PROCEEDINGS

AT THE

ANNUAL MEETING

OF THE

NATURAL HISTORY SOCIETY

OF

MONTREAL

FOR THE YEAR ENDING MAY, 1868:

WITH

A LIST OF THE OFFICERS, LIFE, ORDINARY, HONORARY AND CORRESPONDING MEMBERS AND ASSOCIATES OF THE SOCIETY.

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PROCEEDINGS.

The annual meeting of this Society was held at its rooms on the evening of May 18th, the President, Rev. A. DeSola, LL.D., in the chair. Mr. J. F. Whiteaves, the Recording Secretary, read the minutes of the last annual meeting; after which the usual annual address of the President was delivered, as follows:—

THE PRESIDENT'S ADDRESS.

LADIES AND GENTLEMEN,—As the Chairman of the Council will present you with a *resumé* of the work done during the past year, I propose to devote the remarks which, as your President, I am expected to make on this anniversary occasion, to the consideration of *a few points of interest in the study of Natural History.* I do this, not because I conceive that I can say anything worthy the scientific attainments of those I have the honor to address; on the contrary, I feel constrained to apologize for the infliction of what must prove to them but a thrice-told tale. Yet, I believe they will fully sympathize with the *design* of my remarks, which are intended in the interests of this Society and of the subjects it more immediately discusses, and in humble emulation of the spirit which pervades its operations, to invite those out of it (a far larger number of whom are reached by the Report of our Annual Meeting than by that of any other of our reunions) to its privileges and higher enjoyments, which we desire to share with them. To the non-members of the Natural Society, then, equally, if not more particularly, have I desired to address the remarks which I venture now to make, Ladies and Gentlemen, with the hope of receiving your kind sympathy and indulgence.

The study of Natural History, if merely considered in its aspect of a branch of human knowledge, has a claim on every one's attention. It is a knowledge which is not merely power, but pleasure; and has claims great and peculiar on both the theoretical and practical man. The theoretical will find in it almost

boundless scope for absorbing and interesting cogitation in such inquiries as the origin of species, spontaneous generation, animal or vegetable character of certain obscure forms of life, the correlation of physical forces, mutual relations of the physical and vital forces, and similar modern engagements of human thought. The other great class, the practical, who have been taught by the books of their earliest youth to appreciate the difference between "eyes and no eyes," will also be prepared fully to admit with the student of Natural History that, merely to see an object, or to remember its name, is not to *know* it; and that if thoroughness of knowledge be essential or desirable in all the practical engagements of life, it must be equally so in our study of the countless objects of nature's universal domain—objects that are inseparably connected with the supply of all human necessities and comforts. But this knowledge is not merely useful, it is also elevating and interesting in the highest possible degree; and this I will proceed to show as far as I can in the brief limits to which I must confine myself, by seeking in the three great kingdoms of nature some practical illustrations of the truth of these assertions.

The animal world, from which we may take our first illustration, presents, from its lowest to its highest forms, a series of organic structures progressing with almost imperceptible gradation in perfection of development and complexity of organization. Amongst the simplest of its representatives are the Protozoa, the great majority of which are too small to be distinguished without the aid of the microscope. They are graphically described by Dr. Wm. B. Carpenter as consisting of "seemingly structureless jelly." They perform those vital operations which we are accustomed to see carried on by an elaborate apparatus without any special instruments whatever—a little particle of apparently homogeneous jelly changing itself into a greater variety of forms than the fabled Proteus; laying hold of its food without members, swallowing without a mouth, digesting without a stomach, appropriating its nutritious material without absorbent vessels or a circulatory system, moving from place to place without muscles, feeling (if it has any power to do so) without nerves, multiplying itself without eggs, and not only this, but, in many

instances, forming shelly coverings of a symmetry and complexity not surpassed by those of any molluscous animal. And yet these creatures have performed, and are still performing, one of the chief parts in the history of this globe. With them, we arrive at that mysterious border-land which divides, and yet seemingly blends, the organic and inorganic world; where we find arising the simplest vegetable and animal structures scarcely distinguishable from each other, and beyond which we cannot proceed in our search for the beginning of life. Yet the earnest student, when examining them, feels, with more than ordinary intensity, the profound mystery of life, and will continue to investigate the phenomena they present in eager hope of new revelations. But the Protozoa have not ungenerously left without reward the researches made in their behalf. They have presented to man's astonished sight objects of marvellous beauty in the form and structure of the microscopic shells of many of them. They have also enabled him to obtain enlarged conceptions respecting the nature of species and the laws of organic life, and have taught him to recognize in these minute organisms some of the chief builders of the earth's crust—many of its component rocks being the stupendous monuments of their labors, and in which they lie entombed.

Not without interest, also, will be found the study of the shell-fish, long considered the most inert and stupid of all animals. "Les mollusques," wrote Virey, even within our own time, "sont les pauvres et les affligés, parmi les êtres de la création; ils semblent solliciter la pitié des autres animaux." On the other hand, Lorenz Oken exclaims, "Surely a snail is an exalted symbol of mind slumbering deeply within itself!" Shakespeare's fool hit the happy medium between extremists, when he told King Lear that the reason why the snail has a house was "to put his head in, not to give it away to his daughters, and have his horns without a case." Lucian ridiculed the philosophers who spent their lives inquiring into the soul of an oyster; but a modern writer is yet more severe on the conchologists when he says "Lucian's wiseacres were respectable when compared with their brethren, who care for neither an oyster's soul nor body, but con-

centrate their faculties in the contemplation of its shell." But this writer may have forgotten that the conchologist—reversing the procedure of the lawyer of the fable, who gave to his clients the shells and kept the oyster to himself—may be as mnch warranted to examine the waves, scales and ribs of the shell, as is another to anatomize the contained creature, which, says Lentitius, "animal est aspectu et horridum et nauseosam, sive ad spectes in sua concha clausum, &c." Without claiming too much for the shell-fish, we may assert that the student will find them possessing quite a sufficiency of acuteness and sensibility, and their instinctive proceedings are often very surprising. Some of these proceedings of mollusks, it is true, we are not always inclined to admire; for instance, those of the *teredo*, or ship-worm, that terrible destroyer of ships, landing-piers, and dockyards; though, perhaps, *he* may consider he is only offering just retaliation for man's unceasing warfare against his cousins--the oysters. I may not stay to take a more particular view of the mollusks, but will proceed to notice a few points of interest in the study of the vegetable kingdom.

