemble on Parliament Hill* to represent the people of the 200 electoral districts which include the whole country from the Atlantic to the Pacific.

Each of these divisions has a name. Included in each division are many subdivisions, in all cases having distinctive names; excepting in the case of Prince Edward Island, where the subdivisions are distinguished by numerals, to-day as they have been for 130 years.

These divisions are known, in most of the Provinces, as Counties, and the subdivisions as Townships, Parishes, Municipalities, Polling Districts, etc.

Divisions and Subdivisions, as we had to deal with them in the Census, numbered 3,600 census places.

Consultation with the Post Office List provides the information that there are over 9,000 post offices in the country, each with a place-name; some of them duplicates of the place-names of the electoral districts and of the Census subdivisions; most of them not so.

A study of a good map reveals the names of Lakes, Mountain ranges, Mounts, Rivers and Streams—thousands of them; many of the names not duplicated in the names of the Counties, Parishes, Townships, Municipalities and Post Offices.

Taking the map as a guide we travel along the coast-line of the Dominion, from the fire-devastated town of Wind-

*Parliament Hill is a very appropriate name. The hills were the ancient places of meeting for conference on public affairs. Thus Mote Hill, near Scone in Scotland, had the famous scone stone on which the Kings of Scotland were crowned and on which, since its removal to Westminster Abbey, during 6 centuries 27 Sovereigns of England and of Great Britain have been crowned. Moot Hills abound in England. and *Ludlow* means "the people's hill." Parliament is French for talk, Hill is Anglo-Saxon. Parliament Hill exactly suits the condition of this double-raced, doubly blessed Canada of ours.

sor, N. S., along both sides of the meadow-decorated Minas Basin and the tide-scoured Bay of Fundy; round rock-ribbed Nova Scotia; around the island-sentinelled Gulf of St. Lawrence; along the Labrador coast that has witnessed for centuries the gay or gloomy procession of icebergs, torn from their colossal cradle of the North and hurried by the Polar current to their grave on the submerged shores of the Gulf Stream; around the silent Hudson Bay with its ice-fringed coasts; along the Arctic* littoral, the very home and throne of our "Our Lady of the Snows;" and adown the Pacific shores over which the *Kuro-siwa*† pours its tempering heat and abundant moisture. Everywhere we find names of islands, of gulfs, bays, coves, harbours, inlets, canals and other indentations of the coast-line—also by the thousand.

We have thus many thousands of place-names to deal with, and every name has a meaning. It had an origin and it has a significance.

To those interested in the study of place-names, the questions naturally arising are (1st) "who gave the name," (2nd) "why was the name given?"

To answer the first question would be to sketch with more or less of detail the place-name Fathers of Canada. Missionaries and navigators, saints and sinners, lordly rulers and humble porters, politicians and civil servants, sovereigns and speculators, explorers and store-keepers, surveyors and railway presidents—English, Basques, Portugese, Spaniards, French and Indians—have scattered, with profuse hand, place-names in every part of the Dominion.

To tell about those who have taken a prominent part in the place-name giving of Canada would be to tell of Cabot, Denys, Hudson; Cartier, Champlain, Roberval; Drake, Gilbert, Cook, Vancouver; Bréboeuf, Rambault, Albanel; Verandrye, Mackenzie, Frazer; the Simpsons, George and Thomas; La Salle, Marquette, Jolliet, Thompson, Henry; Rae, Simcoe, Guy and Thomas Carleton; Bayfield, Desbarres, Commander Bolton; Perley of New Brunswick, Geo. M. Dawson, William Ogilvie, Robert Bell; W. D. LeSueur, A. P. Low, R. G. McConnell; J. B. Tyrrell, W. C. Van Horne and many others,

***The Arctic ocean received its name from the Greek word *Arktos*, a bear, on account of the northern constellations of the Great and Little Bear—which sparkle in its waters. Our Great Bear Lake derives its name from the same source.**

†The Black Current so called from its dark blue color which contrasts with the green of the ocean through which it flows. Kuro-Siwa is a Japanese word.

who during four centuries have been the place-name fathers of the country, on a large scale. It would be to tell of the Browns, the Smiths, the Joneses, the Robinsons and all the other individuals who became "men of light and leading" in a thousand Canadian communities, whose virtues are perpetuated in the Smithvilles, the Bell's Corners, the Bellevieux Coves, the Baker's settlements, etc., and who, by their superior energy or by accidental environment, have given their names to many of our Post Offices. I made a count of these and found that there are over 500 post offices in the country whose names correspond to those of the Post Masters actually ministering to the demands of the several communities for epistolary correspondence and for the ever-welcome family newspapers.

Such stories of the place-name fathers, great and small, would be replete with interest to young and to old alike, each having its full share of moving incident by sea and by land, by flood or by field.

With Cabot, on board the *Matthew*, we would have to scout along the shores of north-east Canada, now cautiously entering unknown straits, now exultingly sailing into broad and deep harbours, disturbed by many storms of wind, but happily undisturbed by the vapourings of a Harrisse or the disquisitions of a Dawson on the landfall question. With Basques and Portugese we would have to visit almost surreptitiously (modern fishermen-like), rivers such as the St. Lawrence and Miramichi, and follow porpoise and whale far up their courses. With Cartier we would have to venture through the gloomy portals of the Saguenay and pass through the forest-lined waters of the great river, giving names to frowning cliffs, heated bays, luxuriant islands and glorious promontories. With Vancouver we would have to wander, on board the "Discovery" or the "Chatham," amidst the floods and mazes of the Straits of Georgia—now sweeping on under full sail, now moving cautiously and heaving the lead at every point, and now making preliminary explorations in cutter and rowboat, watching the water for hidden rocks and shoals and the land for ambushed natives. With Wm. Baffin or John Davis, or Martin Frobisher* or Henry Hudson or Luke Fox or George Back or Capt. Dease or Edward Perry or John Franklin or Francis McClintoch or Thos. Simpson, we would

*Whose tomb in St. Giles Church was threatened by the great fire in London, Nov. 1897.

have to push our perilous w. .mong the ice-floes of the Arctic slope of our country; study the Aurora-Borealis race in that part of the world where, in their most gorgeous garbs, they most rapidly flit ere you can point their place; and endure the monotony of a six months' day and a six months' night as the compass of our year.* With Champlain we would have to traverse the unknown Ottawa, watch the Indians offering tobacco † to their deities on the rocks of the Chaudière Falls, follow the "trough" to Nipissing, and, after many vicissitudes of fortune, gaze upon the waters of the *Mer Douce* (Lake Huron) and of the other Great Lakes.

With Verandrye we would have to make journeys full of perils from Lake Superior to Lake Winnipeg, and thence along the rivers of the plains. With Sandford Fleming‡ we would have to cross from "Ocean to Ocean" by unknown paths over the mountain ranges of British Columbia. With Geo. M. Dawson and Wm. Ogilvie, we would have to enter the Yukon region, watch McConnell make a micrometer survey of the Stikine, and Ogilvie secure chronometer longitudes for the establishment of the boundary line, and help Dawson name Mounts *Lorne* and *Lansdowne* and *Logan* and *Jubilee* and a score of other places—shoot, with these explorers, the White Horse Rapids, and scale the Chilkoot or the Chilkat Pass—chilled to the bone. With Dr. Robert Bell we would have to foot it in the inhospitable country of Nipigon or of Baffin Land, or in the hydrographic basin beyond the sources of the Ottawa river, where the *Bell* river tintinnabulates through golden sands into Rupert Bay, where Mount *Laurier* lifts high its crest, and where Lake *Beatrix* recalls Lord Lansdowne's gentle danghter and her brilliant marriage ceremony of a month ago. Under the guidance of J. B. Tyrrell we would have to penetrate the Barren Lands and discover and name in 1893 the *Geikie* River, 900 miles long, "in honor of Professor James Geikie of Edinburgh, who has done so much to foster the study of glacial geology."

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*For the effect of these voyages on English literature see Sedgwick, Atlantic Monthly, March, 1898.

†Mr. Moncure Conway says that a true history of tobacco would be a history of English and American liberty.

‡Sir Sandford Fleming, K.C.M.G., gave many of the place-names along the Intercolonial Ry., named all the stations along the C. P. R. from East of Lake Superior to Winnipeg and is memorized in the place-name *Fleming* in Assiniboia.

With Sir William Van Horne* we would have to toil and struggle to provide the thousand place-names which had to be selected in connection with the naming of the stations of the C. P. Ry.

Plenty of cares, many stripes of pain, much vain wrestling with mosquitoes and cold and heat and privations of many kinds ; many Nansen-like experiences. But what a host of place-names we would have heard given by these Fathers of our Place-nomenclature.

We would have to follow in their devious wandering not alone the men who have been named, but also the Aboriginal Indians (the "naturals," Rev. Richard Hakluyt styled them) as their moccasined feet threaded the way through pathless forests, or their marvellous canoes and their matchless snow-shoes carried them along the streams and plains in their hunt for the sturgeon and the striped or white or blue or black bass and for the beaver, the buffalo, the moose or the caribou, and watch them as with wonderful insight they discover the great topographical features of the country and apply their names of music to them.

We must (however reluctantly) give upon this occasion, the idea of following the *thought-trails* suggested by the question " Who gave the place-names of Canada,"and confine ourselves to the query : " Why was the name given ?"

Isaac Taylor says " there are only about 300 German *grund-worter* (root words) which, variously combined with the *bestimmungs-worter* (designative words) constitute the 500,000 names which are found upon the map of Germany." No such clue have we to guide us through the labyrinth of our place nomenclature.

With us the first step is to ascertain whether the name is *enchorial* or is foreign—is local, indigenous, and with the flavour of the soil clinging to it ; or has come to us—as bananas and sardines and lemons and ostrich feathers come—from abroad; is, in fact, home-made, or is an imported article.

We have borrowed place-names, as well as money, from Great Britain—in the one case as in the other sometimes wisely and oftentimes foolishly. When we called a place *Sud-*

*Probably the place-name Father with the most numerous progeny of all the place-name Fathers Canada has ever had, though Dr. Robert Bell is a close second, if he does not take first place, having some 1,200 place names to his credit in the various regions he has explored.

bury we did a foolish thing seeing that it means *Southborough* and has been transplanted to Ontario and given a local habitation in the *North* country, contrary to all the regulations of Onomatology.* Mr. Sulte at the last meeting of the Society gave us samples of foolishly selected names, including, as he contends, the place-name of this city—Ottawa. Sir William Van Horne mentions *Bergen* as a singularly inappropriate place-name, being situated in the middle of a great plain of Manitoba, while the original Bergen is a seaport of Norway surrounded by high mountains. Every feature in the new place is the direct opposite of the old place—the one a mountain-begirt town, the other a plain-encompassed village; the one washed by the briny ocean—and if you want to know what that means read Robert Stevenson's tale of the "Merry Men"—the other without any water, fresh or salt, in it; the one a great entrepot for fish and fish products, the other scarcely seeing a fish from one year's end to another.

A few months ago the Royal Society of Canada affixed a tablet to the Province Building in Halifax to commemorate the connection of the Venetian merchant †with our country. The plan adopted in this case has been a favorite for many years; only the tablets have taken the form of place-names derived from surname, christian name and title of persons who in some way or other have been associated with Canada. Our borrowings in this line have been extensive. Very few Lords of Plantations, Secretaries of War (when these were also Secretaries for the Colonies) and Secretaries and Under-Secretaries for the Colonies (since 1854) have escaped the seaching place-name hunter called upon to baptize the new township or county or village with a name that will sufficently identify it. Of the 108 of these functionaries who have administered our affairs in the Imperial Government since 1768, I failed to find among our place-names, Castlereagh, Hicks-Beach, Chamberlain, Ball, Pirbright, Meade, Pauncefote and Bramston—8 out of 108.

Since Jacques Cartier's time Canada has had 300 kings and queens, governors, governors-general and lieutenant-gov-

*Sometimes a great and important fact is embalmed in a place-name applied in the reverse of the Geographical position. Thus Sutherlandshire occupies a far North place on the map of the Island of Great Britain though it means the *South* land. The name was evidently given by persons living north of Great Britain; probably the Norwegian settlers of the Orkney Islands gave it.

†Cabot is appropriately memorized in Cabot Straits—the water passage between Newfoundland and Cape Breton.

ernors, including my old friend Lt.-Gov. McInnes of British Columbia and the latest appointed, Sir Oliver of Ontario. From them we have drawn the place-names of about 60 of our electoral districts and of several scores of our minor subdivisions.

Halifax, Osborne, Walpole, Pelham, Hardwicke, Granville, Newcastle, Rockingham, Carleton, Dundas, Shelburne, Grenville, Lansdowne, Liverpool, Eldon, Elgin, Canning, Goderich, Melville, Grey, Fox, Palmerston, Melbourne, Brougham, Wellington, Lyndhurst, Peel, Lytton, Stanley, Gladstone, Salisbury, Hartington, Russell, Bright, Clarendon, Beaconsfield, Spencer, Pembroke, Oxford, Bedford, Dunk, Sandwich, Mulgrave, Clarence, Somerset, Egmont; Aberdeen, —these and several scores more are place-names of Canada given because those for whom they were named were Lords of the Admirality, Colonial Secretaries, Premiers, Secretaries of War, Governors, or other high officials of the Empire. In connection with these names there is wide scope for historical reminiscence having a distinctively Canadian flavor.

In the same way and for the same reasons, the sovereigns of Great Britain and their sons and daughters are memorized in Canadian place names. We have King's Counties and Queen's Counties and Georgetowns and Williamsburgs, and Louises and Albert Edwards and (illustrative of the comparative youth, as well as of the abounding loyalty of the country,) we have 30 Victorias and Victoria Beaches, Peaks and Dales.

From French statesmen, governors, etc., we have borrowed our place-names of Jacques-Cartier, Roberval, Champlain, Montmagny, Coulonge, Lauzon, Frontenac, Vaudreuil, Longueuil, Beauharnois, LaTour, Chambly, Bonaveuture, Montcalm, Marguette, Provencher, Laval, Iberville, Lévis, Lotbiniere, Richelieu, Charlevoix, Montmorency, Nicolet, Soulanges, Verchères—the mention of which names calls up the long succession of able men justly held in sweet remembrance by our French brothers.

I do not know how better to illustrate this feature of our place-naming than to take British Columbia and New Brunswick as examples, presenting each in the form of a monograph.

BRITISH COLUMBIA

FROM THE PLACE-NAME POINT OF VIEW.

When Columbus set sail from a Spanish Port on the 3rd August, 1492, with three vessels and one hundred and twenty men he believed that he would sight land if he sailed long enough ; and that the land would be the Indies. The Old World path along which commerce plodded was that which crossed the land at the eastern end of the Mediterranean and thence by the Indian Ocean found its *eldorado* in the East. Hence, Venice, as the western terminal and distributing point, gained great wealth and aroused the jealousy of Spain and other nations of Western Europe. These sought the Indies by rounding the Cape of Good Hope. Columbus conceived the idea that as the earth was spheroidal in form he could abandon the shore-hugging way of the past and, boldly venturing on the wide, unknown ocean, sail on in a westerly course and reach the land of riches. When he found his way barred by an immense continent, he, Americus Vespucci and others sought along the coast for a passage that would take them to the western shores of the Pacific Ocean, on the east coast of which were the wealth and commodities of the Indies and Cathay, the gold and diamonds and precious stones that had given a magnificent sparkle to all the legends told to the wondering sons and daughters of Western Europe.