About a century and a quarter ago, Linnæus declared the number of the different kinds of plants to be 5,938. Half a century afterwards, the estimate had increased five-fold. In 1847 it was announced as 92,920; and now, Meyens and others calculate the entire vegetation of our planet to consist of some 200,000 species. The aborigines of New Zealand have learned to distinguish by name some 700 trees and plants produced on their own island, a number considerably greater than that of the species described by Theophrastus in the first history of plants ever given to the world. But besides those plants which the pious and philosophic Rae says "are by the wise disposition of Providence proper and convenient for the meat and medicine of men and animals"—besides those which enable the botanist, like his prototype in Milton's Comus, to

> "Ope' his leathern scrip
> And show simples of a thousand names,
> Telling their strange and vigorous faculties,"

we find vegetable life in its most simple form and develop-

ment represented by the mere primary cell; and of the one-celled plants the most interesting order is the *Diatomaceæ*. The yellow dust, which falls like rain on the Atlantic, near the Cape de Verde Islands, and occasionally drifts even to Italy and Central Europe, was found by Ehrenberg to consist of myriads of silicious-shelled microscopic plants. Darwin discovered that a cloud of dust, drifting through the air from the continent of America to Africa, and coming in contact with the rigging of the ship in which he was sailing, consisted of the shelly coverings of diatoms. The naturalists of the Antarctic Expedition constantly found them adhering to the lead, after sounding depths in the ocean which would have engulphed the loftiest peaks of the Andes. Humboldt, on the other hand, has shown that they float in the upper currents of the atmosphere perhaps for years, until brought down to the earth by vertical currents. But, turning from these and the almost equally interesting family of the *Fungi*, which are so destructive, however, to our bread, fruits, and other objects of domestic economy, I would now, on the Solomonian principle of ascending from the hyssop to the cedar, say a few words respecting some of the giants of vegetation. I take, as an illustration, the celebrated Big-trees of California. This group of huge coniferous trees (placed botanically between the pine and the juniper) was discovered in 1850 by some hunters pushing their way through a hitherto unexplored forest in the Calaveras county, about 240 miles from San Francisco. It is deeply to be regretted that cupidity and vandalism have led men to hew down the largest of the group, for the purpose of making a show of them. One measured 96 feet in circumference, its surface smooth, and afforded ample space for 32 persons to dance on it. Theatrical performances were given on it in 1835. As it lay on the ground, it measured 302 feet. The so-called "Mother of the Forest" is 90 feet in circumference, and 327 in length. The largest, called the "Father of the Forest," is 42 feet in circumference and 450 feet long—only a few feet lower than the Pyramids of Egypt. As a set-off to the barbarity which, be it said, no where called forth greater indignation than in the United States, the *Wellingtonia*, as these trees were called by the English,

(*Washingtonia* by the Americans), have become acclimated in England and Scotland, where their growth, first recorded in inches, is now annually reported in feet. The propagation of these trees may lead us to examine, as points of interest in the vegetable kingdom, the more general subjects of the propagation of plants, by nature's wondrous provisions, their fertility and preservation. I will here only cite, in the words of a learned author, one instance of the prolific power with which the vegetable creation is endowed. It is the elm-tree. "At first one seed is deposited in the earth, from this one a tree springs, which, in the course of its vegetable life, produces one thousand five hundred and eight-four millions of seeds. This is the first generation. The second generation will amount to two trillions five hundred and ten thousand and fifty-six billions. The third generation will amount to fourteen thousand six hundred and forty-eight quadrillions seven hundred and twenty-seven thousand and forty trillions, and so on, in sums too immense for the human mind to conceive. Now, when we allow the most confined space in which a tree can grow, it appears that the seeds of the third generation from the elm would be many myriads of times more than sufficient to stock the whole superficies of all the planets in the solar system."

Recurring for an instant to the *Diatomacæ*, I may here remark that the existence of these minute uni-cellular organisms may lead the uninitiated to doubt whether they could well answer that apparently easy question, What is a plant? Further investigation would show that it is difficult for the greatest adept to do so, and that when it is attempted to draw a line of demarcation between the primary conditions and forms of animal and vegetable life, no problem in the science of nature is more obscure; and the difficulty increases too with our knowledge. Perhaps this may be sufficiently shown by those familiar objects, the sensitive plant and the sponge. It was always held by naturalists that the property or character distinguishing animals from plants is *feeling*, which is evinced in the lower forms of animal life by their shrinking from the touch. But when we try vegetables as well as animals by this rule, we find many plants

(one example is the *Mimosa pudica*, or sensitive plant,) endowed with a far higher degree of susceptibility to external impressions than is evinced by some of the lower races of animals under the operation of tests which, if applied to the higher races, would amount to torture. Thus the arts of ingeniously tormenting have been exhausted in vain upon the imperturbable sponge, which is endowed with vital powers which appear to render its animal nature unquestionable. Lacerated with forceps, bored with hot irons and saturated with the fiercest acids of the chemist, it has never once given any symptom of suffering or sensibility. These facts may be sufficient to show that no difference of a physical or chemical description can be established between plants and animals in that low part of the organic world in which the two great divergent branches have their source, and that any attempt to separate them must be arbitrary and artificial. Here then the student of Natural History learns the great lesson of a fundamental unity prevailing throughout organic nature. He sees exhibited to him a sequence without interruption in the working out of the divine idea of creation—from man spiritual and immortal, in whose wonderful organization meet and culminate the structural perfections of all the animals, down to the primary cell in which vegetables and animal life exhibits its simplest form of development.

Turning now to the third of nature's great kingdoms, I would remark that no one has ever questioned the utility of that study which directs and guides us in our search within the bowels of the earth for the ores and other substances that are at once the sources of national wealth and the supply of human wants and comforts. But while the utility of the study of mineralogy is everywhere conceded, geological research, which is inseparably connected with it, has been regarded not without much suspicion and disfavor. Irrespective of the fact that all quarrying and mining undertakings must be properly based on, and directed by, geological knowledge, how different the aspect which a section of country exhibits to the eye of a geologist and of the uninformed spectator. Whether it present sand, gravel, or alluvial soil; and in its form hill or valley, solid rock or detached boulders—all add

to the interest and pleasure of the scientific observer. The stone turned up by the ploughman, and which would not interrupt his whistle or call forth the slightest interest in the stolid wielder of pick and mattock, has for the geologist, sermons and histories, exhibiting to him mighty changes and wondrous revolutions that have completely changed the surface of the globe he lives on. The careless laborer breaks the stones that have no other interest in his eye than that they are intended to mend the roads; and the quarryman cuts out his slabs, the highest utility of which he deems their appropriation to building or ornamental purposes. Both crush, or cut to pieces, in all the blindness of ignorance, the fossil forms of unknown animals contained in them, but from which the geologist teaches the botany and zoology of former phases of the world, and even enables him to speak of great changes to take place in the future. The achievements of geology are, however, too numerous and important even to glance at within my limits, but I would venture to say something respecting one of its sub-divisions—*Ichnology*, or the study of fossil footsteps, revealing to us wonders of the past such as the imagination of even a Milton or a Dante could never conceive.