After them came other navigators who sought to pierce the continent, and in the hope of so doing ranged as Arctic explorers from the Straits of Belle Isle northward to Greenland, sometimes pushing the prows of their vessels into Hamilton Inlet and Ungava Bay ; at others forcing their way into Hudson's Great Bay and all along through the ice-girt islands that now compose the Island Province of the Dominion, the new-born District of Franklin ; or passing into the Gulf of St. Lawrence, pushed up the river, past Montreal, past Lachine, past Lakes Ontario, Huron, Superior, and on, still on, seeking the water courses that would carry their ships out into the Pacific and on their way to China and India ; or poking their vessels' noses into every stream and river and gulf from the Bay of Fundy to the Gulf of Patagonia, thinking that in each

great river or deep indentation they were to make the great discovery that would wrest from the Old World trade-path its pre-eminence and give the western people of Europe their share of the commerce that had enriched the Mediterranean countries. Finding no opening in all their search along the shores from Hudson Strait to Magellan Strait, they sailed round the southern end of the continent and turning northward painfully began anew their search for the passage of whose existence they were so positive that they called it, in advance of discovery, the Anian Strait.

Among the early navigators who searched the western coasts of the continent, one of the earliest was Juan de Fuca, a Greek sailor engaged by the Spanish Government and sent out by the Spanish Viceroy at Acapulco in Mexico. He asserted that he had found the desired passage in the Strait that separates Vancouver Island from the mainland and into which the Fraser River opens its wide mouth. This was in 1592 and we have a reminder of the Greek sailor's trip in the place-name, "Juan de Fuca Straits." Before this effort Admiral Drake—the great seaman who took so active a part in the revolution of the 16th Century by which the transition from galley warfare to warfare under sail, from the period of oars to the period of sails, was effected, and the further evolution of the British ship of war from its prototype, the Drakar or long ship of the Norsemen, to the "Terrible" type of steam-driven battle-ships, was made possible—in 1579 visited the Northern Pacific Ocean, having with him much plunder of Spanish vessels which he greatly desired to convey to English ports as swiftly and as safely as possible. He went north to the 49th parallel of latitude, found nothing that suggested a passage way through to the North Atlantic, turned the bows of his vessels southward and went to the "Island Kingdom" by way of stormy Cape Horn, from impalement on which his good seamanship saved him *

In 1774 Juan Perez in command of an expedition of discovery sailed from San Blas to head off the Russians then making explorations in the North Pacific Ocean. His instructions were to make land as far north as the 60th degree of latitude and take possession in the name of the King of Spain. He visited Queen Charlotte Islands and Nootka Sound which he named *San Lorenzo*, a name which took no hold but soon

*Cape Horn was discovered and named by Schouten in 1616 after his birth place the town of Horn in the Netherlands.

disappeared, being properly swallowed up by the original Indian name. In the next year Perez again made his appearance on the coast and took possession of the northwest coast as far as Alaska, not finding, however, any passage; in fact shrouding whatever discoveries he made in the obscurity of deliberate concealment. His connection with our country is remembered in the place-name *Juan Perez Sound* in Queen Charlotte Islands.*

England now came to the front in the practical way that has made her so successful. She offered a reward of £20,000 to the discoverer of a passage north of the 52nd parallel. In March, 1778, Capt. Cook left the Sandwich Islands on his homeward trip after his voyage of circumnavigation and took the northern course, sighted Cape Flattery and concluded his narrative by writing when in latitude 69° 32′; "We are now upwards of 520 leagues to the westward of any part of Baffin's or Hudson's Bay and whatever passage there may be, it, or at least part of it, must be to the north of latitude 72°. Beyond naming the places he visited and making a small collection of furs he did little. That little, however, was of great importance. It changed the current of mercantile thought. If there was no passage, there were furs. There was business to be done and if the passage should be found well and good. It ceased to be the primary object. In consequence, there were the fur-trading explorations of Hanna, of Strange, of Portlock and Dixon, all of 1786; and Barclay's expedition of 1787, accompanying which was Mrs. Barclay, probably the first European woman to visit that part of the North Pacific Coast. Hanna named *Sea Otter Sound* and *Fitzhugh Sound*. To Strange we are indebted for *Cape Scott*, named after one of the Bombay merchants who fitted out his vessels. Dixon's memory is perpetuated in *Dixon Straits* and it was he who named *Queen Charlotte Islands*. Barclay is remembered in *Barclay Sound*.

Other expeditions were that of Meares in 1787-89 whose shipbuilding operations resulted in a quarrel between Spain and Great Britain only settled by a treaty signed at Madrid in 1794; the Kendric and Grey Expedition of 1788, the ships in this instance flying the United States flag; (they named the Columbian River after one of their vessels and thus indirectly gave us the place-name of the Pacific province, British Col-

*Anyone who wishes to study the Queen Charlotte Islands from the place-name point of view cannot do better than consult Dr. George Dawson's monograph in the Geological Survey Report of 1878-79.

umbia); the Martinez aud Haro expedition, 1789; (they named Haro Strait for us); the Eliza expedition, 1790-95. commemorated in the place-name Port Eliza; and the Vancouver expedition, 1791-95 the chief objects of which were to make a vigorous search for the elusive Anian Strait, to find out what settlements had been made by other countries and to take possession of some English property in Nootka Sound.

In the meantime the Hudson's Bay Company, since 1670, had been extending their operations from the great bay from which they take their name, westward, till in 1782-3, the Northwest Company entered the field as determined rivals of the older company. One of the officers of this latter company, Alexander Mackenzie, wears double laurels, as the first discoverer of the Mackenzie River and its Arctic Ocean outlet, and as the first white man who went through the Rockies to the Pacific Ocean.

Subsequently the great lumber companies explored the bays and sounds and inlets in search of easily accessible forest trees, giving their names to many lakes just as in the Ottawa valley the men of the lumber-camps have given the names of many of their "bosses"* to the lake-feeders of the river.

Then came the gold discoveries, and then followed the Canadian Pacific Railway.

From all these sailors and shoremen, explorers and surveyors and lumbermen have come the place-names of British Columbia, many of them being Indian names or adoptions from the Haidahs, the Nootkas and the Shuswaps, the three great families of the Columbian group of aborigines. The marks of them all are upon the shores, the mountains, the islands, and the various forms of water—the rivers, inlets, lakes, gulfs, sounds, canals and arms.

As a name-father Capt. Cook is responsible for a number of place-names along the north-west coast of North America. He gave Cape Flattery its name on 22nd March, 1778, because from the lay of the land, "there appeared to be a small opening which flattered us with the hopes of finding an harbour." As in this instance Hope told not only a flattering, but what in the honest sea-captain's view was the same, an untruthful tale, he called the promontory Cape Flattery.

*The evolution of the word "boss" is interesting. It was originally *base*—the man at the base; the man upon whom the enterprise rests. We say "It rests with him to make it a success." The Early Dutch on this continent used the word *Baas*, and the English sounding of "boss" soon came to spell it so.

He missed Juan de Fuca Straits by being blown to the westward. His next landfall was a place called by him King George's Sound, but which he, later on, suggested should bear the native name of Nootka. There he remained long enough to satisfy himself that the natives were a very superior race, "for," said he, "I must observe that I have nowhere in my several voyages met with any uncivilized nation or tribe who had such notions of their having a right to the exclusive property of anything that their country produces as the inhabitants of this Sound"—a characteristic of us Canadians to this day, whether at the British Columbian or the Nova Scotian end, with all that is between included. Cook sailed for the mainland where he sighted, on the 2nd May, Mount Edgecombe, well within the territory now claimed by the United States as Alaska. He journeyed along till the 26th. October giving place-names right and left—none of them however in Canadian territory—the few he gave along the Nootka Sound territory not surviving; "Nootka" has overwhelmed Cook's place-name of King George's Sound; "Point Breakers" has given way to "Point Maquilla," so named in honor of a native chieftian with whom Meares had dealings in 1786; while "Woody Point" has been re-baptised "Boulder Point" the woods having disappeared and the boulders having become the prominent feature.

As is quite natural, Vancouver is the greatest name-father of the British Columbian coast. He was one of the early comers. He found an almost virgin soil in which to plant his place-names with every expectation of their taking root. He was engaged in a task that led him, in prosecuting it, to examine the coast very carefully. He was therefore all the time searching the nooks and crannies of the coast.

On the 8th March, 1791, Capt. George Vancouver received instructions, signed by Chatham, Hopkins, Hood and J. T. Townsend, to proceed to the Sandwich Islands, winter there and go in the Spring to the North West Coast of North America to obtain accurate information as to other nations who might have settled there and especially to obtain information for His Majesty's use in respect to the "water communications, which may tend to facilitate an intercourse, for the purpose of commerce, between the North West Coast and the country upon the opposite side of the continent inhabited by

the king's subjects." In 1791 His Majesty's subjects thu referred to were preparing to separate, Upper from Lower Canada, and to hold their first Legislative Assemblies. They were not troubling themselves very much about the passage to China or about a way across the continent by means of water-stretches. They had to hew down the forest, hunt up sweethearts, prepare homes for them and work out the problem of life under many discouragements. But no doubt in many a home in the back-woods as well as in such centres of population as Montreal, (population 20,000,) Quebec and Halifax there were those who waited eagerly for news of the Vancouver expedition round the world. However that may be, Capt. Vancouver sailed out of Falmouth, England, on the 1st. April, 1791, in the "Discovery" accompanied by Lieut. Broughton in the "Chatham." He decided to go by way of the Cape of Good Hope and see what Capetown, then a Dutch Colony, was like and whether it was worth annexing to Great Britain (accomplished four years afterwards.) From the Cape he stretched across the wide sheet of ocean and reached Cape Chatham on 27th September, remaining on the Australian Coast to examine George Third's Sound. Thence they sailed to Van Dieman Land and New Zealand, leaving on the 22nd. November for the Society Islands where they remained till the approach of March gave promise of a kindly reception in the North West Coast. This coast was sighted on 18th. April 1792 after a month's run. On the 29th. April Vancouver reached Cape Flattery naming it "Claffet" thinking for the moment that was the name Cook had given it, and passed up the Straits of Fuca coming to anchor in a small bay now known as Neah's Bay, just round the corner from Cape Flattery.

His first place-name was not an attempt to supplant Captain Cook, and some time after, when he learned that "Flattery" was Cook's name for the promontory, he dropped his own and took Cook's place-name. The next day the sharp eyes of his third Lieutenant (Baker) saw a mountain towering high and covered with snow, and Vancouver at once named it "Mount Baker." Where the vessels anchored for the night the lay of the land reminded Vancouver of the look of Dungeness in the British Channel and accordingly he named the anchorage "New Dungeness."

The next day the yawl, the launch and the cutter started off with their occupants to explore the shores. They discovered

a large bay protected by an island from the northern winds, and Vancouver gave the bay the name of his vessel, "Discovery Bay," and called the island "Protection Island;" and then all returned to the ships well pleased with their day's work. The next day he made a circuit of a larger bay and called it "Port Townsend," in honor of one of the signers of his letter of instructions.

Day after day they pursued their task of discovering, and within a month had examined the huge "pocket" with its islets, its bays, its basins and had given to the 1,800 miles of coast it included, the general name of "Puget Sound" after Vancouver's second Lieutenant, Peter Puget. By June he was ready to proceed northward and to enter the great internal sea, of which on June 4th, in honor of the King's birthday, he took formal possession and named it, with bumpers, the "Gulf of Georgia." Thus far he had named Hood's Canal after Rt. Hon. Lord Hood, another signer of his letter of instructions; Port Orchard, after one of his men; Vashon Island, after "my friend Capt. Vashon of the navy;" Restoration Point, because the day they saw it was the day commemorative of "that memorable event, the restoration of Monarchy and of King Charles II as its representative;" and Penn Cove "in honor of a particular friend." Then during July and till August 25th, he was busy exploring and naming the hosts of islands, passages, inlets, &c., between Grey's Point and Cape Scott, the north west point of Vancouver Island. A glance at a good map will show that the 64 days were busy days. At Point Grey (named for Capt. Grey of the U. S. vessel "Columbia") he found two Spanish vessels engaged in surveying the straits, for Spain had her eye upon the region. Vancouver's courtesy was equal to theirs,and he called *Galiano* and *Valdez* Islands after the Commanders of these two vessels. Then he went on northward, ever seeking to find some inlet that would connect with the great inland sea, which in turn would bring the Atlantic Coast of North America within close distance to the Pacific and, thus supply the opportunity to establish that north west passage believed so firmly by many to exist. He explored and named (after Sir Harry Burrard of the Royal Navy) Burrard Inlet, upon a magnificent headland of which the fine city of Vancouver is built, a memorial, on the mainland, ot the great sea captain. He named *Atkinson Point* after a "particular friend;" *Anvil Island* "because of its shape;" *Point Upwood* "for an early friend;" *Howe Sound*, for Admiral Earl Howe; *Jervis Inlet*,

for Admiral Sir John Jervis; *Scotch Fir Point*, because of the first firs they had seen, reminding them, in the midst of a flora very different to that of their Island home, of Scotland; Harwood and Savary Islands for "old friends;" Johnstone Straits and Broughton Straits and Island and Mudge Cape and Hanson Island and Baker Passage to signalize his confidence in his officers, while the "middies" were not forgotten, as Hardwick Island and Points Duff and Gordon and other place-names prove. Nelson Island he named after "Captain Nelson of the Navy"—a seaman whose fame was within a few years to start ringing down the centuries. Thurlow Island and Chancellor Passage commemorate the great Chancellor of 1783, while Loughborough Inlet recalls Thurlow's alternating Chancellor, Alexander Wedderburn, Lord Loughborough.

Vancouver sighted the coast on the 18th April and rounded the northern point of Vancouver Island on the 27th August, and between these dates had given to more than a hundred places names which most of them retain to this day, a few having been changed after the United States, by the Oregon Treaty, secured a portion of the coast explored by Vancouver.