Possibly Robinson Crusoe himself was not so much astonished at the footprints on the sand of his desolate island, as the naturalist who first saw the footmarks of birds on the slab of sandstone turned up by the plough of an American boy in 1802, at South Hadley, in the valley of the Connecticut River. From this valley, the tide of conjecture flowed over other continents, until it seemed finally to settle down into the theory that the Noachic flood had rolled over those sandstone slopes, the surface of which, when the waters subsided, was so soft as to readily receive the imprints of a bird's foot. The traces then were those by which the raven of Noah had written the historical fact of his standing on the earth itself; and so the foot-prints were finally set down as those of Noah's raven. For another quarter of a century and more, this dictum of popular ignorance remained uncontroverted, men of science paying but little attentiou to it, until a Scotch clergyman, Dr. Henry Duncan, of Ruthwell, in 1828, called attention to fossil tracks in connec-

tion with the sandstones of Corncocklemuir. Buckland, by means of his Bridgewater Treatise, gave wide circulation to Duncan's discoveries, showing that these impressions were found through a depth of forty-five feet of rock, not on a single stratum only, but on many successive strata, thus demonstrating that they had been made at successive intervals. The sandstones of Dumfrieshire are supposed to have been wide-spread expanses of sand of a littoral character, visited and covered by the ancient tides, some of these surfaces recording atmospheric conditions. Their faces are sometimes pitted with hollows, the results of a pelting shower, and these pittings have occasionally such a well-defined and distinct direction, that one can ascertain the direction of the wind, which bore along with it the rain clouds. The sandstones of Cheshire, again, exhibit sufficient evidences of solar influence. We find here the sun-dried surfaces of the clayey strata associated with the sandstone, over which animals formerly crawled, cracked and shrunk by the solar beams. Again, they present beautiful sand ripples, the result of a gentle breeze breaking the stiff surface of a shallow pool of sea water on these sandy shores. There may also be found instances of the evaporation of salt water, and the crystallization of sea salt, from the natural salt pans of the ancient beaches. Another noticeable fact is the almost constant and uniform direction of the impressions. They nearly all indicate that the animals, which Sir William Jardine shows must have belonged to some forms of tortoise, walked from the west towards the east. Further discoveries of fossil footsteps were made in the United States in 1835, the impressions again resembling the feet of birds, and found in the sandstone rocks near Greenfield. Dr. Hitchcock, President of Amherst College, showed that they were actually produced by the feet of living birds, and that one of the kinds of tracks had been made by a pair of feet, each leaving a print 20 inches in length Says the eminent Owen: "Under the term *Ornithichnites giganteus*, Dr. Hitchcock did not shrink from announcing to the geological world the fact of the existence, during the period of the deposition of the red sandstone of the valley of the Connecticut, of a bird which must have been at least four times larger than the

ostrich." "I have already referred," says Hugh Miller, "to flying dragons, real existence of the Oolitic period, that were quite as extraordinary of type, if not altogether so huge of bulk, as those with which the Seven Champions of Christendom used to do battle; and here we are introduced to birds that were scarcely less gigantic than the roc of Sinbad the sailor." I might add to Miller's remarks, that the Bar Yuchné, that enormous bird of the Talmudic legend, seems to find identification here.

But I must hasten to conclude these remarks, already too long. They must necessarily convey but a very faint idea of the boundless field of interesting and pleasurable inquiry awaiting the student of Natural History; still, I trust they will not be without effect in leading into this field, some of those who have not hitherto entered at all. To such, my concluding words would be in the accents of caution and advice. I would say, "You must needs fearlessly concede to modern science all that is claimed for it, to this extent, that in its dealings with the great physical powers or elementary forces which pervade and govern the material world, it has been led or even forced into a bolder form and method of inquiry—that inductions of a higher class have been reached, and generalizations attained, going far beyond those subordinate laws in which science was formerly satisfied to rest,—that the precision and refinements of modern experimental research strikingly distinguish it from that of any anterior time,—that physical researches generally in our own day have a larger scope and more connected aim, experiment being no longer tentative merely, but suggested by views which stretch beyond the immediate result, and hold in constant prospect, those general laws which work in the universe at large. But let it be ever remembered that there is also exhibited in our own day a marked fondness for what is new and difficult and unintelligible in philosophy—a spirit that takes pleasure in stigmatizing as hindrances to truth in physical science, all such opinions as are fostered by ancient and popular belief, including those which assume Scriptural authority for their foundation. In their too hot zeal against dogmatical authority, we find some falling into the opposite rashness of lending their authority and favour to

hasty and partial experimental deductions, or to doctrines still in their infancy, and checked or controverted by opposite opinions of equal weight. Let, then, the dangerous effects of gratifying too prevalent a taste for transcendental inquiries in science be duly marked and carefully avoided, regarding it as cause for gratitude and felicitation that they are corrected by the contemporaneous activity of those philosophers who make experiment and strict deduction the sole measure and guides of their progress.

The Chairman of the Council (Mr. A. S. Ritchie) then submitted the following:—

REPORT OF THE COUNCIL.

Your Council beg leave to present the following report of the proceedings of the Society for the past year, and in doing so would express the hope that this Society as it grows older may become more useful, and that a deeper interest for its welfare may be evinced by the whole community.

The many difficulties under which the Society has laboured for years, still exist in certain forms; one of these is its financia position. The debt on the building is still hanging over us. In regard to this, your Council recommend that those praiseworthy efforts of certain members of the Society in canvassing and obtaining subscriptions towards its liquidation be carried into effect by the collection of the amount already subscribed, and if possible to advise the neeessity of a second attempt at canvassing so as to leave us with a clean debit sheet and something on the credit side at the end of another year. The thanks of this Council and of the members generally are specially due to those gentlemen who interested themselves in obtaining subscriptions.

The Government grant has been received, and it is hoped will be continued as usual.

The number of members has steadily increased, there having been eighteen members elected during the year. They may be classified in this manner: 15 ordinary members; 2 corresponding members; 1 non-resident ordinary member.

Another class of members have been admitted into the Society, viz., Lady Associates. Thirty-three have been enrolled during the last year, making an addition of new names on the list of membership of fifty-one.

Another feature to be noticed here is the election of sixteen life members in lieu of $50 subscribed by each for the liquidation of the debt.

There has been a number of resignations during the year.

Your Council would recommend to the new membership committee and to all the members of this Society the necessity of endeavouring to add to our list of fellow-workers in our labours to improve and benefit mankind.

Another new feature to be noticed in this report is the institution of field meetings. The first of these was held at St. Helen's Island, and was well attended, while everything tended to shew that all were satisfied and pleased with their trip.

The thanks of the Council are due to Dr. J. Baker Edwards, for revivifying an old idea of this Society in regard to field meetings, which, but for his zeal, might have only remained an idea. The thanks of the Council and Society are tendered to all who helped in the carrying out of these arrangements—and we would recommend to the new Council a continuance of these meetings, as the amount of good to the Society by their occurence will no doubt stimulate to increased usefulness—and your Council hope that the second field meeting to be held on Her Majesty's birthday, may be crowned with success.

The next point to be mentioned is the opening of the Museum to the public on Saturday afternoon; and the thanks of the Society are due to the Corporation for their kindness in granting a policeman to guard the interest of the Society on these occasions.

Another question for the consideration of the new Council is the necessity of making the Library more usefnl to its members. This work has been already begun by our Curator, Mr. Whiteaves, as his report on the Library will shew. Your Council would recommend the suggestion of Principal Dawson for consideration, to provide tables where the scientific periodicals of the day may be available to the members of this institution.

The Somerville course of public lectures have been extremely interesting this session. The following is a list of the lecturers, with the titles of the subjects selected by each:

1st. On the Peninsula of Sinai and its Engraved Rocks. By the Rev. Dr. De Sola.

2nd. On Air Poisons and their Antidotes. By P. P. Carpenter, B.A., Ph. D.

3rd. Sources of Mineral Wealth. By Principal Dawson, LL. D., F.R.S., F.G.S.

4th. On the Game Laws. By Alfred Rimmer, Esq.

5th. The Races of Mankind. By Dr. Bessey.

6th. Coal and its Products. By Dr. J. Baker Edwards.

The following original papers were read before the Society:—

Report on the Field Day. By Dr. J. Baker Edwards.

On Some of the Causes of the Excessive Infantile Mortality of Montreal. By Dr. P. P. Carpenter.