On his second voyage Vancouver sighted the coast of Vancouver Island on the 18th May, 1793, and after a few days set out to continue the survey of the mainland coast and returned to Nootka on Sept. 2nd, a period of three and a half months, during which he gave about 200 place-names and confirmed a dozen or more that had been given by previous explorers. He appears to have proceeded upon much the same plan as in his previous examination of the grandest archipelago the world possesses, that between the mainland of British Columbia and Oregon and the Island of Vancouver. Cape Caution, he so named as a warning to all future navigators to take special care when in its vicinity. Gardner Canal he named after Vice Admiral Gardner, who was in command of the station at Jamaica when Vancouver was there and who reported favorably of him, mentioning him to Lord Chatham and the Admiralty. Behm Canal after Major Behm "in recollection of the weighty obligations conferred by him on the officers and men of the Resolution and Discovery while while at Kamtchatka in 1779"; New Eddystone, because the rock looked like that on which the Eddystone light is perched; Escape Point and Traitor Cove, because the treacherous

natives attacked him in the last and because he and his men effected their escape from the first named. The great Edmund Burke, the centenary of whose death was observed last month (Nov. 1897) whose claim to renown is that he was a leading actor in the four high tragedies of his time—the revolt of America, the insurrection in Ireland, the misgovernment of India and the revolution in France—Burke has his tablet in our place-name of Burke Canal given by Vancouver; and this is so far as I can discover the only one assigned to him in Canada. From the part he took as advocate and agent of the 13 American colonies, Burke was not a favorite with the United Empire Loyalists who were giving place-names in Canada and the Eastern Provinces during the period of his greatest activity.

Point Higgins he named after His Excellency Senr. Higgins de Vallenar, President of Chili, in "commemoration of kindness" shown him. Point Wales (west point of Observation Island) after, he writes, "my much esteemed friend, Mr. Wales, of Christ's Hospital, to whose kind instruction in the early part of my life I am indebted for that information which has enabled me to traverse and delineate these lonely regions." While the early Loyalists in Prince Edward County on the northern shores of Lake Ontario were doing honor to King George III by using the christian names of his fifteen children for place-names, Vancouver, animated by the same thought was naming in honor of his King such places as Point Sophia, Point Augusta, Point Frederick, Point Amelia, Point Adolphus, Point Mary and Cape Edward. Port Fidalgo was named by Vancouver after Senr. Fidalgo who had visited the place in 1790 and bestowed several place-names in remembrance of his friends, but had omitted to use his own name. Vancouver thought such modesty should have its reward, and with his usual broad minded generosity rescured Fidalgo from oblivion by giving the port his name. Port Countess, one might readily suppose was named after some lady of that rank who had done a kindness to the ever-grateful sailor. It was really named in honor of Capt. Countess "of *the* Navy," as Vancouver always refers to it, as if there were no other navy worthy his thought. Cape Hamond, far up on the North west coast of this continent, Vancouver named after Sir Andrew Snape Hamond, some time Governor of Nova Scotia and landed proprietor of New Brunswick, who thus has the honor of having his name attached to places and rivers in the far West Pacific and in the Atlantic Provinces. In Point Couverain, Vancou-

ver perpetuated the "name of the seat of my ancestors." In Point Hunter he showed his regard for " my very particular friend and physician," Dr. Hunter. In Cape Henry and Englefield Bay he commemorated his "regard for my much esteemed friend, Sir Henry Englefield." Cape Decision he so named because he there decided that this cape formed the north west continental point, as Cape Flattery formed the south west point of the archipelago. On Sept. 5th. 1793, the great name-father of the coast of North West America reached Nootka and sailed off to the Sandwich Islands there to winter. On April 14th. 1794 he returned to finish his survey and signalized his return by naming Point Woronzow in honour of the Russian Ambassador at the British Court. Lynn Canal he named after "the place of my nativity, Lynn in Norfolk." About the 53rd. degree of north latitude one can find on a good map Mussel Canal, Carter Bay, and Poison Cove. These names commemorate one of the few deaths that occurred during Vancouver's lengthy absence from England. One fine June morning Mr. Barrie of Vancouver's vessel, the "Discovery," went with three seamen in a boat to explore an inlet. When they reached a cove they found and ate some shell-fish. They were soon attacked with numbness in their faces and extremities; then their whole bodies became numb. Mr. Barrie, alarmed at the symptoms, recommended them to "pull for dear life," as violent exercise would induce perspiration. The three sailors bent to their oars and, like the sturdy British seamen they were, they "pulled for the shore." On landing, one of them, Carter by name, rose to get out of the boat, but sank down. He was tenderly cared for by the officer and his two mates who had to a considerable degree recovered, but he grew worse and died at mid-day on the pebble shore, ministered to to the end by his staggering comrades, wead and faint but dauntless in their dire extremity. Vancouver mourned the loss of a "true man and a good sailor," and gave the three names in commemoration of the event. Wooden Rock, off Cape Ommancy, is a sailor's monument to a brother sailor, Wooden, who there fell overboard and was drowned in the swirling tide. In his log Vancouver wrote he was "a good man and an active sailor." Point Conclusion indicates that the task was done and that the great seaman may now turn the bows of his vessels homeward. On his way out he names Cape Addington after the "Speaker of the House of Commons" and reached Nootka on September 2nd; leaves on 16th October 1794 and arrives in the Thames 20th October, 1795, to

find that without any solicitation on his part he has been gazetted a Post Captain.

In B. Columbia the C. P. Railway people have given us *Field* after D. D. Field of the U. S. family of Fields to which Cyrus of Atlantic Cable fame belonged; Mount MacDonald, after Sir John of glorious memory; Mount Agnes, after our one Baroness, Agnes of Earnescliffe; Revelstoke, after Lord Revelstoke, one of the Barings; Mount Stephen, to commemorate George Stephen, who has taken it as his title; Mount Sir Donald, to keep in remembrance for future generations the Donald Smith whose unwavering faith in the *rail* passage—the real Anian passage—never faltered even when the fortunes of the C. P. R. were at their lowest point.

They or others have given us Mount Cartier, Mount Tilley, Mount Begbee—and have incidentally presented us with a very good idea, viz., the appropriation of our mounts as memorials of the Fathers of Confederation. We have enough to go round and leave lots for the premiers of Canada, for our great scientists, historians and poets.

NEW BRUNSWICK

FROM A PLACE-NAME POINT OF VIEW.

In 1757 the township of Cumberland was formed and named after Fort Cumberland, the name given by Col. Moncton to the French Fort Beausejour after its surrender in 1755. It was a strip of land fourteen miles wide and extending from Cumberland Basin to Bay Verte—the whole distance across the isthmus of Chignecto which connects Nova Scotia with New Brunswick. In 1759 the growth of population in Nova Scotia to the south and to the north of the isthmus led the Nova Scotian Executive Council to create a new county embracing all the population north of Kings County on the Basin of Minas. The new county taking, its name from the fort and settlement around it, was called Cumberland, and embraced all the present Province of New Brunswick.

In 1765 the Nova Scotian Council divided the county of Cumberland, leaving the north shore as far as Bay Chaleur to its former local connection and constituting the River St. John region and all west of it another county to which was given the name of Sunbury. The origin of the name is lost. The townships created in Sunbury at that date were Burton, Conway, Francfort, Gagetown, Maugersville, and New Town.

Burton was named after Brigadier-General Ralph Burton who had a good deal to do with Quebec after Wolfe had conquered on the Plains of Abraham as our good friend Dr. Brymner has shown. *Conway* after Henry S. Conway, he and the Duke of Grafton being Secrateries of State in the Rockingham Administration formed in 1765; *Francfort*, probably so named from the French fort; *Gagetown* after General Thomas Gage, who was the principal land-owner there. *Maugersville* after Joshua Mauger, whose name is first on the list of grantees of land in that township. *New Town* is, of course, descriptive.

There are, then, of the men influential enough to have their names given to their respective townships—Burton, Conway, Gage and Mauger. Of these four, Mauger would be the most influential. He was wealthy, had a distillery in Halifax, where Mauger's Beach still perpetuates his memory, and was engaged in large financial transactions with the Government. Thus in the Dominion Archivist's report for 1894, mention is made of the fact that the Lords of Trade writing to Acting-Governor Belcher in 1763 inform him that, when money is required, he is to apply to Mauger or his agent in Halifax, drawing on the Treasury in his favor. In 1764 Mauger was wrothy with the Lords of Trade and all the officials, and declared that, if he "does not get back the money, he will petition Parliament," "one good effect of which," he says, "if there is no other, will be to warn people against advancing money on account of Government." His complaint appears to have secured the support of Chief Justice Belcher; for in February, 1765, that functionary states Mauger's case to the Lords of Trade. In the same year (Oct. 28th) the Governor (Wilmot) advises the Lords of Trade that he has drawn on them in favor of Mauger for £1,504. Evidently Mauger had influence and had a great interest in the new county formed on the banks of the St. John River. What more natural than that he should have suggested to Montagu Wilmot that Sunbury would be a good place-name, taking it from the village of Sunbury, near London?

Whatever the origin of this early county place-name, it is certain that population increased and with it the desire to have a larger Colonial establishment. In 1784 New Brunswick was erected into a separate province and Thomas Carleton was appointed its first Governor. Thousands of United Empire Loyalists had found their way to the Maritime Provinces and thousands more began the great work of colonizing the littoral of the St. Lawrence from Lake St. Francis to Lake Ontario; the shores of Lake Ontario as far as the Bay of Quinte; the neighborhood of Niagara and part of the shores of the Detroit River. They were finding homes in the ports of Shelburne, Halifax, Guysboro. They were penetra ting into the valleys of the Annapolis and the Cornwallis and the Avon. They were pouring into the St. John River region, in great numbers. Organized government must go with them. It was in those days felt to be a difficult, if not an impossible, task to manage from Halifax the affairs of the people in such distant regions as Burton and Gagetown. So Thomas Carleton was sent to do the work.

No doubt he and his Council studied the subject carefully. The first work they had to do was to divide the province into counties. They found on the map the counties of Cumberland and Sunbury—too large and unwieldy for purposes of home rule. Accordingly they began to subdivide and to name the subdivisions. Cumberland belonged about equally to both provinces. But the newer yielded gracefully and abandoned Cumberland as a place-name to Nova Scotia. They did the next best thing. Looking on the map of England—the motherland for whom so many had sacrificed everything, home and ease and wealth and friends—they saw that Cumberland was adjoined by Westmoreland and Northumberland. What better names than these could be suggested? Surely none. So these two were adopted. The monarchic principle found expression in the place-names of Kings County and Queens, lying side by side. In St. John they preserved in its English form the old name given by De Monts in 1604. In Charlotte County (after Queen Charlotte) there is an exhibition of that strong personal love for the sovereign which characterized the men and women of that period. Sunbury, shorn of its giant dimensions, was retained as the sole memorial of the province's former connection with the sister province of Nova Scotia.

The new names and boundaries of the counties were authorized by Royal letters patent in May, 1785.

During the next year, 1786, the Governor and his Council appear to have addressed themselves to the task of subdividing the eight counties they had created.

Following the division into two counties made in 1765, several townships had been named by the Nova Scotian executive and in addition to those already mentioned, there were Hopewell, Hillsborough, Moncton, Campobello (1770) Sackville (1772) and Prince William (1783), all, except Campobello and Prince William, in the Cumberland division.

These had all been designated townships in accordance with the plan adopted by Nova Scotia.

But the Governor and Council of New Brunswick objected to the word "township." Possibly they feared it as too suggestive of the New England *Town* which had proved the forcing house of revolt, the hotbed of rebellion. Possibly, too, many of them had come from Maryland and Virginia, and were thus familiar with the word *Parish*; or probably it sounded more English to men who shrank from having around them any reminder of the cruel harshness meted out to them by the successful rebels. Whatever the reason, they decided upon the word *Parish*, instead of township, to represent the subdivisions of the county. They changed Amesburg into Kingston. Francfort was merged into Queensburg; Conway was divided between Lancaster and Westfield; Newton became St. Marys—and the twelve of the period prior to 1784 became 26, and these in the years intervening became, by 1891, 162 parishes and wards, forming the units adopted in the Census work, of which 66 per cent. or two-thirds are names of persons or places of English origin.

I have not time to give in detail the place-names of New Brunswick with their meanings. The name of the Province was selected in honor of the reigning family the word *new* being given in accordance with the precedent established when New France, New England, New Netherlands, New Sweden and New Scotland (Nova Scotia) were adopted.*

*Anyone who wishes to study more minutely the place-names of New Brunswick is referred to a paper by Prof. Ganong in the Canadian Royal Society's Proceedings for 1896. Ganong divides the place-naming period of New Brunswick into (1) The Indian period; (2) the period of exploration, 1000-1604; (3) the French period; (4) the New England period, 1760-1783; (5) the Loyalist period, 1783-1790, and (6) the post-Loyalist period, 1790-1896. He says New Brunswick is rich in Indian place-names and that, with three or four exceptions, the names of the rivers, lakes and harbors are of Indian origin.

OTHER ILLUSTRATIONS.

Connected with the place-names tender sympathy sometimes crops out. For instance Fort Connolly was named after James Connolly, whose daughter Nellie, a beautiful maiden of sweet sixteen, young Douglas (afterwards Sir James Douglas and Governor of Vancouver Island) along with his other duties, found time to woo and win as he sojourned, in the employ of the Hudson's Bay Co. in the region of Bear Lake at the head of head of the branches of the Skeena River on the far off Arctic slope of our vast country. No doubt after honoring the father, Douglas found his path to the lady's heart all the easier.

Frequently a story of hardship conquered by love and patience is embalmed in the place-name. The other day I read of Joan Murray Ritchie who had recently died. She was born in the little village of Knock in Dumfrieshire, Scotland, in 1809. Her father dying when she was a child she became a domestic servant with a family in Annan. When 24 years of age she married William Ritchie of Greystones. In 1841, with three children to care for, the couple came to Canada. Ritchie hired himself to a Scotchman of Vaughan for $100 a year with a house and pasture for a cow. After ten years he saved enough to buy a farm in the township of Flos, (name given from Gov. Colborne's wife's poodle dog), having himself during those years become an expert backwoodsman, while his wife had learned all that was required of a farmer's wife in those days. She knew how to make maple-sugar, to spin yarn and make homespun. She understood the art of the dyer and could take the wool from the sheep's back and put it through all the processes needed to transform it into a suit of clothes, to shield her *mon's* back and sides and front from the blasts of a Canadian winter. In 1851 the family moved to their new home in the forest of Flos and built them a log cabin on the banks of the Wye, (a transplanted Welch word signifying *water*, and therefore often used for rivers). In the first year the husband and father cleared a patch of ground for wheat and potatoes and then went away to earn enough money to carry the family over the winter, leaving the wife to take care of the lonely forest home. Year after year they worked and planned to surround themselves with comforts, and extended a helping hand to other settlers, till a village sprung up of which Ritchie was appointed Postmaster and to which he gave the name *Elmvale*, in honor of his

noble-hearted wife whose birth-place among the rugged Scotch hills was called *Elmvale*. Mrs. Ritchie survived her loving husband 30 years and had the happiness of seeing her children married and settled around her, the whole numbering 115, viz., 4 daughters, 3 sons, 72 grandchildren, 35 great grandchildren and one great great grandchild.

Gratitude is embalmed in some place-names. Here is one example, "to our purpose quite."