On Some Results Obtained by Deep Sea Dredging at Gaspé. By J. F. Whiteaves, F.G.S.

On Some Evidences of the Occurrence of Gasteropoda in the Devonian Period; and, on Some Points in the Structure of the Crinoidea. By E. Billings, F.G.S.

A Few Notes on the Habits of the Canadian Salmon. By D. A. P. Watt, Esq.

Obituary Notice of two British Naturalists lately deceased. By Dr. P. P. Carpenter.

A Communication on Some of the Phenomena in Geisslers Vacua Tubes; and, on the Spectra of Certain Vapours and Gases, with experiments. By Dr. J. Baker Edwards.

On Some New Facts Relating to the Huronian and Lower Carboniferous rocks of New Brunswick. By G. F. Mathew.

Remarks on the Doctrine of Geological Cycles. By Principal Dawson, LL.D., F.R.S.

Several of these have been published, or are in progress of publication, in the *Canadian Naturalist.*

In regard to the this journal, your Council recommends that action be taken at as early a day as possible by the

new Council in procuring more subscribers, as with the present number the publishers feel their inadequacy to issue it as formerly—once every two months. Four numbers of Volume III. are printed, and the fifth, bearing date June, is in the press. Mr. Watt, of the editing committee, suggests if the Council, by personal canvass, could procure seventy or eighty new subscribers, the journal would go on as formerly.

The annual Conversazione was held on the 24th February, and passed off in a very creditable manner. Microscopes were exhibited, with microscopical preparations, by Dr. Edwards, also by Messrs. Ferrier, J. P. Clark, Muir, Baillie, and Ritchie. McGill College contributed philosophical instruments, under the superintendence of Professor Johnson and Dr. Smallwood. Dr. Edwards also exhibited the opaque lantern and dissolving view apparatus, likewise electrical tubes. The music was furnished by the choir of St. John the Evangelist's Church, under the charge of the Rev. Mr. Norman, and Mr. Meyerhoffer kindly officiated as pianist on the occasion, which contributed very much to the success of the entertainment. Objects of interest in the fine arts were also contributed by friends of the Society. The President Rev. Dr. DeSola, and Principal Dawson, favoured us with addresses, making our last Conversazione one of the most successful yet held.

The next point we would touch on is the improvements in the Museum. New cases have been furnished for both sides, which will be noticed in the report of the curator, Mr. Whiteaves. The thanks of the Society are due to him for his zeal and labours in its interest. The subject of ventilation in regard to the Lecture Room has been reported on, and we would recommend this circumstance to the consideration of the new Council.

We are also indebted to the untiring zeal of our Treasurer, Jas. Ferrier, jr., Esq., for the trouble he has always taken in the management of the financial matters of the Society.

The thanks of the Society are also due to Mr. Wm. Hunter for his efforts in its behalf; and for the many valuable contributions of birds and other specimens to the Museum.

It was unanimously resolved to recommend to the Society at its annual meeting, That the Silver Medal of the Society be voted to Dr. Dawson, Principal of McGill College.

In conclusion your Council, in retiring from office, would fain hope that the incoming year may be more propitious, that our successors may find better days in store for them, and that before long, by the hearty co-operation of all the members, this Society may become what it ought to be—a benefit to the country and a public boon.

ALEX. S. RITCHIE.
Chairman of Council.

REPORT OF THE SCIENTIFIC CURATOR AND RECORDING SECRETARY.

Since the last annual meeting considerable progress has been made, not only in the classification of the specimens already in the collection, but also in the acquisition of new objects of interest. In the department of mammalia five species have been added, three of which are new to our series. A specimen of the young, or blue variety, of the Artic fox has been presented by the Smithsonian Institute, and Mr. Barnston has kindly given us an example of the Rocky Mountain Rat, Neotoma cinerea of Ord. By exchange with the Chicago Academy of Sciences we have obtained two specimens of the Leopard Spermophile, from Illinois, and one example of the Missouri pouched Rat (Geomys bursarius) from Iowa. Within the last two years our series of American mammals has been almost doubled, and within the past four years we have added to our series fifty new Canadian and nine new species of exotic mammals.

The principal feature of the past year has been the great improvement in our collection of birds. Thirty-six new specimens of Canadian birds have been procured, and beautifully mounted by Mr. Hunter. The Smithsonian Institute have contributed 11 rare species of N. American birds, mostly from Russian America.

Captain Bulger has forwarded a series of 200 specimens of the birds of the Himalayas, all carefully named. Unfortunately,

however, these have sustained such injury from damp during the passage that only 59 specimens could be saved.

The Rev. Dr. Greatorex, of London (England), has presented us with a specimen of the Yellow-billed Albatross. During the past twelve months 109 new specimens of birds have been added to the collection. Two large new cases have been erected in the Museum, one of which is devoted to the reception of Canadian birds, and the other to that of British and foreign species. The whole collection has been re-mounted upon separate stands, each of which has been made on the premises. The Canadian birds have been re-grouped, classified and named in exact conformity with Prof. Baird's Monograph on the Birds of North America. This part of the collection is now in perfect order, and the whole of the series is carefully labelled. The Exotic species have been re-grouped and partly named, but the classification of this part is not yet finished.

To give an idea of the work entailed by this new and improved system of classification some details may not be out of place. The following is an estimate of the number of specimens of birds in our collection up to the present date.

Canadian Birds	373
United States Birds	23
British Birds	100
Exotic Birds	338
	934

How much progress has been made in this important branch of Natural History may be inferred from the fact that during the past year we have added 109 new specimens, and in the preceding session 120, giving an average of over 100 specimens per year.

Amongst the Reptiles several new specimens have been added, one of them a frog (Rana sylvatica) which has not heretofore been catalogued as inhabiting Lower Canada, also several critical species of the native genera Salamandra and Plethodon, and some others in addition, including three exotic forms.

Nine species have been added to our series of Canadian fishes; among the more interesting of these are Raia lævis from the

Lower St. Lawrence, a very large specimen of Corvina Richardsonii, 3 species of Catastomus, Labrax notatus Richardson; also specimens of Anguilla acutirostris, and examples of the Canadian Herring and Mackerel.

During the past summer dredging operations were carried on in Gaspé Bay with considerable success. Twenty-one species of Mollusca, one of Echinodermata, and one of Alcyonidæ, new to the Canadian fauna, were procured, and specimens of most of these have been placed in the Museum. An interesting series of invertebrates, dredged by Mr. Packard in Labrador, have been presented by that gentleman to the Society. The collection of Crustacea and Echinodermata has been carefully gone through and re-classified.

The large herbarium of the Society has occupied a considerable portion of the time of the past year. The whole collection has been gone through, the loose plants have been fastened, and the whole of the valuable series of North American plants has been grouped in accordance with the classification adopted in Prof. A. Gray's Manual. Mr. D. A. P. Watt has kindly arranged the ferns, and has added many species that were wanting in this department. The collection of N. American plants now fills 24 large portfolios.

In the departments of ethnology and archœology several interesting specimens have been added.

Considerable attention has been paid to the Library; the periodicals are systematically arranged, and 31 vols. of the proceedings of American and English scientific societies have been bound. About 56 vols. of the proceedings of European societies, however, still want binding.