In the forties there lived in Louisiana a man named Rev. William King who married a planter's daughter. On her father's death she inherited 15 slaves. These, on her death, Mr. King liberated and, after selling his Louisiana plantation, carried them to Canada in 1848. He found in Western Canada (now Western Ontario) a large number of fugitive slaves, very ignorant and living in great poverty. In 1850 he presented their cases to the Presbyterian Synod, then in session in Toronto, succeeded in enlisting the sympathies of its members, as well as those of other denominations, and secured the co-operation of Canadian anti-slavery societies. As a practical method of aiding the slaves a company was incorporated in June, 1850, called the Elgin Association. A prospectus was issued for the "social and religious improvement of the colored people of Canada" as the Association announced its object. The public was asked to take stock to the amount of $20,000. With the money 9,000 acres of land were purchased from the Government at an average cost of $1.75 per acre. This tract was divided into lots of 50 acres for which the colored settler paid $2.50 per acre in ten annual instalments with interest. Mr. King formed the nucleus of the settlement by giving his 15 freed negroes their land in 1850. While the Fugitive Slave Law was in operation in the United States many thousands of slaves found their way by the "underground railway" into Canada, and in 1853, 100 families had settled in the King tract, while many more occupied improved farms in the neighborhood. They were very helpful to each other, and most of the farms were cleared and homes built by means of "chopping bees," those warm-hearted neighborly institutions of early Canadian times. The settlers also found employment on the farms of their white neighbors and sold railway ties at seven cents each to the Canada Southern Railway then under construction.

As they advanced in prosperity a village sprang up in the settlement being the railway station of *Buxton*, so named by the colored people in honor of Sir Fowell Buxton, the dis-

tinguished philanthropist whose life-long devotion to the cause of the slave in the colonies of Great Britain resulted in the Imperial Statute of 1833, by which the last vestige of slavery was removed from Canadian soil. The village of "Buxton" memorizes to this day, and let us hope for all time, the great event of the legal abolition of slavery in the British Colonies, and the gratitude of the fugitive slaves who found an asylum in free Canada from the wrongs and sorrows of the land of their birth.

On the 27th May, 1753, there sailed out of Halifax Harbour a fleet of fourteen transports carrying 1,453 persons, mostly Germans, with a few French-speaking Protestants from Switzerland and France, under charge of 92 regular troops and 66 rangers. Their destination was Merleguesh. Landing safely they began to build a town which they protected, on the land side from Indians, by palisades and blockhouses, and on the water side from pirates, by a battery called Fort Bowscawen. With true German promptitude they began at once to obey the primal command "increase and multiply" for Jane Margaret Bailey gave birth to a child on the first night after the landing. From this band has largely sprung the 37,000 souls ascertained by the Census of 1891 to be the population of the fine County of Lunenburg—as the town and county were christened for the first settlers a fortnight before they left Halifax, in memory of Lüneburg, in Hanover, Prussia. One of their first acts after landing was to call the stream on the banks of which they stepped from the boats, *Rous's Brook* in honor of Capt. Rous under whose safe conduct they had come to their future home. Thus Capt. Rous is remembered in our place-names, and that his memory is worthy of perpetuation is plain from the fact that he was in command of the *Sutherland*, 50 guns, when Wolfe was before Quebec, and that it was from the deck of this ship that Wolfe issued his last orders before he climbed the steep slope leading to the Plains of Abraham and to fame.

In the year 1783 the British legion which had served with distinguished reputation in the war between Great Britain and some of her American Colonies under Col. Tarleton came to Nova Scotia and began a settlement at Port Mouton, and laid out the boundaries of a town to which they gave the name *Guysboro.* They soon found that the soil was stony

and barren, and, although they had built several dwelling houses, they determined to abandon the place. While they were making preparations for their departure a fire destroyed everything they had. A King's ship was at once despatched from Halifax with provisions, or they would have suffered from hunger and exposure. Most of them gladly seized the opportunity and removed to Chedabucto Bay at the eastern end of the Province, where they joined a number of persons, belonging to the civil department of the army and navy, who left New York when the British forces evacuated it; and as they had nothing else to take they took the name and gave it to the present Guysboro, leaving Port Mouton to rejoice in its original French name given it 180 years before by De Monts in 1604, because one of his few and precious sheep there jumped overboard and was lost. The new name of Guysboro was manufactured from the Christian name of Sir Guy Carleton, to do honor to the man to whom the British Authorities had committed the task of transporting from New York the thirty or thirty-five thousand Loyalists, Hessian soldiers and others, servants and slaves, who, on the conclusion of the war between Great Britain and her revolted colonies, resolved to cast in their lot with the mother land, and whose experience of Sir Guy's considerate mind and feeling heart had aroused in them the strongest regard for him.

These somewhat lengthy statements serve to show to what extent, and for what reasons, our place-names have been imported: some from the political relations that exist or have existed between the two mother countries and ourselves; others from sentimental causes that do credit to the warm hearts of the Canadian people, proving:—

"How far the gulf stream of our youth may flow
Into the Arctic regions of our lives."

Time would fail to tell of the authors, poets (Tennyson, &c.) heroes of the mother-land* commemorated in our place-names.

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*Oliver W. Holmes referring to the Mother Isle finely says:—

"One half her earth has walked the rest,
In poets, heroes, orators, sages."

SECOND DIVISION.

Passing to the other great division of place-names, technically the *enchorial*, they are of Indian and Canadian origin—using the word *Canadian* to include Nova Scotians, New Brunswickers, and all others, as well as the inhabitants of Old Canada.

They include (1) names derived from physical characteristics; (2) names derived from individuals of local fame.

The first class includes the Indian names of the country. These have the full, unadulterated flavour of the soil about them. They are aboriginal in their bouquet. Long before the coming of the White Man—long before De Monts sailed from Port Royal (now Annapolis) along the coast to Florida without finding a trace of the White Man—the Indian tribes had mapped out this continent and divided it among themseves. With their keen eyes and practical habits they applied place-names which embalm physical characteristics whose aptness, we, of these times, have no difficulty in recognizing. Most of the orographic place-names of to-day are of their coining. Thus, Massachusetts—"the great blue hill."

Many of the rivers owe their names to the Indians:—Mississippi, Saskatchewan, Assiniboine. Many of the portages over which the canoes were carried from one water-stretch to another still bear Indian names.

In the case of the imported place-names, those formed of material from outside, I used the Provinces of British Columbia and New Brunswick as repositories from which to draw illustrations. In the case of the Indians the other provinces may be drawn upon.

Manitoba is an Indian word meaning *Strait of the Spirit*, the Indian legend being that in the narrower portions of Lake Manitoba strange noises were heard by the Indians. These noises, not accounted for by any experience of the Indians, were considered supernatural, and, therefore, caused by the Manitou—the Great Spirit. Pere Lacombe says the word should be *Manitowapan*, *supernatural or god-like*—the Indian dwellers on the shores of Lake Manitoba deeming it to possess supernatural qualities; whether in the way of noisemaking or in the line of healing or what else, not specified.

Assiniboia, perpetuates the Assiniboins—a tribe of Indians whose name is thought by some to mean Stone boilers and

by others Dwellers in a rocky region—both epithets being true to fact.

Winnipeg comes, after various modes of spelling, from two Cree words—*Winne* "cloudy" or murky, and Napee, "water;" the Crees calling the Lake, Winnipec—meaning water tinged during the summer months with a green color owing to the presence of a vegetable growth which abounds in parts of the lake. "It is a minute, needle-shaped organism about half an inch in length, sometimes detached and sometimes in clusters, and at times the water is almost as thick as pea-soup."

Pembina : nipa-mina, a Cree word for a red berry which grows in great abundance along banks of rivers.

Shubenacadie ; a place for ground nuts.

Pictou ; Pict means explosion of gas. Whenever in Micmac, the noun ends in the sound "kt," the regular form of the case locative is the addition of "*ook*." Pictook is equal to Pictou. Peter Toney, an educated Micmac, says there was once on a time a big fire which burned the tents of a large encampment, and always after the Indians referred to it as Muskeak Bucto (big fire) corrupted by the Whites into *Pictou*. Mr. Howe said Pictou means anything like a jar or bottle which has a narrow mouth and widens afterwards. Pictou Harbour does this; hence the name. It seems more than probable, from the coal found there and from the coal fires that have been burning in the region suggesting the likelihood of fires caused by lightning, that the root word means fire or some manifestation of fire.

Chebogue, N.S., from Itebogue, spring water.

Merigomish, N.S, from Micmac, *Mallegomichtk*—"hard wood grove."

In Nova Scotia and also in other provinces the Indian names were in some cases translated into the French by the French when they gained supremacy, and sometimes into English when in turn the English came to rule.

Apohech-Kumoochwakadi, "place of Black Duck," was translated by the French and called Riviere des Canards. The English to-day call it *Canard River*. Eel Brook is the English translation of the Indian *Oopt-omagogin*—"place for eels." Cranberry Head is simply the English of the Indian *Soonecatio*, "place for cranberries." *Membegwich* means "Little Harbour" and so the English call it Little Harbour.

In Nova Scotia a fair number of Indian names remain, though more might have been retained. A good many years

ago I picked up a torn newspaper. Examination showed it to contain some verses of poetry that seemed, both from the sentiment and the jingle, to be worthy of preservation. There was no name, assumed or real, of author attached to the poetry. I sent a copy to Beamish Murdock who embalmed the verses in his history of Nova Scotia without having been able to discover the author. I wrote to Angus Gidney, whose long experience on the Press and whose literary taste would likely enable him to throw light on the authorship, but neither he nor Mr. Calneck, to whom I also applied, could give any information. Lighthall mentions De Mill as probably the author. But De Mill when I asked him could give no clue. Rev. J. Campbell, who wrote a book on Yarmouth County, 1876, attributes it to " our esteemed fellow-citizen " Richard Huntingdon, with what degree of authority I know not. The verses themselves run as follows :—

The memory of the Redman
How can it pass away
While his names of music linger
On each mount and stream and bay;
While *Musquodoboit's* waters
Roll sparkling to the main,
While falls the laughing sunbeam
On *Chegogin's* fields of grain.

While floats our Country's banner
On *Chebucto's* glorious wave,
And the frowning cliffs of *Scatarie*
The trembling surges brave;
While breezy *Aspotogan*
Lifts high its summit blue;
And sparkles on its winding way
The gentle *Sissiboo.*

While *Escasoni's* fountains
Pour down their crystal tide;
While *Inganish's* mountains
Lift high their forms of pride;
Or while on *Mabou's* river
The boatman plies his oar;
Or the billows burst in thunder
On *Chicaben's* rock-girt shore,

The memory of the Redman !
It lingers like a spell
On many a storm-swept headland,
In many a leafy dell ;
Where *Tusket's* thousand islets
Like emeralds stud the deep ;
Where *Blomidon*, a sentry grim,
His endless watch doth keep.

It dwells round *Catalone's* blue lake
Mid leafy forests hid :
Round fair *Discouse* and the rushing tide
Of the turbid Pisiquid.
And it lends, *Chebogue*, a touching grace
To thy softly flowing river
As we sadly think of the gentle race
That has passed away forever.*

If we turn to the St. Lawrence River Provinces, we find the traces of the Indian everywhere. I can only give a few specimens and those in the briefest manner possible.

Quebec is Indian for the narrow strait formed by Cape Diamond jutting out into the river.

Ontario is Indian for a "beautiful prospect of hills and waters," or a corruption of the Indian word *Onitariio*, meaning "beautiful lake or waters," the appropriateness of which, as of every place-name given by Indians is at once apparent; and the same may be said of the early French names the environment being the same in both cases. It is a good deal more than can be said of our English place-names although we in Canada may fairly and proudly boast of having carefully abstained from imitating the barbarities of our cousins to the south of us. When the traveller asked the French native what the river in one of the Western States was called over which he was ferrying the stranger, the answer was Bloody Gulch," the Yankees call it ; with us it is *La Brunette*—'the brown river.'"

***Fortunately the poet's vaticinal fears have not been realized. In the provinces of Quebec, Ontario, Nova Scotia, New Brunswick, Prince Edward Island and British Columbia there has been, under the wise and kindly care of the Government of Canada, acting through the Indian Department, an increase of 11,005 in the Indian population of those provinces during the past 25 years ; an increase of nearly 24 per cent.**

Lake Erie is the *lake of the wild cats*, or as my friend *Dr. Bourinot says, the lake of the *Raccoon*, the Indians resorting in the ancient times to the region round about for raccoons. Lake *Huron* is the lake of the Indian-Huron tribe who seem to have cultivated shocks of hair, (French *Hure*,) similar to to those of certain African tribes with which we of the present time are familiar from our geographies or from personal observation. Lake *Michigan* is from the Indian Mishigan, meaning *monstrous lake;* and Lake *Nipissing* is Indian for *diminutive*, the lake being small by the side of the great lakes. *Kaministiquia* means *wide river*. *Manitoulin* is a Frenchification of the Indian word Manitou wahining—"*the dwelling place of spirits.*" Mattawa (Indian Mataowan) means "*place where two rivers meet.*" *Ottawa*, according to Father Arnaud, means "the place where the water boils and surges" and according to Rev. Mr. Beatty, it means the "River guards," the Ottawa tribe of Indians being so called by the Indians of Montreal because they guarded the river and prevented the irruption of the more northerly tribes into the regions at the mouth of the river. Mr. Sulte thinks the word means "men of the woods." *Penetanguishene* means "rolling of shining sands." *Toronto* means "place of meeting"—a name that well characterizes it to-day, as the boast is that it is the City of Conventions.

When the St. Lawrence River Indians referred to the Maritime Provinces they called the region "Abenakis," derived from *Waben*—"it is dawn" and Ykki, "land;" or "land of the dawn or east." The English, who are essentially water-men, have seized upon the other peculiarity and call them the Maritime region. But the "Dawn" land is a fine poetic name.

Abittibi; (*Abitt* meaning "middle." Nipig meaning "water)" the middle water, Lake Abittibi being half way between Nipissing Lake and James Bay.

Athabasca; Ayapp as Kais, meaning "there are rushes, reeds or herbs here and there."

Ka Kouna; Kâkwa means porcupine; nak, "at the;" equal to "The Porcupine's home."

Chicoutimi; *Ishko*, "up to where;" timiw, "it is deep." "The end of deep water."

Shawenegan; *Shavo*, "through," *nigan*, "tool," needle

*** I am proud to know that since the above was written the Doctor has received the well merited honour of a K.C.M.G. from the Sovereign.**

or awl; the fall of water having acted like a tool to pierce the rock.

Escoumains means the berry region.
Yamachiche means muddy bottom and shore.
Yamaska means shore covered with reeds.
Kamouraska means reedy shore.
Mingan means the wolf region.
Maskinonge means the house of the marvellous Pike.
Missisquoi means the home of the big woman.
Madawaska means river having its outlet among reeds.
Mistassini means large stone lake.
Miscouche means the bear country.
Saguenay means outflowing water.
Temiscouata means deep everywhere.
Tadousac means the hillock region.
Caughnawaga means at the rapids.
Quinte—Kahenta means meadow.
Hochelaga means Beaver Dam.