The Library is in great want of new books illustrative of the Natural History of N. America, no additions in this direction having been made for years. It is to be hoped that efforts will be made to supply this much to be regretted deficiency. Hardly any of the best monographs in the various departments of Natural History (books which are absolutely essential in the study of Canadian zoology, botany or geology) are to be found on our

shelves, and the study of physical science is in consequence much retarded.

J. F. WHITEAVES, F.G.S., &c.,
Curator & Rec. Sec. N. H. S.

The following abstract, shewing the financial position of the Society, was then submitted by the Treasurer, Mr. Jas. Ferrier, jun.

DR. THE NATURAL HISTORY SOCIETY OF MONTREAL, IN ACCOUNT WITH JAMES FERRIER, JR., TREASURER. CR.

1868.		1867.	
May 1.		May 1.	
To Cash paid, J. F. Whiteaves, salary	$400 00	By Balance in Treasurer's hands	$128 97
" " Wm. Hunter, do.	200 00	1868.	
" " J. E. Pell, commission for collecting	44 30	May 1.	
" " Interest	216 00	By Cash, Government Grant	750 00
" " for Wood and Coal	145 69	" Life Members' subscriptions	250 00
" " Gas Accounts	47 24	" Donations received towards liquidation of debt	95 00
" " Water Account	38 75	" Members' yearly subscriptions	881 00
" " City Taxes	41 19	" Museum entrance fees	13 50
" " Insurance	39 00	" Rent of Lecture Room	136 00
" " Repairs, and petty expenses	160 16	" Proceeds of Conversazione	41 37
" " P. O. Account	12 71	" " Field Day	20 50
" " Books, Printing, and Advertising	167 98	" " Sale of Glass Cases	43 49
" " for Furniture	227 22		
" " Mortgage, favor late Wm. Watson	400 00		
To Balance in Treasurer's hands	219 59		
	$2359 83		$2359 83

JAMES FERRIER, JR., *Treasurer, N. H. S.*

STATEMENT OF LIABILITIES, MAY 1ST, 1868.

Mortgage on Society's Building, favour Royal Institution $2000 00

It was moved by Jno. Leeming, seconded by Dr. David, and carried by acclamation:

That the silver medal of the Society be voted to Principal Dawson, for his services to the cause of science in British America.

It was next moved by Mr. Marler, seconded by Mr. Shelton, and unanimously resolved:

That the foregoing reports be adopted, and that they be printed for distribution to the members.

Mr. T. J. Claxton moved, and Mr. W. Muir seconded, a resolution to the effect:

That the thanks of the Society be given to the retiring officers, and that we desire more especially to express our sense of the importance of the services of Mr. Whiteaves, as Scientific Curator, and our desire that he may continue to occupy that position.

The following gentlemen were elected office-holders for the coming session:—

OFFICERS FOR 1868-69.

President.—Principal Dawson, LL.D., F.R.S., &c.

Vice-Presidents.—Rev. A. De Sola, LLD.; E. Billings, F.G.S.; Sir W. E. Logan, LL.D, F.R.S., &c.; C. Smallwood, M.D., LL.D., D.C.L.; Dr. T. Sterry Hunt, F.R.S.; The Right Rev. the Lord Bishop and Metropolitan; Jno. Leeming; Dr. P. P. Carpenter; G. Barnston.

Treasurer.—Jas. Ferrier, jr.

Corresponding Secretary.—Prof. P. J. Darey, M.A.

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Librarian.—E. E. Shelton.

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Editing Committee of the "Canadian Naturalist."—D. A. P. Watt, Acting Editor; Principal Dawson; Dr. T. Sterry Hunt; E. Billings; J. F. Whiteaves; Prof. P. Darey.

Library and Membership Committee.—W. Muir; Alexander Gordon; M. H. Sanborn; D. Rose; and R. McLachlan.

List of Donations to the Museum.

From May 27th, 1867, to April 27th, 1868.

The dates refer to the meetings of the Society, at which the objects were presented.

Donars' Names.	Donations.
	May 27th, 1867.
R. J. Fowler, Esq.....	2 Red Breasted Mergansers. (*Mergus serrator Linn.*)
	Male American Mallard. (*Anas boschas, Linn.*)
	Pair of Buffel-headed Ducks. (*Bucephala albeola.*)
	Male Ring-necked Duck. (*Fulix collaris, Baird.*)
Jas. Ferrier, jun., Esq....	Male Green-winged Teal. (*Nettion Carolinensis.*)
Mr. W. Hunter.....	Pileated Woodpecker. (*Hylotomus pileatus.*)
Prof. Darey.....	Male Loon. (*Colymbus torquatus, Brunnich.*)
Smithsonian Institute, (Washington, U. S.)	A series of ethnological and other objects of interest from the Mackenzie river, and from the islands of the Pacific.
A. S. Ritchie, Esq.....	Two species of Amphibia.
	October 28th, 1867.
W. Abbott, Esq.....	Indian Pipe Bowl, from the supposed site of the Indian village of Hochelaga.
G. Barnston, Esq.....	Skin and Skeleton of the Rocky Mountain Rat. (*Neotoma cinerea, Ord.*)
R. J. Fowler, Esq.....	American Hare. (*Lepus Americanus, Erxleben*)
J. F. Whiteaves, Esq.....	8 species of Canadian Marine Shells, 3 of Canadian echinoderms, 1 Sertularia, and Alcyonium rubiforme, all dredged in Gaspé Bay.
	14 species of Shells from the United States, and 15 exotic species.
Rev. Dr. Greatorex, (London, England)...	Skin of an Albatross. (*Diomedea*—?)
Smithsonian Institute, (Washington, U. S.)	Skins of the Arctic Fox. and of the following birds, from Rusian America:
	2 Varied Thrush. (*Turdus nævius, Gmel.*)
	1 Water Ouzel. (*Hydrobata Mexicana.*)
	1 Chestnut-backed Tit. (*Parus rufescens, Townsend.*
	1 Steller's Jay. (*Cyanura Stelleri, Swainson.*)
	1 Harlequin Duck. (*Histrionicus torquatus, Bon.*)
	1 Fork-tailed Petrel. (*Thalassidroma furcata, Gould*)

List of Donations to the Museum.

Donars' Names.	Donntions.
Smithsonian Institute. (Washington, U.S.)	1 Pomarine Skua. (*Stercorarius pomarinus, Temm.*) 1 Buffons Skua. (*Stercorarius cepphus, Ross.*) 1 Black-throated Diver. (*Colymbus arcticus, Linn.*) 1 Tufted Puffin. (*Mormon cirrhata, Bon.*) 1 Horned Puffin. (*Mormon cornicula, Naum.*)
	November 25th, 1867,
Mrs. Banner Price, (through Dr. Hingston).	3 specimens of the Herculus beetle. (*Dynastes Hercules.*) 1 young Alligator and 3 Lizards.
Mr. Higginson.....	Male Goshawk (*Astur Astricapillus.*)
H. R. Gray, Esq.....	2 lampreys, from the Lachine Canal. 2 intestinal worms.
Thos. Watson, Esq.....	A Canadian grey Squirrel.
Donald Smith, Esq.....	An Esquimaux stone kettle, a blubber and a flinching knife, dug up near Ungava, Hudsons Bay Territory.
	December 29th, 1867.
Alconbrack, Esq., (Bedford, P. Q.).....	Specimens of Maclurea magna (a fossil shell) from the Chazy limestone.
Rev. W. P. Wright.....	Geode, lined with Quartz crystals; from Keokuk, on the Mississippi river. Specimens of the following fossil plants, from the coal fields of Norris, Illinois:—Pecopteris abbreviata, Neuropteris hirsuta, Asterophyllites and Calamites—sp.
Chicago Academy of Sciences.....	2 Skins of the Leopard Spermophile (*Spermophilus tridecem-lineatus*) from Illinois. 1 specimen of the Pouched Gopher (*Geomys bursarius*) from Iowa.
— Kennedy, Esq.....	3 species of drift fossils from the neighbourhood of Montreal, and a large specimen of Lunatia heros, from Portland, Maine.
	February 24th, 1868.
J. G. Ascher, Esq.....	Alcyonium, Scolopendra, Corals and Shells, from Bermuda.
	March 30th, 1868.
M. H. Sanborn, Esq.....	3 coins, viz.: 1 Californian gold half dollar, 50 centimes of the French Republic, 1851, and two annas of the East India Company.