We must not longer dally with the beautiful Indian names beyond expressing a hope that the Post Office authorities, who are responsible for a great many place-names, will treat with tenderness any remaining Indian names, especially in the North West.

Time is left for only a few words about the 2nd class, the place-names memorizing men of local or Canadian fame.

George M. Dawson has, it seems to me, been especially careful to give prominence to our men of Canadian-made fame. Ogilvie's name has been blown about this pendant globe in connection with Canada's great treasure-house, the Klondike. He stands for honesty and trustworthiness—a civil servant of whom the Service and the Country may well be proud. We know now what he has been doing as an explorer. But George Dawson years ago gave a valley in the Yukon District the name of Ogilvie Valley in honor of William. Both Dawson and Ogilvie commemorated that genial Minister of the Interior, Thomas White—the first in Mount White and the second in White Pass.

Sir William Logan's memory enjoys the unique distinction of having five monuments, three of them mounts, more enduring than brass or marble. Mount Logan near Lake Francis in Yukon given by Dawson; Mount Logan near

Mount St. Elias and Mount Logan in Rimouski County by Murray. The fourth is an island in the Nipigon region, given by Bell in 1869, and the fifth is Logan Inlet in Queen Charlotte Islands.

Lake and River Labarge (Yukon) are named after Mike Labarge who was engaged in exploring, for the Western Union Telegraph Co., the river and adjacent territory in Yukon for the purpose of connecting Europe and America by telegraph through Canada, Alaska and across Behring Strait and on through Asia. The exploration took place in 1865-7. The successful laying of the Atlantic Cable in 1866 put an end to the project. Mike was on hand to greet Nansen in Montreal the other day. Telegraph Creek commemorates the same expedition. Mount Dawson, near Lake Labarge, and Dawson City are place-names which tell of one of the most indefatigable explorers of modern days, one whose career does honor to the Civil Service of Canada. The men of the Geological Survey are worthy of praise because they have in so many instances retained the Indian names.

In 1864 a notable gathering took place in the historical City of Quebec. There were gathered men from the provinces of Canada, (now Ontario and Quebec,) from Prince Edward Island, from Newfoundland, from New Brunswick and Nova Scotia. They met to see what could be done to bring about the amalgamation of British North America. To this gathering came the venerable Taché, the astute John A. Macdonald, the fiery Cartier, the splendid debater McDougall, the great Onontio George Brown, the able financier Galt, the shrewd Mowat, the eloquent McGee, the vehement Tupper, the suave Archibald, the trusted Tilley, the active Mitchell, the keen-minded Fisher and many others of whom time fails me to tell. They debated and discussed. Many suspicions were in the public mind. But in secrecy, as was necessary, they worked and hammered till they produced 72 resolutions which, after being fused in the alembic of the statute-shapers of the British Parliament, were placed upon the Imperial Statute book as the *Union Act of 1867*. Those who took part in this historical work have been remembered in the place-names Taché, Macdonald (municipality and mount) McDougall, Brown, Campbell, Mowat, Langevin, Tupper, Tilley, Archibald, Johnston and Chapais. There are some others whose names might well

be adopted as place-names and there are some—such as Galt and Cartier and Grey—whose names had already been employed before the Quebec Conference took place.

Morris in Manitoba commemorates Alexander Morris, a man who strove to make his country great and prosperous. De Salaberry, of whose good works Sulte has sung, is remembered in Salaberry in the French district of Provencher.

We recognize at once, in the place-names of Burpee and Bidwell and Billings and Dawson (ex M.P.) and Howland and Mills and Robinson and Sandfield and Brantford and Papineau, Lauder, Osler, Widdifield, Kirkpatrick, Hagerman, Blake, Lount, Himsworth, Chapleau, Schreiber—public men who have worked for the best interests of the country.

Of course this vein might be worked and results produced for a whole night. What has been said must suffice.

And yet we have but skirted the shores of the subject. An inexhaustible supply is untouched.

Some place-names are corruptions arising from misunderstanding of previous names. We have had place-names given by Basques, Portuguese, Spaniards, French and English. Some of these earlier place-name givers bestowed names that from the ignorance or carelessness of subsequent generations of different races have been subjected to much phonetic abrasion, and in some instances mutilated beyond all recognition. In London, Eng., under the operation of this factor there is *Sermon* Lane, the origin of which is traced to Shermonier's lane —the lane in which stood the office of the *money-shearers*, or clippers connected with the Mint. So in Canada a mountain near the head of the Bay of Fundy is known as the Shepody Mountain. The name (so say some) the French gave it was *Chapeau de dieu*, from the cap of cloud which often overhangs it. The English who followed continued the name as Chipody and later as Shepody.

Down in the Gulf of St. Lawrence forming the most easterly point of the north shore of Baie des Chaleurs is Cape d'Espoir, so named because it was a welcome sight to early French fishermen who had lost their bearings in a storm. The English call it *Cape Despair* and the lugubrious change is reported to have been intentional having been caused by the total loss there of an English troopship carrying a portion of Sir Hovenden Walker's squadron in 1711. We have added to our list of post offices in this very year of grace, 1897, the post office of Cape Despair.

One of the gates in the picturesque City of Quebec was called the *Hope* gate, after one of the Hope family. The French christened it *Porte de l'Esperance.*

Cap Faim, commemorative no doubt of an unpleasant experience of hunger by a band of early navigators, has, under the phonetic spell of English sailors, been transformed into Cape Fame.

Sir James Le Moine tells how one Shepard built a villa and called it Shepardville, near the City of Quebec, and around it in time clustered some *habitants'* houses. To the cluster the French gave the name Bergerville, translating the English word "shepherd" into the French vernacular, as was natural. Subsequently, Irish settlers multiplied and with characteristic *insouciance* they called the place *Beggarsville.* Once again the French got the upper hand, and, with characteristic politeness, translated the Irish name into "Village des Queteux," not *village des gueux*—the village of the almstakers, not the village of the beggars—a nice distinction.

Cape Speer in Newfoundland was originally Cap-da-Espera, Portuguese for Cape Hope. Nobody sees even a homeopathic scintilla of *hope* in its present name. Cape Raz was Portuguese for Flat Cape. Its present name, Cape Race, carries with it no suggestion of flatness. Cape Ray comes from the Basque word *arraico* meaning "approach," the point for turning has been reached." It is Ray by corruption. It would need a Roentgen Ray to uncover its original.

Some place-names have a singular power of asserting themselves against persistent efforts to change them; thus, Basin Minas was originally so called. It then became, in French, Basin Mines, but as there were no mines in the vicinity it has got back to its original Portuguese rendering, Minas, "where there are springs."

Bay of Fundy was originally Baya Funda, Portuguese for Deep Bay. The French called it La Baie Francaise. But its original name clung to it in spite of the long French occupation of Acadia.

Imagination, a lively fancy, plays a not inconsiderable part in the efforts to account for many place-names. Thus one of the fanciful derivations of the word "Quebec" is "O! *quel bec*" freelly translated "O! what a beak," supposed to have been uttered by the French sailors when they first saw

the giant headland looming up as mysterious as the great *roc* of "The Arabian Nights."

In New Brunswick a river is called, in local parlance, Ken-ne-bec-ay'shus, and local tradition, in endeavoring to account for the name, affirms that once on a time when the river banks and the adjacent country were covered with a dense forest there stood on the clearing, before the river, a tavern, the proprietor of which was named *Casey*. Two travellers in a terrible storm pushed on their way and coming suddenly upon the house thought of the comfort the inn and its accompanying "hot toddy" would afford and asked each other with incredulous joy, "Can it be Casey's?" Hence, of course, the name.

There are two mountains near the border line of the two fine counties of Colchester and Pictou in Nova Scotia, Mount Thom and Mount Ephraim. Local tradition gives the following account of the origin of these place-names. The early settlers of Truro, Nova Scotia, came from New Hampshire (New England) and for a time lived in great terror of the Indians and accordingly they resorted at night to a stockaded fort where they might sleep without dreaming of wild Indians, war-whoops, tomahawks and scalping knives. On one occasion word was sent to them from Halifax warning them of the hostile intentions of a large band of Indians in camp at or near Pictou. The settlers resolved upon sending scouts across country to find out. Tom Archibald, Ephraim Howard and John Oughterson volunteered for the service. After journeying for some time through the dense forest they came to a hill according to their calculations not far from Pictou. Selecting the tallest tree Oughterson said to Archibald "Mount, Tom." Tom in obedience to the order mounted the tree. Not seeing the water from his lofty perch, he so reported and the trio travelled some distance further and came to another hill where they repeated the effort to see salt water, only on this occasion the command was addressed to Howard, "Mount, Ephraim." On their return to Truro they described the incidents of their expedition and among these were the tree-mounting exploits. Naturally the hill where Tom climbed the tree became known as Thom's Mount and the other as Ephraim's Mount. Hence to this day Mount Thom and Mount Ephraim remain the distinguishing place-names of these two elevations.

I have thus very imperfectly given a partial view of the

place-names of Canada. It will be in the future increasingly difficult to bestow appropriate place-names. Now that we are one country we must avoid the duplications that have come to us as a legacy from the ante-confederation period. Perforce, the fund of appropriate names from France and Great Britain nears the bottom. We have not by any means exhausted the names of the saints in the Roman and Saxon Hagiologies but as we had 499 places in the Census commemorative of these worthies and have a good many more of them outside of the Census lists it is plain that we cannot depend much longer upon the saints to supply us with place-names.*

The finer taste of modern times requires that we do not imitate our neighbors and hunt in ancient Greek history for such names as Athens, Troy, Tyre, Sidon, or give such fantastic names as Tomb City, Henpeck City and the like. The practical tendency of the age is opposed to names having an eponymic† existence. Isaac Taylor, already quoted, says, "If the true principles of Anglo-Saxon nomenclature were understood our Anglo-American and Australian cousins might construct an endless series of fresh names which might be at once harmonious, distinctive, characteristic and in entire consonance with the genius of the language."

I suggest that it would be a step in the right direction for the Government to appoint a permanent commission of three or more competent persons to provide the new place-names we are continually needing.

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*The extent to which Canadians were a maritime people, in the early years, is seen in the fact that there are, in the Dominion, 55 places to which the name of Ste. Anne, the Patron Saint of sailors, has been given.

†A personal name evolved by popular speculation to account for some geographical term the true meaning of which has not been understood; as the speculation that France takes its name from Francus, a son of Hector; and Britain from Brydain, a son of Aenius; and Scotland from Scotia, a daughter of Pharoah.

P. S.--Page 44, line 5. Since writing that the C. P. Ry. is responsible for the place name of Mount Macdonald, I found from official reports that this Mountain, as well as others, was named by Mr. Otto J. Klotz, our efficient President, who was the first to triangulate the mountains in the Rockies and Selkirks along the route of the C. P. Ry.

G. J.

The Fur Seal of the North Pacific.

J. M. MACOUN.

Assistaut Naturalist to the Geol. Survey of Canada.

[*Read March 4th, 1898.*

The principal resorts of the Fur-seals of the North Pacific (*Callorhinus ursinus*) are the Commander Islands near the Kamchatkan Coast and the Pribylov Islands in Lat. 56° on the eastern side of Behring Sea. They were at one time found in large numbers on some of the more northern of the Kurile Islands and on several small islands between Kamchatka and the Asiatic mainland, but being unprotected have been on these islands almost exterminated. The seals frequenting the Commander Islands differ in no essential respect from those found on the Pribylov Islands. They have the same habits, eat the same food and meet the same fate as the Alaskan seal so that in order to restrict my paper to reasonable limits I shall speak only of the latter animals.

Though the Pribylov Islands were not discovered until 1786, Russian explorers and traders had for nearly fifty years been searching for the breeding places of the fur-seal that at certain seasons were very abundant in the passes of the Aleutian Islands and along the Alaskan coast. When Pribylov landed on St. George Island, one of the group which bears his name, he found no trace of the island ever having been inhabited by man and it is due principally to this fact that they were the chosen haunt of the fur-seals. Here for thousands of years they had been unmolested, and if in earlier times they bred on the Aleutian Islands further south they had long before been exterminated by the inhabitants of these islands who passed freely from one island to another in their skin canoes and boats.

The Pribylov Islands are not so barren and bleak as they are generally supposed to be. Except where the rocks have not yet been covered with soil the ground is everywhere hidden by a luxuriant growth of grass interspersed with beautiful flowers. Though the hours of sunshine are few in summer this does not affect the coloring of the blossoms, for I have nowhere seen deeper, richer colors than are exhibited by the flowers growing on the Pribylov Islands. Blues and yellows of every imaginable shade predominate, the light yellow of the Poppy contrasting with the orange rays of the Arnica and the Dandelion, and the pale blue of the Polemonium with the very dark blossoms of the Monkshood.

The number of species is not great, only about 150, and of these only some 50 species are at all conspicuous, but these make up in individual numbers for the paucity of species. They are so mixed together, however, that without studying them attentively one is apt to imagine the number of species to be much greater than is really the case.

Pribylov, in the name of the Russian government, took possession of the islands he had discovered, and from 1786 until 1867 they were owned by Russia. With the cession of Alaska they passed into the possession of the United States. Reliable statistics are not available for the earlier years of the Russian control of the islands, but it is known that at least 1,000,000 skins were taken from them between 1798 and 1821, and about the same number was marketed between 1821 and 1867. The method of killing, and curing the skins will be dealt with in another section of this paper.

The islands being uninhabited, the Russians when they began to kill the seals transported several hundred natives from the Aleutian Islands to the Pribylov Islands. Here these people built for themselves sod huts or barabaras such as they had always lived in. There was no improvement in this respect until the U.S. control, when comfortable modern houses were built for all the natives. In many other respects, too, their condition has been improved, they have been taught habits of cleanliness and economy, aud nearly all of them read and speak English though they still retain the Russian religion. One of the stipulations made by Russia when the islands were sold to the United States was that no other church should be established there. During the sealing season from June 18th to August 1st, these people work very hard, but throughout the rest of the year they live in absolute

idleness. A government agent regulates the amount of goods of various sorts which each may purchase, including provisions and clothing, so that there is no waste. The climate admits of no agricultural pursuit, and the islands being without timber there is no work of any kind upon which the natives can be employed.

Before entering into a detailed description of the seals and their habits some of the special terms by which they are classified in the islands may be defined.

The young of the fur-seal are called "pups," the mature females are called "cows," the young male seals between 2 and 4 years are known as "bachelors or holluschickie," and the mature males as "bulls." The seals when on the islands are divided naturally into two classes, the breeding seals going upon the rookeries, and the bachelors on the hauling-grounds. Upon the rookeries the mature seals congregate and here the young are born. The hauling-grounds are usually, though not always, close to the rookeries. Here the young male seals are to be found when ashore, and from these hauling-grounds the seals killed on the islands are driven.

The first bull reaches the islands about May 1st and between that time and May 15th they come ashore in increasing numbers, by June 1st nearly all have arrived and taken up stations on the rookeries—from 20 to 50 feet apart on the more crowded rookeries; at greater distances on the less compact ones. During the whole month of May and the first week in June fights between these bulls are frequent, but though sometimes terribly torn they seldom kill one another. From the date of his arrival until the rookeries break up in August the bull seal does not leave his harem. During that time—about three months—he neither eats nor drinks and never sleeps for more than a minute or two at a time. The mature bull weighs between 400 and 600 pounds, the specimen at the museum of the Geological Survey being about the average size.

The first cow arrives about the middle of June and the number gradually increases until July 15th when the rookeries are said to be at their height, that is there are more cows upon them at that time than at any other. As the cows come ashore they are sometimes caught by waiting bulls and driven or pulled into their harems, but as a general rule the cow goes where she pleases and is very apt to join a harem in which several other cows have already congregated The fur-seal,

as you are all aware, is a polygamous animal, harems of from two to fifty and sometimes 100 cows being formed around individual males. The young are born very soon after the arrival of the cows and soon form themselves into little groups, or "pods" as they are called on the islands. They spend their time in sleep and play, and grow rapidly. They can swim when first born but do not go into the sea of their own accord until a month or six weeks old, when on calm days the greater part of their time is spent swimming and playing in the water in front of the rookeries. A little later they go long distances from the rookeries on which they were born and haul-out in great numbers on the shores of quiet bays.

The earliest date on which I have seen pups swimming was July 18th, 1892. The day was bright and warm and the tide at the time I first noticed them was just beginning to flow. A great many pups were playing in the pools among the rocks near the edge of the sea; in one place there were 40 or 50 together and in many others more than half that number, while all along the shore the young seals were in little groups of from 3 to 10. No old seals were near them but those swimming about in the water and those going to and coming from it. As the tide came in some of the pups slowly retreated, but many of them remained among the rocks until the water was some distance beyond them. They played about and swam from one rock to another and back many times with no appreciable interval of rest. I neither at this time nor on any other occasion, saw an old seal attempt to teach a pup to swim nor carry it to the water, nor have I ever seen anything that would lead one to suppose that pups *learned* to swim. On the contrary a pup cut from its mother can swim a long time.

The length of time a pup is dependent upon its mother has never been satisfactorily ascertained. It is known that they begin to secure food from the sea long before they leave the islands in the autumn, but they have also been killed very late in the season with their stomachs full of milk. So long as the mother seal remains on or near the islands and her pup can find her he doubtless receives nourishment from her, but if left to his own resources he will generally be able to secure food for himself. I do not hesitate to say that a strong pup six weeks old that goes freely into the water can secure food for himself, up to that time he is probably dependent upon his mother, though promiscuous nursing is not unknown.

While speaking of the young seals reference may be made to the known causes of their destruction and the supposed effects of pelagic sealing. Dead pups were never noted in large numbers on the Pribylov Islands until 1891 when several thousand were found on one rookery by the British Commissioners. Dr. Geo. M. Dawson and Sir George Baden-Powell, the U. S. Treasury Agents on the islands, could not at first account for this great mortality, but finally attributed it to pelagic sealing. The mothers of these pups had been killed at sea they said, and the young had died of starvation. This hypothesis was made the basis of one section of the United States case and although shown to be untenable is still maintained. It was shown by the British Commissioners that in 1891 pelagic sealing had under the *modus vivendi* of that year ceased long before the date at which the pups seen by them died, but it was still maintained by the United States that pelagic sealing was the cause of the mortality. In 1892 no seals were killed by pelagic sealers in Behring Sea, but in that year I found an even greater number of dead pups on the rookeries. Sealing at sea had evidently not caused the death of these pups, and this was the view taken by the arbitrators at Paris in 1892. None of the natural causes of destruction known to us seemed adequate to explain this great mortality. Those that came under our observation were trampling or crushing by older seals, drowning, straying away from their home rookeries, and a few minor causes. None of these explained the deaths of large numbers of young seals on restricted areas and though no trace of an epidemic could be found this explanation first advanced by the British Commissioners seemed the only reasonable one. In 1896, in company with Dr. Jordan, the U. S. Commissioner, I counted over 11,000 dead pups on the rookeries before pelagic sealing began. Later in the season—in October—we again counted the dead pups and found that about the same number had died since the date of our first count early in August. Ignoring the fact that whatever the causes of death might have been early in the season they were probably in operation throughout the season, it was assumed by the agents of the United States that these later deaths were all due to starvation. No new cause of destruction was found in 1896, Dr. Jordan being of the opinion that the principal cause of death was trampling by older seals. In 1897, however, acting upon the suggestion of Dr. Styles, of Washington, we discovered that the chief cause of death was a small parasitic worm, a species of Uncin-

aria found in great numbers in the intestines of the young seals. It attacks the intestinal walls and destroys them, thus causing congestion and subsequent death. The deaths of nearly all the pups examined were due to this worm, and though we left the islands early in August and could not determine whether as many young died from this cause late in the season as in early August there is no reason to doubt that such is the case. The proportion of pups that starve to death has not yet been even roughly determined.

The great similarity in the appearance of female seals makes it difficult, if not wholly impossible, to determine with any degree of accuracy the movements of individuals. For this reason no definite statement can be made as to how frequently they go into the water, how long they remain there, or how often they suckle their young. It is known that for the first two weeks, or longer, after a pup is born its mother does not leave it. After that as the pup grows older and is suckled less frequently, the mother seals go into the water and hundreds of them may be seen any day playing and swimming about near the rookeries. Like the males they require food only at long intervals and when it is needed it can be procured within a very few miles of the rookeries. Under the Paris Regulations no seals may be killed at sea within 60 miles of the breeding islands and this protected area affords in my opinion ample protection to the nursing mothers, though doubtless they do sometimes, perhaps frequently, go a greater distance from the land, though it is not necessary to do so in order to procure food. Pelagic sealers report the taking of many seals in milk at long distances from the islands, and Mr. Andrew Halkett, whose admirable report on his investigations at sea in 1896, I have had an opportunity of reading, reports a very large percentage of this class of seals among those taken by the schooner upon which he lived. The wide variance between the percentage of females in milk taken by different schooners shows that this class of seals is much more numerous in some parts of Behring Sea than in others. Many of these females are the mothers of the young who died upon the rookeries from the effects of the Uncinaria and other causes, and of course the killing of such females entails no further loss. Many others are killed after the young are able to sustain themselves and no starvation of pups follows the killing of such mothers. Some pups undoubtedly die of starvation but the number is small and even when the mother is killed before the young one can pro-

cure food from the sea it not infrequently secures nourishment from other females. Several such cases have been noted by me.

When on their rookeries the seals exhibit little fear at the approach of man, but as they see badly, a large moving body will sometimes frighten them and cause a stampede. One may approach within a few yards of them, however, if one moves carefully with no undue noise and I have frequently sat for hours with seals on all sides of me, old and young frequently coming within touching distance. It was sometimes necessary to drive them all from the rookery when a count of dead seals was to be made, and on such occasions it was often impossible to move the old bulls though clubs and stones were freely used. A cow will occasionally stand as resolutely at bay but no danger is to be anticipated from her. A bull will sometimes charge, however, and safety lies then only in fleetness of foot. No blow short of one that would actually stun or kill him will stop a bull that has made up his mind to vindicate his supposed rights. So well is this understood that on one occasion last year when we were counting pups a bull chased Mr. Clarke, Dr. Jordan's assistant, and his retreat being cut off he jumped from a low cliff into the sea rather than attempt to defend himself against the enraged bull.

The life of the young bachelor or holluschickie would be a happy one were it not that throughout the whole sealing season he is driven and re-driven to the killing grounds and if he escapes with his life has, at least, to undergo the fatiguing and injurious process of being driven long distances over land. As I have already said, the young male seals herd together, congregating in large numbers on what are called hauling-grounds, either in the immediate vicinity of the breeding rookeries or at some distance from them. Until the killing season begins, about June 15, they are unmolested, go freely to and from the sea and spend their whole time in sleep and play. They are known to take food during the summer, but with them as with the older seals, long intervals elapse between meals. With the opening of the killing season their troubles begin. Drives are made from all the hauling-grounds every few days, from some of them almost daily. These drives are made by the native Aleuts in the employ of the sealing company, but under an agent of the United States Government. Between midnight and 2 o'clock according to the distance the seals are to be driven, a party of men goes to the

hauling-ground; some of them steal quietly between the seals and the water or between the young males and the breeding seals if the drive is made from behind a rookery. Great care is taken to prevent stampedes, as when once thoroughly frightened the seals cannot be controlled. They are not hurried and a very few men suffice to prevent any lateral movement. If the morning be warm they cannot be driven at all and sometimes drives are not finished, the seals being allowed to return to the hauling-grounds or to the water. The killing-ground is usually reached between 3 and 5 o'clock in the morning, and the killing is begun as soon as the seals have cooled off. A pod or bunch of between 20 and 40 seals is separated from the band and driven to where the clubbers await them. They are killed with long clubs much the shape of a base-ball bat, but about twice the length. Five or six clubbers surround the pod that has been driven to them, the agent of the sealing company points out the seals he believes to be of the size to afford the best skins and they are quickly dispatched by a blow or two of the club. The natives who do this work are exceedingly skilful, and seldom miss the seal pointed out to them or strike another. When clubbed the seals are dragged aside by the skinners and a fresh pod driven up. After being clubbed each seal is stuck with a knife to ensure its being dead, and after cooling for a few minutes is quickly skinned. In this too, the natives are remarkably expert, some of them being able to remove the skin in less than one minute. The seals which are thought too large or too small, or whose skins appear to have been injured, are allowed to escape and ultimately reach the sea; many of them return to the hauling-grounds whence they are again driven. This process of re-driving cannot be otherwise than injurious to them, but while the present methods are practiced there seems to be no way of obviating it. After all the seals have been killed and skinned (and more than a thousand are often killed during one morning) the skins are taken to the salt-house when after being counted they are salted. They are laid flat on the floor, care being taken that the edges are not turned in, salt is then shovelled over them until they are completely covered, when another layer of skins is laid down and so on until the kench or bin in which they have been placed is full. In ten days or two weeks, they are taken from the salt, well shaken, and then re-salted. A week or two later they are ready for bundling. Two skins are laid face to face with the fur outwards, the edges are turned in and then rolled

into a complete bundle about the diameter of a stove-pipe and about 18 inches long. The bundle is securely tied with a stout cord and the skins are then ready for shipment. In that condition they reach London where they are again sorted, and divided into sizes and sold by auction in their salted raw condition. The dressing of seal-skins is done almost exclusively by one London firm. The process differs from that used in dressing all other skins. The longer, coarser hairs penetrate a little further into the skin than do the finer softer ones which constitute the fur. The under-side of the skin is carefully scraped until the ends of the longer hairs are cut when they are easily removed. The skins are then dyed and are ready to be made into garments.

The native seal-killer on the islands knows nothing of all this, however, and is concerned only with the work of killing the seals and the consequent feasting such an ample supply of fresh meat affords him. While the men are busy clubbing and skinning the seals, the women and children are employed in cutting off the best parts of the carcase for use as food. All parts of the seal are eaten, tongue, heart and liver, as well as the solid flesh. A part of what is not consumed during the summer is dried for winter use, though the process is a long one on account of the prevailing foggy or wet weather, and the drying meat is unsavoury to a white man, both in appearance and odour. At the table of the sealing company such meat is served in some form at every meal. As dressed by cooks of experience it is very palatable, though rather gamy in flavour. The liver, is particularly good, at least those who are fond of liver say so.

The seals begin to leave the breeding islands in October and by the middle of November all the cows and pups have gone. The bulls, or at least some of them, remain on the islands until the first heavy snow-fall when they, too, disappear. Very little is known of the fur-seal when at sea during the winter. They spread over the whole North Pacific Ocean, being occasionally found as far south as the Sandwich Islands. In early January they come in near the coast and are during that month found along the whole coast line between San Francisco and Vancouver Island, not however, coming in recent years very near the shore, though formerly they were found in large numbers about New Years in some of the bays on the west coast of Vancouver Island. During February and March they move gradually northward following the general trend of the coast and during April and early

May are found in great numbers west and north-west of Sitka, on what are called by the pelagic sealers the Fairweather grounds. They move more quickly after leaving that part of the ocean and are supposed to go straight to the Pribylov Islands. While at sea the only animal known to prey upon the fur-seal is the Great Orca, or killer-whale, as it is popularly called. Whether these animals destroy many fur-seals in mid-ocean cannot be determined, but the seals are scattered over so wide an area that it is probable that the number killed by the *Orca* is not great. Before the seals leave the islands in the autumn, however, the killer destroys a great many of the pups. They come close up to the land and swimming in among the young seals seize them and kill them at a single bite. Many pups are killed apparently through pure wantonness, though many of them are eaten. It is not probable that many of the older seals die from any other cause but old age while they are absent from the islands. They feed upon squid and all kinds of surface-swimming fish, and swim so rapidly and can go such a long time without food that it is not at all probable that many of them die from starvation. Nor can rough weather have any effect upon them, as from the time the young seals first go into the water they delight to play among the breakers and in heavy seas, and are so essentially an aquatic animal that the roughest weather, no matter how long continued would fail to injure them.

While absent from the islands the only known destructive agency of importance is pelagic sealing. From January until May in the North Pacific Ocean and from the 1st of August until the weather grows rough, in Behring Sea the seal is killed in large numbers by the pelagic hunter. A short account of his methods may not be without interest. The Canadian sealing schooners are for the most part fitted out in Victoria. If white hunters are employed they also are engaged there, but if the hunting is to be done by Indians, the schooner after having been provisioned sails to the west coast of Vancouuer Island where most of the Indian hunters live. These schooners are of all sizes, the best of them averaging about 100 tons. If white hunters are employed boats are used, if Indians, canoes. The boats are peculiarly adapted for sealing and have been specially modelled to serve the purpose for which they are intended, being the same shape at both ends, either end thus serving as bow. Outside of Behring Sea guns may be used. When hunting with the gun the hunter stands in the centre of the boat, both of the boat-pullers facing

him, one pulling with his back the other with his face towards the bow. When a seal is seen the boat is rowed gently towards it the man facing the bow acting as steersman. If the seal dives and comes up in the rear of the boat it is not necessary to turn it, the bowman then becoming steersman. The hunter never fires except at very short range and seals that have been hit are with rare exceptions secured. The prohibition of the use of fire-arms in Behring Sea has led to a more general use of the spear by white hunters. It has always been the favorite weapon of the Indian. When hunting with the spear the white hunter stands in the bow of the boat. Indians use canoes almost exclusively. Two men form a crew, the bowsman acting as hunter. Each schooner carries from ten to twenty, sometimes more, boats or canoes.