List of Donations to the Museum.

Donars' Names.	Donations.
	April 27th, 1868.
Bt.-Major G. E. Bulger, F.L.S., F.R.G.S., M. Z.S., 2nd battalion, 10th foot	A valuable series of 200 specimens of the birds of the Himalaya's, all carefully named.
C. Robb, Esq	10 varieties of Canadian marbles, cut and polished, and 6 specimens of minerals from Canada and New Brunswick.
Dr. A. S. Packard, jun.	A collection of Marine Invertebrates from Labrador, and from Eastport, Maine.
Jno. Kittson, Esq	Specimens of the following mammals and birds from Morrison's Island, opposite Berthier, P. Q.:—
	2 Meadow mice. (*Arvicola riparia, Ord.*)
	1 Tyrant Flycatcher, male. (*Tyrannus Carolinensis.*)
	1 Short legged Pewee. (*Contopus Richardsonii.*)
	1 Red winged Starling. (*Agelaius phœniceus.*)
	1 "Boblink." (*Dolichonyx oryzivorus.*)
	1 Spotted Sandpiper. (*Tringoides macularius.*)
Jno. B. Goode, Esq	1 Downy Woodpecker. (*Picus pubescens.*)
	1 Ruby crowned Wren, male. (*Regulus satrapa.*)
Mr. W. Hunter	1 Hairy Woodpecker, (*Picus villosus.*)
	1 Yellow bellied Woodpecker. (*Sphyropicus varius.*)
	1 Golden Winged Woodpecker. (*Colaptes auratus.*
	1 Chimney Swallow. (*Chætura pelasgia.*)
	1 Great Crested Flycatcher. (*Myriarchus crinitus.*)
	Pair of Yellow Warblers. (*Dendroica æstiva.*)
	Pair of the Solitary Vireo, (*Vireo solitarius.*)
	Pair of the Warbling Vireo. (*Vireo gilvus.*)
	Pair of the Yellow throated Vireo. (*Vireo flavifrons.*)
	1 Grass Finch. (*Poocætes gramineus.*)
	1 Northern Phalarope. (*Phalaropus hyperboreus.*)
	1 Snipe. (*Gallinago Wilsomii,*)
	1 Tell Tale Tatler. (*Gambetta melanoleuca.*)
From a friend	Two specimens of the "Black Trigger Fish" (*Balistes ringens*) from Brazil.
W. Rodden, Esq	A Canadian Rattlesnake. (*Crotalus durissus.*)
Acquired by purchase	1 Pin-tail Duck, male. (*Dafila acuta.*)
	1 American Widgeon. (*Mareca penelope.*)
	1 Scaup Duck, Male. (*Fulix marila.*)
	1 "Malachegan." (*Corvina Richardsonii.*)
	Pair of English Partridges. (*Perdrix cinerea.*)
	1 English Jack Snipe. (*Gallinago gallinula.*)

List of Donations to the Library.

Donors' Names.	Donations
Executors of the late W. Christie, Esq.....	Reliquiæ Aquitanicœ. London 4to. Parts 4-6.
Dr. P. P. Carpenter.....	Proceedings of the Bristol Natural History Society for 1866, and for January, 1867.
The Geological Survey of Canada.....	Catalogue of the Silurian fossils of the Island of Anticosti, with descriptions of some new genera and species, by E. Billings, F.G.S.
The Author.....	A brief account of the Thesaurus Siluricus, by J. J. Bigsby, Esq.. M.D., F. G. S., &c.
U. S. Sanitary Commission.....	Documents of the U. S. Sanitary Commission. New York. Vols. 1 and 2, 1866.
	United States Sanitary Bulletin. New York, 1863-65.
The Author.....	Cephalopodes Siluriéns de la Bohéme. Introduction, par Joachim Barrande.
	Three Scientific Pamphlets from Leipsig.
Smithsonian Institute, Washington, U. S....	Smithsonian Miscellaneous Collections. Vols. 5, 6, and 7. 8vo. Washington, 1864-1867.
	Smithsonian Contributions to Knowledge. Vol. 14. Washington. 4to.
Natural History Society, Boston, Mass	Memoirs read before the Boston Natural History Society. Vol. 1, Part 2. 1867. 4to.
The Author.....	On the Classification of the Subdivisions of McCoy's genus Athyris, as determined by the laws of Zoological Nomenclature. By E. Billings, F. G. S.
"	List of the brachiopoda from the Island of Anticosti. By N. E. Shaler.
Mrs. Edwin Atwater.....	French Bible, translated by Jean Diodati. Geneva, 1644.
	Dr. Haweis' Commentary on the Scriptures. Glasgow, 1765.
Joel Mansell, Esq.....	History of the Albany Penitentiary. Dyer. Albany, N. Y.
Natural History Society, Boston, Mass.....	Condition and Doings of the Boston Society of Natural History, as exhibited by the annual reports of the Custodian, Treasurer, Librarian and Curators. 1867.
J. D. O. McBean, Esq., [Berthier en haut....	Dakotah Grammar and Dictionary.
Rev. Dr. De Sola.....	Insectorum sive minimorum animalium theatrum. London, 1634.
"	Horticultural Essays. No. 1. On the Natural Order Proteeœ. By J. Knight, F. H. S. London, 1809.
"	A General View of the Writings of Linnœus. By R. Pulteney, M. D., F. R. S., &c. 2nd Edition. Edited by W. G. Maton, M. D., F. R. S., &c. London, 1805.

List of Donations to the Library.