The life of the pelagic seal hunters is in every respect a hard one. On board the schooner his quarters are crowded and his fare often poor. He is allowed to remain on board only in the very roughest weather, any day on which the boats may be lowered with safety being considered a suitable one for hunting. On leaving the vessel the boats nearly always form in line so that each may have a clear space to windward. The schooner remains as near as possible stationary during the day, sometimes slowly following in the wake of the boats, though if the weather be calm they work towards all points of the compass and then, of course, the vessel moves as little as possible. Often in the North Pacific and nearly always in Behring Sea the fog is so dense that the vessel can be distinguished only a few yards away, but these hardy adventurous men, taking their lives in their hands set out to look for seals with the same unconcern as if the day were clear. In such weather a fog-horn is blown on the schooner towards evening or a bomb-gun fired, but even with these precautions boats frequently fail to reach the schooner until the following day and some of them not at all. The methods of salting and curing the skins on board these vessels are as nearly like those pursued on the islands as the restricted room and tossing vessel will allow.

While only young male seals are killed on the islands, the pelagic sealer from the very nature of his methods of hunting is compelled to kill male and female indiscriminately, the sexes not being distinguishable when the seals are in the water. That this is the case has been made the basis of innumerable attacks upon pelagic sealing, not alone by those interested in the Behring Sea controversy, but by uninterested

parties who maintain that such methods of killing are inhuman and barbarous and ought not to be allowed. Those who use this argument forget that this has been the method pursued in the taking of all fur-bearing animals. More beaver are trapped every year than there are fur-seals killed at sea, and females as well as males are of course taken in this way, and so with fur-bearing animals of all kinds, but no one ever thinks of asking that the killing of such animals be prohibited on that account. So, too, with all domestic animals used for food, who thinks of asking when eating beef, mutton or pork whether the animal whose flesh he is consuming was a male or a female? With regard to the fur-seal, however, it is claimed that since it is a polygamuous animal and males may be killed on the islands without undue disturbance of the females, that that method alone should be pursued. There is ample evidence that this is not the case. Long before pelagic sealing could have had any effect upon the condition of the seal rookeries, a great decrease was noted in the number of seals of both sexes on the islands. This decrease can be attributed to no other cause than the excessive killing of male seals, the annual quota of 100,000 leaving an insufficient number to mature for procreative purposes.

This aspect of the seal question has been dealt with in my own reports and those of the British Behring Sea Commissioners, where all the facts which go to show that the decrease in the number of fur-seals is due not to pelagic sealing but to the methods pursued on the Pribylov Islands as enumerated and discussed.

The Yukon and its Gold Resources.

By William Ogilvie, Administrator of the Yukon.

Extract.

[*Read Feb. 18th, 1898.*

Of the two most southerly branches of the Yukon, the westerly, known as the Lewes, heads at the summit of the Dyea (or Chilkoot Pass,) in north latitude 59° 49′, approximately, and west longtitude 135° 13′; the other, known as Teslin, takes its rise somewhere between 131° and 132° west longtitude and about 59° 40′ north latitude.

These two streams are, at the present time, the principal routes of entrance to the Yukon valley—the first named, so far, absorbing most of the traffic. They are about equal in length—something under 200 miles—and about the same distance below the junction, another stream, the Pelly, joins. Teslin is navigable for almost its entire length. The Lewes is broken by the Canon and White Horse Rapids about 100 miles from its head. Small steamers have been run down through these, but it would be a very difficult task to get one up, in fact, practically impossible. Below their confluence, about 120 miles, we meet the Five Finger Rapids of the miners. This, however, is not an insuperable barrier to ordinary steamboat navigation, simply requiring the aid of a powerful line for about 200 yards. From this point to the mouth of the Yukon, about 2,000 miles, no further obstacle occurs. This river, with its confluents, so far as at present known, aggregates about 3,200 miles of navigable water—that is, navigable for ordinary, light-draft, stern-wheel steamers. Of this distance the main stream, taking either the Dyea

or Teslin branch, and from their junction to the mouth, has upwards of 2,000 miles, the other 1,200 miles being on the confluents.

As far as can be traced from our present knowledge, the valley in Canadian territory affords 6,000 miles of river, stream and gulch, of which about 1,400 are navigable for the class of steamers suited to the region. In this territory, which I consider by far the most important part of the Yukon valley, we find gold profusely scattered; in fact, it would be difficult to select a single mile on which traces are not found. I do not wish to be understood as saying that all this is rich or will pay for developing, far from it, but we know now that about half of it affords good indications—good enough to warrant us in assumiug that it will be worked under more favorable conditions than at present exist. Out of this 3,000 miles not more that than 400 or 500 have been thoroughly prospected and developed, and in those 400 or 500 we have found the world-renowned Klondike region, which probably, all told, comprises less than 150 miles of river, stream and gulch.

The Stewart, with its confluents, furnishes nearly 2,000 linear miles of gold-bearing territory. This will average possibly less than ¼ of a mile in width. At present much of this we know is good.

The Pelly, up to the time of speaking, is practically unknown. A little prospecting has been done at several points with the result that, though not considered rich, it is an asset in the gold production of the future.

Outside of the Yukon valley in the more south westerly portion of this district, gold has been found on streams tributary to the Alsek River, from which we may reasonably conclude that the whole Yukon territory is more or less gold-bearing and will probably afford 7,000 linear miles of auriferous deposit, of which we may assume say one-half as worth developing; not at present it may be, in part, but with increased facilities for transport there can be very little doubt but that it will be utilized. These remarks refer, of course, to auriferous gravels and earths. When we take into consideration quartz, the possibilities can only be imagined. At present there are upwards of a dozen gold-bearing quartz lodes located iu the vicinity of Forty Mile and Dawson, low-grade in quality but vast in extent. It is only reasonable to infer that, where gold is so universally and widely scattered, a portion of it at least must remain in the *in situ* mother lode, and

we may go further and say it does so remain at many points. The discovery and development of these points will naturally follow from the discovery and development of the auriferous gravels.

Other metals have been found at several points in the territory, notably silver-bearing galena in the vicinity of Forty Mile; silver ore itself in the vicinity of the lakes at the head of the Lewes; copper on White River; and traces of copper along the Yukon and Forty Mile. The richest gold deposits, so far as at present known, have been found running in a curved line following the general trend of the Pacific coast several hundred miles inland. Just east of this zone there is a sharp change in the geological character of the country from the older metalliferous rocks to the newer and comparatively recent cretaceous system. It is worthy of note that the richest deposits have so far been found on the borders of the change of system.

Convenient to the auriferous gravels and in these cretaceous rocks there are immense deposits of coal. Of this coal specimens have been analyzed and pronounced a very good quality of lignite. Whenever fuel is required for the development of the quartz lodes that will be found, coal is abundantly convenient, and it is only a question of months until this is utilized as the fuel of the country.

The other resources of the country are few, the principal one being timber, which need not, however, be mentioned, except so far as the requirements of the country itself are concerned, and even in that direction I very much fear the supply is stinted. A great deal of it is consumed in what the miners term "burning," i. e. thawing the ground in which the gold is found, the normal condition of the entire region being eternal frost from say two feet below the surface, and every shovelful of dirt brought from levels lower than that has first to be thawed. Under the present system of thawing nine-tenths of the heat developed by the combustion of the wood is wasted, with the result that along the auriferous streams timber very soon entirely disappears. The timbered area is confined exclusively to the valleys of the rivers, streams and gulches, and very seldom extends more than a quarter of a mile in width, that is, what might be termed commercial timber. The sides of the hills are covered with a thick growth of scrub shrubbery which in the distance charms the eye, but is totally unfit for practical use. This I think gives rise to the glowing accounts we sometimes read of the timber

resources of that region, as strangers passing down the river in a boat, see, as far as the eye can carry, both sides of the valley verdure clad, all of which they assume to be as important as that immediately adjacent to the stream, which generally is of fair size and of good quality. A tramp landward from the river would soon disabuse their minds of this idea.

To sum up, we may say that of the 7,000 miles of river, stream and gulch, which we have assumed exist in the Yukon district, at least five sixths are more or less timbered with timber of practical use, the belt having an average width of say a quarter of a mile, which gives us, approximately, about 1,500 square miles of timbered territory. At the present rate of consumption for mining purposes, building, and lumber for boats and other necessities, this will only last a few years. It is important, therefore, that it should be husbanded as far as possible, but that, as a question of administration, hardly concerns us here.

The general surface of the country is rugged, bleak and sterile; the sides and summits of the ridges and ranges from about 1,500 feet above the streams are bare. Below that, as already intimated, there is a thick growth of scrub and shrubbery, through which it is often extremely difficult to force one's way.

The winter, it might be said, begins in the last half of October and lasts until the middle of May. Ice commences running in the streams about the first date, and generally lasts until the latter date. This gives us nearly seven months of winter, during the greater portion of which the temperature often runs below—40°, and, during three months, borders on—60° or even below it. The attached table shows what may be expected.

In conclusion, I would say the region is not at all inviting, and its food resources may be said to be *nil*. Travel is exceedingly difficult and laborious. Insect pests, especially mosquitoes, are a veritable curse; and the long, dreary winters with their very short days are depressing. Still, to those who have hardihood. pluck and patience, there may be a rich reward for a few years' stays there. Hundreds have found it so, and thousands of others may venture with like expectations.

Year.	Mon
1887	Aug
	Sept
	Oct.
	Nov.
	Dec.
1888	Jan.
	Feb.
	Marc
	Apri
	May
1895	Aug.
	Sept.
	Oct.
	Nov.
	Dec.
1896	Jan.
	Feb.
	Marc
	April
	May
	June
	July
	Aug.
	Sept.
	Oct.
	Nov.
	Dec.
1897	Jan.
	Feby
	Marc
	April

METEOROLOGICAL RECORD IN THE YUKO

Year.	Month.	TEMPERATURE.				NUM			
		Mean Minimum.	Mean Maximum.	Highest.	Lowest.	32 degs. and below.	Zero and below.	—10 degs. and below.	
1887	Aug.	39·9 dgs			21·6 dgs	4			
	Sept.	31·7 "			16·0 "	18			
	Oct.	18·5 "			4·0 "	31			
	Nov.	— 5·1 "			—24·1 "	31	22	12	
	Dec.	—33·6 "	—27·6 dgs	10·5 dgs	—55·1 "	31	31	29	
1888	Jan.	—25·3 "	—15·3 "	13·0 "	—53·5 "	31	27	23	
	Feb.	—16 8 "	— 4·3 "	24·2 "	—52·7 "	29	24	17	
	March	—11·5 "			— 52·7 "	26	19	13	
	April	—20·4 "			—37·7 "	29	28	23	
	May	19·8 "	43·3 "	55 0 "	— 1·8 "	30	1		
1895	Aug.	40·1 "			28·0 "	6			
	Sept.	30·9 "			21·5 "	18			
	Oct.	19·4 "			—12·7 "	29	1	1	
	Nov.	4·2 "	11·9 "	38 5 "	—36·3 "	30	12	3	
	Dec.	—18·2 "	—13·8 "	6·0 "	—55·4 "	31	29	20	
1896	Jan.	—41·9 "	—33·0 "	6·0 "	—67·9 "	31	31	29	
	Feb.	—25·5 "	— 11·6 "	32·0 "	—64·8 "	29	27	24	
	March	— 2·4 "	18·1 "	39·5 "	—37·3 "	31	20	6	
	April	2·0 "	24·0 "	49·0 "	—28·4 "	28	15	10	
	May	28·8 "	48·7 "	62·0 "	5·0 "	18			
	June	39·8 "	65·1 "	80·0 "	27 8 "	4			
	July	44·5 "	68·9 "	81·0 "	33·0 "				
	Aug.	42·1 "	62·6 "	76·0 "	27·2 "	2			
	Sept.	34·3 "	50·5 "	63·0 "	4·8 "	8			
	Oct.	20·2 "	32 9 "	51·0 "	— 1·0 "	27	2		
	Nov.	—14·7 "	— 6·0 "	22·5 "	— 38 0 "	30	23	18	
	Dec.	—17·4 "	— 6,5 "	11·0 "	—44·5 "	31	28	19	
1897	Jan.	—24 0 "	—14·0 "	10·0 "	— 55·6 "	31	27	21	
	Feby.	—12·3 "	0·6 "	31·0 "	—36 0 "	28	23	14	
	March	—14·7 "			—54 3 "	30	21	15	
	April	18·1 "			— 5·0 "	27	1		

RECORD IN THE YUKON DISTRICT.

Lowest.	NUMBER OF TIMES.							
	32 degs. and below.	Zero and below.	—10 degs. and below.	—20 degs. and below.	- 30 degs. and below.	—40 degs. and below.	—50 degs. and below.	- 60 degs. and below.
21·6 dgs	4							
16·0 "	18							
4·0 "	31							
-24·1 "	31	22	12	3				
-55·1 "	31	31	29	26	19	14	4	
-53·5 "	31	27	23	19	16	7	3	
-52·7 "	29	24	17	11	7	6	1	
-52·7 "	26	19	13	6	5	4	1	
-37·7 "	29	28	23	13	7			
- 1·8 "	30	1						
28·0 "	6							
21·5 "	18							
-12·7 "	29	1	1					
-36·3 "	30	12	3	1	1			
-55·4 "	31	29	20	10	6	3	1	
-67·9 "	31	31	29	25	24	15	12	5
-64·8 "	29	27	24	16	11	10	2	2
-37·3 "	31	20	6	3	1			
-28·4 "	28	15	10	8				
5·0 "	18							
27 8 "	4							
33·0 "								
27·2 "	2							
4·8 "	8							
— 1·0 "	27	2						
- 38 0 "	30	23	18	13	7			
-44·5 "	31	28	19	11	7	2		
- 55·6 "	31	27	21	16	13	9	6	
-36 0 "	28	23	14	9	2			
-54 3 "	30	21	15	12	8	5	3	
— 5·0 "	27	1						

Utilisation of Moss Lands.

By Thomas Macfarlane, F.R.S.C.

Extract.

[*Read March 4th, 1898.*

After a few introductory remarks the lecturer proceeded as follows:—

Utilisation of course includes cultivation, but I do not intend to speak of cultivation only. I shall have something to say about the more modern methods of cultivating moss-lands later on, but the subject is not an inviting one. In these days when almost every one is prepared to tell you that "farming does not pay" he would be a courageous man who would advise a settler to reclaim a swamp.

There is a comparison attributed to Queen Elizabeth which points out that life is like a bog; if you stand still you begin to sink and if you want to keep afloat you must keep moving. I shall, therefore, ask you to leave the consideration of bogs as they occur in nature, and the possibility of cultivating them, and ask you to accompany me, in spirit at least, to see a more pleasing landscape, a moor drained, consolidated and in process of utilization, where art has come in to modify nature, and, as it generally does, to improve it. In describing such a moor I must avoid any minute reference to the plants by whose instrumentality it has been produced. I can only deal with vegetation in a very general way, and indulge the hope that the botanical aspect of the subject may on a future occasion be made the subject of a disquisition by my friend Prof. Macoun, than whom there is no better authority.