Donors' Names.	Donations.
Rev. Dr. De Sola	Sur les principes de la Zooclassie, ou de la classification des animaux; par M. H. de Blainville. Paris, 1847.
The Authors.....	Bombay Magnetic and Meteorological observations. 1864.
Per J. Robertson, Esq....	Cape of Good Hope. Report of the Colonial Botanist for 1863, 1864, 1865 and 1866. Cape Town.
The Author	Modern Scientific Investigation; its methods and tendencies. By Prof. J. S. Newberry. Salem, Mass. 8vo. pamphlet.
The Author	Geology and Natural History Survey of N. Carolina. Part 3. Botany. By Rev. M. A. Curtis, D. D., &c.
U. S. Patent Office.....	Patent Office Reports for 1862, 1863, 1864 and 1865. 7 vols. 8vo.
M. J. Mitcheson, Esq.....	48th Annual Report of the Controllers of Public Schools of the 1st School District of Pennsylvania. Philadelphia, 1867.
Thos. Rimmer, Esq.....	Colorado in the U. S. Schedule of Ores, &c. By J. P. Whitney.
The Author	On Natro-boro-Calcite; its formula and associations. By Prof. How, D. C. L., &c.
.....	Nederlandsch Meteorologisch Jaar-boek voor 1866. 1861-1862. Utrecht.
Royal Society, Christiania.	Meteorologiske paa Christiania Observatorium, 1864, 1865 and 1866.
"	Meteorologiske Beobachtungen aufgezeichnet auf Christiania Observatorium, 1-2, 1862. 3 and 4, 1848-55; and vol. 1, 1837-63.
"	Meteorologiske Iagttagelser det Sydlinge Norge. 1863-66.
"	" " " 1866.
"	Acta Universitatis Lundensis. 1865. 3 divisions.
"	Etudes sur les affinités chimiques par C. M. Guldberg and P. Waage. Christiania.
"	Beretning om Fisteri Udstillingen i Aalesund; Christiania.
Geol. Survey of Iowa....	Report of the Geological Survey of the State of Iowa. 1868.
The Author.....	Investigations of a Naturalist between Mingan and Watchicouti, Labrador. By W. Couper.
R. M. Bernard, Esq.... (Shipton, P.Q.).....	The Intellectual Observer. London. Nos. 55 to 64, inclusive.
From the Publishers in exchange for the Naturalist.....	Canadian Journal. Toronto.
	Transactions of the Literary and Historical Society. Quebec.

List of Donations to the Library.

Donars' Names.	Donations.
From the Publishers in exchange for the Naturalist	Journal of the Board of Arts and Manufactures of Upper Canada. Transactions of the Nova Scotian Institute. Silliman's American Journal. Proceedings of the Academy of Sciences of Philadelphia. Annals of the Lyceum of Natural History of New York. Boston Journal of Natural History. Proceedings of the Essex Institute. Do Franklin Institute. Do Entomological Society of Philadelphia. Journal of the Portland (Maine) Society of Natural History. Transactions of the Academy of Sciences of St. Louis. Transactions of the Albany Institute. Albany, N. Y. Annals of Iowa. Proceedings of the American Philosophical Society. Proceedings of the American Antiquarian Society. Historical Magazine. The American Naturalist. Salem, Mass. Proceedings of the American Academy of Arts and Sciences. Proceedings of the Linnæan Society. Proceedings of the Dublin University Zoological and Botanical Association. Proceedings of the Tyneside Naturalist's Field Club. Journal of the Society of Arts. London. Proceedings of the Natural History Society of Dublin. Quarterly Journal of Science. London. The Popular Science Review. London. Transactions of the Geological Society of Glasgow. The Geological Magazine. London. Bulletin de la Société Imperiale des Naturalistes de Moscou. Zeitschrift der Deutschen Geologischen Gesellschaft, 1861 and 1862, (From the Geological Society of Berlin.) Mittheilungen der Kaiserlich-koniglichen Geographischen Gesellschaft. Vienna.

List of Donations to the Library.

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From the Publishers in exchange for the Naturalist	Sitzungsberichte der koniglichen, bayer Akamedie der Wissenschaften Zu Munchen. Munich.
	Forhandlinger i Videnskabse Selskabet i Christiania. Christiania.
	Novorum Actorum Academiæ Cæsareœ Leopoldino-Carolinœ Germanicæ naturœ Curiosorum. Dresden.
	Berichte uber die Verhandlungen der Koniglich Sachsischen Gesellschaft der Wissenschaften zu Leipsig.
	Abhandlungen herausgegeben vom naturwissen-schaftlichen Vereine zu Bremen.
	The Isis. Dresden.
	Giornale di Scienze Naturali ed Economische. Palermo.
Government of Canada ..	Canada Gazette.
	Statutes of Canada.
Education Office, L.C.....	Journal of Education.
The Publishers	The Canadian Naturalist and Geologist.

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Literary and Historical Society.....Quebec.
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UNITED STATES.

Natural History Society.....Portland, Maine.
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GREAT BRITAIN.

Geological Society.....London.
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Geological Survey of Great Britain.....London.
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The Geological Magazine.....London.
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CONTINENT OF EUROPE.

Société Géologique de France.....Paris, France.
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Freiberg Royal Academy.....Freiberg, Saxony.
Nederlandisch Metereol. Jarrboeck.....Utrecht.
Journal of Natural and of Economic Science.....Palermo.
Royal Society.....Leipzig.
Academiæ Cesareæ-Leopoldino-Carolinæ Germanicæ naturæ curiosorum...Dresden.
The Isis.....Dresden.
Abhandlungen herausgegeben vom naturwissenschaftlichen Vereine zu....Bremen.

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Scott, Gilbert.
Shackell, H.
Shaw, H. J.
Shearer, Jno. S.
Shelton, E. E.
Shewan, A. N., M.A.
Simpson, G. W.
Smallwood, C., M.D., LL.D.
Smith, John, Alexander St.
Smith, Col., W. Osborne.
Snow, E. L.
Starnes, Hy. M.P.
Sutherland, Dr. Wm.
Thomas, Henry.
Thompson, Thos. M.
Tiffin, Jos., Jun.
Torrance, F. W.
Trenholme, Dr. E. H.
Vennor, H. G.
Walker, Wm. S.
Wanless, Dr.
Watson, Thos.
Watt, D. A. P.
West, Jas.
Whiteaves, J. F.
Whitney, H. H.
Wilkes, Rev. H., D.D.
Williamson, Jas.
Winks, G.
Wood, Rev. E.
Wood, A. S.

Lady Associate Members.

Mrs. Stanley C. Bagg,
" W. C. Baynes,
" Champion Brown,
" Hugh Cochrane,
" (Dr.) Craik,
" (Principal) Dawson,
" (Dr.) De Sola,
" (Dr.) J. Baker Edwards,
" Jas. Ferrier, jr.,
" Jno. Foulds,
Miss Mary Gale,
Mrs. (Dr.) Girdwood,
Miss Haight,
Mrs. E. H. Lay,
" H. F. Lamplough,
" W. Learmont,
Miss G. A. Leslie,
Mrs. Theodore Lyman,
" Jno. Lyman,
" Jas. E. Major,
Miss Isabella McIntosh,
" B. A. McLachlan,
Mrs. McKinlay,
" H. Phillips,
" Jno. Popham,
" Peter Redpath,
" T. M. Taylor,
" Jas. Torrance,
" H. W. Walker,
" (Dr.) Wilkes,
Miss Rimmer.

Honorary Members.

DATE OF ELECTION.

May 29, '50...A. M. McWhinnie.....London, England.
Nov. 29, '52...General G. Lefroy, F.R.S.....Royal Arsenal, Woolwich, England.
Aimé Bouchard, M.C.....Academie des Sciences, Paris
Milne Edwards, M.D..... " " " "
Feb. 28, '53....Professor Joseph Henry, Secretary of the Smithsonian Institute..... ....Washington.
March 28, '53...Dr. Rae.....
Jan. 5, '54...O'Bryan Bellingham, M.D.....Dublin.
May 19, '56...C. Smallwood, M.D., L.L. D.....Montreal.
Sept. 29, '56...Professor James Hall.....Albany, N. Y.
Professor Dunglison.....Philadelphia.
Oct. 26, '56...Professor Agassiz.....Cambridge, nr. Boston, U. S.