The imaginary trip on which I have invited you is to Holland, or, more properly, the Netherlands. Holland is

only one of the provinces of the Netherlands, only one of the Low Countries, although probably the most important of them. It adjoins the German Ocean, whereas the Province that we have to visit, that of the North Brabant, is bounded on the east by Westphalia, and is traversed by the river Meuse, which takes its rise in the Ardennes, flows through Belgium and the Netherlands, passes Rotterdam and reaches the sea at the Hook of Holland. It was by the Hook of Holland route from Harwich that I landed in Rotterdam, on the morning of a foggy Saturday in December, 1892. My business in the Netherlands was to study beer, moss and peat and my first glimpse of the latter article was at the Weimar Hotel where it seemed to be the only fuel in use. After using my letters of introduction diligently, I found that the chief producers of peat and moss litter were the brothers Van Griendt, the elder of whom invited me in the most friendly way to accompany him to his works and extensive moors in the province of North Brabant.

Faithful to my appointment with Mr. Van Griendt, I met him at the railway station in the morning, and was introduced to Mr. C. W. Lancaster, accountant, of Birmingham, England, who visited the moors at the same time. Our route lay across the Meuse and past Dordrecht, Breda, Tilburg and Boxtel to Helmond, where we arrived about 11 o'clock. From here a carriage conveyed us along the Willems Faart, one of the numerous canals of the country, to Asten at the edge of Asten Moor. Strange to say, the Willems Faart Canal lies in lower ground than the Asten moor, but the canals which traverse the latter are connected with it and the general canal system of the country. In order that sloops, or scows may pass from the latter into the canals of the Asten Moor they have to be locked up several feet, which, proves that the Asten Moor is at present a high moor, and must have been higher previous to its having been unwatered and consolidated.

Here it may be profitable to point out the distinction which the Germans have made betwixt two great classes of moor lands, a distinction which might easily I think be carried out in English also. There are first what they call low lying, meadow or greenland moors, to which possibly our word "marsh" would apply. They are always to be found near creeks and rivers, follow the course of these and give rise to the formation of wet and sour meadowlands. The peat or turf which is formed in these is of a black color, and when

dried crumbles easily to dust. It is in these marshes in Canada that the farmer finds his black muck, which is unconsolidated organic matter derived from vegetation of a varied character. On the other hand the heath moss, or high moors show a different character. They are covered by heath plants and instead of a varied vegetation the swamp mosses or sphagnum occur in huge quantity. Dwarf firs show themselves, but sphagnum varieties constitute the main vegetation. Indeed Professor Macoun thinks that the name of peat bog is exactly equivalent to sphagnum bog, and that the "muskegs" of the Northwest have the same mode of origin as the German *Hochmoore*. Of course there are intermediate formations betwixt the "marsh" and the "muskeg" to particularise which would require too much time. Some of these might be characterised as "swamp" and, in these the bushes predominate over the mosses.

Every bog has its origin in a pond, and when the moss vegetation, living and dead, has filled up these and cannot spread beyond the edges it begins to increase and rise in the middle. The German name of "high moor" seems to come from this higher position, which is above the summer water level of the surrounding country. These high moors shew a characteristic arching; being higher in the middle than at the edges, and instances of such moors are known which in the centre are from 15 to 25 feet higher than the level of the water in the basin in which the original deposit began. The vegetable matter which lies beneath the surface ranges in colours from yellow on the top to deep black in depth. These moors yield frequently two different products, moss litter and peat, the former after drying being brown, soft and spongy. The peat on the other hand is when dried, black, hard and unyielding.

Both of these products are found in the Asten Moor, the moss litter lying above the peat, each having a thickness of about four feet. Before the upper layer came to be utilised, and when working a peat bog in the old days, this higher part had to be removed at much expense in order to get at the denser and darker peat which was much more valuable as fuel. Now the upper part brings in more money than the lower, and the manner of working a peat deposit has been revolutionised. The total depth of the Asten Moor down to the soil underneath is about eight feet. This is the thickness after consolidation which is a very different thing from the depth of the bog in its natural state. The shrinkage which it under-goes

on draining is very considerable and amounted in this case to about two feet.

The surface of the consolidated bog is a much pleasanter place now than it ever could have been before. Except for the canals and drains you can walk over it everywhere without inconvenience. Standing in the middle of the Asten Moor the outlook is strange and almost impressive. As far as the eye can reach there is nothing but moor, but the monotony of the scene is very much relieved by the gigantic stacks of moss sods dried and ready for milling.

The Asten moor was not brought into this condition without much labor, carried on after the adoption of a plan thoroughly well thought out, and during the lapse of many years. The unwatering began 20 years ago and had to be done gradually, the first drain being dug only to a depth of about 18 inches. No deeper digging was possible until after the surface part had settled and solidified to such an extent as to prevent the rolling down of the fluid moss into the drain, and the consequent loss of all the labor. After the consolidation of the upper 18 inches, another deeper cut of 12 inches was made in the drain for carrying off the water; then intervened another delay for allowing the bog to settle, and by repeating this process, the gradual consolidation or compression of the ten feet to the eight feet thickness was effected; very slowly and at a rate not exceeding one foot annually. It may be thought that it goes without saying that the solidification of such a semi-liquid mass could have been effected in no other way, but we shall learn, later on, that other methods have been tried elsewhere, with very disastrous results to the parties interested.

One of the most remarkable phenomena to be observed on the Asten moor is the construction in it of canals filled with water, in which scows are floating for conveying the dried sods from various points on the moor to the mill. That such canals can exist without again impregnating the bog with water, and converting the peat and litter into their original semi-fluid state seems astonishing, and yet there are plainly to be seen, within a distance of six feet from each other, the canals in question and ditches by means of which the bog has been unwatered, the latter containing only driblets of water oozing from the bog.

(Here the lecturer gave more minute details of the manner of producing moss litter at Asten.)

Of course there are works for the production of moss lit-

ter and peat elsewhere than in the Netherlands. Sweden, Oldenburg, Hanover and Bavaria are known be producing largely of this material. In England, too, the manufacture is established in the neighborhood of Doncaster and Goole, Yorkshire. In 1896 I visited the moss litter beds near the latter city, and found them thoroughly drained, as in the case of the Dutch moors. There were, however, no canals to be seen for effecting the transport of the material, light railways being substituted for them. I saw the mill at work for teasing and packing the litter, the machinery in which much resembles that employed on the Dutch moors. The material packed had evidently had ample opportunity for becoming dry because the mill building was filled with fine floating dust, like snuff, which however had not the same irritating properties. At the time of my visit the Goole and other works of a similar character in England were suffering from extreme depression in the price of their product. When I visited the Dutch moors four years previously, one of the gentlemen of our party was a Mr. Lancaster from Birmingham, who took as close an interest in the bogs and studied them as thoroughly as I did. This gentleman belonged to a firm of chartered accountants who had been entrusted with an examination of the property from a mercantile point of view, and in order to the possible formation of a limited company for working it. It seems that, subsequently, the formation of the company was accomplished and that its operations brought down the price of moss litter in London from 24s. per ton to nearly one-half that rate. Hence those tears on the part of the Yorkshire people, who could not possibly compete with the Dutch in the matter of labour or freight.

Coming now nearer home, we have to remark, as regards the production of moss litter in Canada, that two attempts have been made, one at Musquash, N.B., and another at Welland, Ontario. In the former case I am extremely sorry to say the capital embarked in the enterprise has not yielded any return. Whether we are to conclude from this that the inherent and climatic difficulties of the undertaking are insurmountable, or that grave errors have been committed in conducting the work is not quite certain. I am, however, inclined to the latter supposition, and venture to point out two circumstances which may have gone a long way to render the venture abortive. In the first place no systematic survey, laying out, and consolidation of the bog was attempted. There was no difficulty in the matter of levels, and a drain

was brought to the edge of the bog and deep enough to unwater it. But any attempt to penetrate the bog at such a depth was futile. Its semi-liquid mass rolled into the drain quicker than it could be dug out, and made progress impossible.

In the second place it was thought possible at Musquash to get rid of the water more rapidly than by the slow steady-going operations of nature. Much ingenuity was displayed and much expense incurred in inventing and operating machinery for squeezing out the water from the mossy pulp but without success. Artificial heat was also used for effecting the drying more rapidly, but it is hard to conceive how that could have been done economically. Drying by natural means was supposed to be impossible. Indeed a sod of moss, dug direct from the unconsolidated bog, and exposed to the direct rays of the sun for a long time is still found to be extremely moist in the inside. Therefore it is that, previous to any attempt at drying such sods, their material must be previously drawn together; consolidated by pressure while in the original bed, so that when they come to be acted upon by wind and sun they will be better conductors of heat, and dry in a reasonable space of time. On the whole the failure at Musquash may possibly have been owing to the common fault of neglecting or undervaluing the experience which has been gained elsewhere.

In the County of Welland, bounded by the Welland Canal, its feeder, and the shores of Lake Erie, there is a large area of "marsh," the history of which occupies considerable space in the records of the County Council. The Ontario Peat Fuel Company is now engaged in trying to utilize the material of this marsh for making moss litter. The product has been placed on the markets of our Canadian cities and is to be purchased in Ottawa. We most sincerely trust that everything will be done by Canadians to make use of it, not only on account of its inherent good qualities, but on account of the advantage which is likely to inure to our agriculture by its extensive application to the various purposes for which it is suitable.

If ever the moss litter industry succeeds in Canada it will most likely to do so in the Province of New Brunswick, which is said to contain the most extensive moors in the Dominion. Many of these skirt the shores of the Gulf of St. Lawrence, and those near Point Escuminac have been described by the late Mr. Edward Jack of Fredericton. In his lifetime Mr. Jack was an enthusiast in exploring the moors

of his native province, and advocating their exploitation. Let us hope that his mantle will fall on a worthy successor, and that the working of these huge deposits of organic matter may at last be carried out successfully.

In the Province of Quebec, although the production of moss litter has not actually been accomplished there is abundance of the raw material as our Chairman very well knows. Anyone who has travelled through the province must have observed their occurrence at Valleyfield, Berthier, Three Rivers, Champlain, Levis, and at numerous points on the line of the Intercolonial Railway. Between Cacouna and St Arsene there is an excellent example of a high moor, well situated for exploitation. I am not aware as to whether any statistics exist as regards the quautity of such land in Quebec, but the figures are obtainable for Ontario. In the Report of the Bureau for Industries for 1896 it is stated that there are in the province :—

Acres cleared.....	12,671,857
Acres woodland.....	7,264,167
Acres swamp or marsh.....	3,236,390
Total occupied.....	23,172,408

Thus of the rural area or total number of acres of assessed land 25.5% or over one-fourth is bog or marsh, containing an as yet unappreciated store of fertilizing material. It so happens that the first succesful attempt to utilize Moss Litter for sanitary purposes in Canada was made in the Province of Ontario. At Caledonia Springs the method of deodorising human refuse by means of the moss from a bog in the neighborhood has been carried on for several years with the most satisfactory results to all concerned. The moss litter here referred to is unusually rich in nitrogen, assaying nearly 3%, and the compost resulting from its use is an excellent fertilizer.

I have now told you something about the production of Moss Litter, and must next anticipate the question—Well, what is the good of it all? What is done with the article and of what advantage is it to the human race in general, and to agriculture in particular? In answering such enquiries I must leave peat and its applications out of consideration, not because they are unworthy of attention, but because of the want of time on the present occasion. Furthermore, Moss Litter has about four times the value of peat, and the successful working of the former, which as a rule lies above the peat,

must precede the production of fuel from the lower beds of the sphagnum bogs. I very much fear that the want of success which has so far attended the working of peat bogs for fuel has been owing to the fact that the true nature of the upper parts of the "white turf" or "bastard peat" or moss litter as we call it was not taken into consideration. I am convinced that the way to success lies first in the utilization of the moss litter for sanitary and agricultural purposes. Even in speaking of that article I must, for want of time, restrict my remarks to two of its applications, both of which tend to the enrichment of arable land.

1. It is used in town and country all over Europe for bedding animals, and keeping the stables clean and inodorous. It is thus a substitute for straw than which it possesses better absorbent qualities. Its price is seldom higher than that of straw with which it competes vigorously. Here in Ottawa it sells at about double the price and consequently the trade in it is not very brisk.

2. It is used as an absorbent, deodoriser and disinfectant for all manner of domestic refuse, including human excreta and kitchen offal. It has also been found convenient to apply it in slaughter houses and factories, whose products are of an evil smelling sort. Anyone can easily convince himself of its deodorising qualities by mixing a little of it with kitchen refuse in summer time, by which means the latter is kept inoffensive until removed. Not only does moss litter, on account of its porous, spongy character, take up obnoxious gases, but it can also absorb from 10 to 16 times its weight of water. Drying by means of it, applied to organic substances, is one of the best plans for arresting their decomposition. (The lecturer next described the nature and constituents of moss litter the production of humus from it and the advantages of the latter in agriculture.)

It will scarcely answer in these days of steam and electricity to say that "there is nothing new under the sun," but so far as regards agriculture, the oldest of the arts, I believe that modern investigation reveals very little not previously known. Take the acquisition of the nitrogen of the atmosphere by the leguminosae, a fact now universally accepted by agriculturists, that seems to have been known to the ancients and a passage in Pliny shows that the Romans based their practice on it. Neither is there anything entirely new in the application of moss litter as an absorbent and deodordiser. When Professor Macoun was collecting his specimens of sphagnum

varieties in the Northwest, an Indian Chief asked him if he proposed to take them to his squaw. It seems that the Indian women collect and dry the sphagnum moss, and encase their babies in it, and that it keeps them perfectly dry and comfortable during the long journeys which they have often to undertake when they are swathed up in Indian fashion and carried on the backs of their mothers. Dr. Dawson also tells me that along the trails in the same region tufts of moss are to be seen stuck on poles, and exposed to rain, sun and wind. It is in this way that the moss is prepared and stored for the sanitary requirements of the Indian babies when travelling. That which has been the practice of Indian tribes for centuries is now being introduced in many German cities not only as the best system from a health point of view, but as the one likely to bestow great advantages on agriculture. The committee on manures of the German Agricultural Society is now devoting much attention to this subject, and any one, who wishes to know the progress they have made and the valuable results they have arrived at, should study the valuable book by Dr. J. H. Vogel, published in 1896, on the disposal of City Refuse.

It would indeed be a fool-hardy and Quixotic undertaking for anyone in the present day to begin a crusade against the water-borne system of sewage removal. The love of ease and modern conveniences, and the indisposition to look the problem of city sanitation squarely in the face are too strong to afford such a reformer any chance of success. But in localities where no such system has been established and in towns where local circumstances make it impossible, it would, in my opinion, be advantageous for the authorities to consider seriously the moss litter system of dealing with human excreta. Even in cities or their suburbs, where there are districts almost destitute of any system and where the removal of refuse is a source of constant annoyance, the use of moss litter might prove to be an unhoped-for blessing. The manure resulting from its use is entirely deprived of any offensive character, and would be of the greatest advantage to the farmers of the neighborhood.

(The lecturer concluded by referring to the various methods employed for reclaiming and cultivating moorlands in place, and gave particulars concerning the Rimpau dam system at Cunrau on the Elbe, and the Corporation farm on Carrington Moss near Manchester.)

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