Corresponding Members.

DATE OF ELECTION.

Aug. 26, '37...Dr. Sabourin.....United States.
Sept. 29, '45....Major Kendall.....
June 26, '46....Dr. W. Newcomb.....Troy, N. Y.
June 25, '47....J. W. Leaycraft.....Quebec.
Nov. 20, '47...Henry Holmes Croft, Professor of Chemistry, University College.....Toronto.
April 24, '48....Major Lachlan.....Cincinnati.
June 25, '49....Dr. John Hillier Blount.....Birmingham, England.
July 30, '49....Jean Charles Taché.....Quebec.
Charles Payn, M.D.,.....United States.
May 20, '50....T. McDonald.....Jamaica.
Jan. 27, '51....Cecil Percival Stone.....
April 25, '52....Samuel Kneeland, M.D.,.....Boston, Mass.
Aug. 30, Dr. Robert M. Huston.....Philadelphia, Penn.
William Rogerson.....Royal Observatory, Goeenwich.
William Andrews.....Quebec.
J. Adolphus Thurberg.....Louisiana.
Sept. 8, '52...M. C. Brodie.....Beanharnois.
E. A. H. Allen.....Troy, N. Y.
Oct. 25, '52...Wm. Goodenough Wheeler,.... M.D.,..... .....Chelsea, Mass.
Rev. William Scott.....Sherbrooke, C. E.
Nov. 29, '52...B. P. Johnson, Secretary, Agricultural Society.....New York.
Samuel Walker.....Roxbury, Mass.

Sir John P. Boileau, Bart., F.R.S.....London.
John L. LeConte, M.D.....Hhiladelphia.
J. Eliot Cabot, Cor. Sec. of the Boston Society of Natural History.....Boston, Mass.
John Cassin.....Philadelphia.
John Gundlach, M.D.....Cardenas, Cuba.
Prof. W. Buckland.....Toronto.
Feb. 28, '53...Dr. Charles Huguet Latour.....St. Rémi.
Dr. J. W. Salisbury.....Albany.
George Webber Breton.....Paris.
George Gephson Rumley.....Dublin.
Archibald Cameron.....Pointe du Chêne.
March 28, '53...Hon. Jos. Cauchon, M.P.P.....Quebec.
Benjamin Franklin Niles.....Washington, D. C.
Francis Markoe, jr.....Washington, D. C.
Samuel Dutton.....Gnernsey.
H. Thieleke.....Quebec.
François Xavier Garneau.....Quebec.
Chas. Laberge, Esq.....St. Johns, P. Q.
Rev. F. Pilote, College of Ste. Anne de la Pocatière.....
Dr. Théop. Huguet Latour,.....Boucherville.
April 27, '53...Vertue Edwards.....London, England.
Pierre Martial Bardy, M.D.....Quebec.
Thomas Wakley, jr.....London.
William Bell.....London.
Philip Claiborne Gooch, M.D.,....Richmond, Va.
Col. Campbell, C. B.....St. Hilaire.
Eben. Wight, M.D.....Boston, Mass.
Alexander Murray.....Woodstock, C. W.
July 26, '53....George G. Francis .....Swansea, England.
Geo. Prev. de Boucherville .....St. Hyacinthe.
Rev. G. Langevin.....Quebec.
Albert Baker, M.D .....Stancross, Devon, England.
John Gilson.....Rome, Italy.
Nov. 28, '53...Casimir Dessaulles.....St. Hyacinthe.
Hamilton D. Jessup, M.D.....Prescott.
M. Turcot, M.D.....St. Hyacinthe.
Rev. M. Lavallée .....St. Vincent de Paul.
April 24, '54....Rev. Michael Ashton.....Adelaide, Australia.
June 30, '54....Rev. M. A. Trudeau.....Buffalo, N. Y.
Edward Crisp, M.D.....London.
Edward L. Ormerod, M.B.....Brighton.
James Spence.....Pointe Claire.

Oct. 30, '54...Rev. Louis Ed. Bois.....Maskinongé.
Dr. Amédée Weilbraim.....Tournay, Belgium.
Jan. 29, '55...Sir James Ed. Alexander.....
June 25, '55...General Rowan.....
Dr. Litchfield.....Kingston.
Oct. 29, '55...William Couper.....Ottawa.
March 31, '56...Sir G. E. Cartier, M.P., Bart.
A. Brunel..... .....Toronto.
Rev. W. Brethour, M.A.....Ormstown.
April 28, '56....Hon. Judge Sicotte.....St. Hyacinthe.
May 19, '56...Asst. Com. Gen. Ibbotson.....
Jan. 28, '56...P. L. McDougall, Advocate.....Toronto.
J. C. Lee, M.D..... .....London, C. W.
Prof. P. J. Heyfelder.....Finland.
Dec. 29, '56...H. P. Gosselin.....Clarendon.
Alexander Copeland.....Hinchinbrooke.
Feb. 25, '57...Prof. O. P. Hubbard, M.D.,
Darmouth College.....Hanover, N. H.
Rev. A. J. Tellier, President St.
John's College, N. Y.....Fordham.
R. L. Pell.....New York.
April 27, '57...Jules Flavien Gingras.....Quebec.
July 27, '57...Count Motschulsky.....St. Petersburgh.
April 27, '57...Rev. M. Curtis, D.D.....Hillsborough, U. S.
W. S. Sullivan.....Columbus, Ohio.
S. Durkee, M.D.....Boston, Mass.
May —, '60....Rev. Louis Wurtele.....Actonvale.
July —, '60...M. J. Mitcheson.....Philadelphia.
Oct. —, '60...Henry Poole.....Halifax, N. S.
Rev. D. Honeyman, F.G.S.....Antigonish, N. S.
Ed. Bowen, M.D.....Brantford.
Nov. —, '60...Barnard R. Ross.....Fort Simpson, Rupert's Land.
Jan. —, '62...Thomas Macfarlane.....Actonvale.
June 30, '62....Professor Baird.....Smithson'n Inst., Wash'gton.
W. Stimpson, M.D..... " " "
Rev. A. Forrestor, D.D.....Principal of Normal Schools,
Truro, Nova Scotia.
Sept. 29, '62....Dr. Lowe, F.R.S., &c.....Brighton, England.
Nov. 24, '62...S. H. Parkes.....Birmingham, England.
Mareh 30, '63...Hugh E. Montgomerie.....London, England.
Professor J. W. Bailey.....Fredericton, N. B.
N. W. Bethune.....Ottawa, C. W.
Oct. 26, '63...W. Saunders.....London, C. W.
A. S. Packard.....Brunswick, Me.
H. Rose.....Granby, C. E.
G. F. Matthew.....St. John, N. B.

Oct. 26, '63...Professor How.....Nova Scotia.
Nov. 30, '63....John Brown.....Hamilton, C. W.
Sept. 26, '64....Professor R. Bell, F.G.S.....Kingston, C. W.
Oct. 24, '63....Rev. R. McDonald.....
Professor H. Y. Hind.....Windsor, N. S.
Nov. 28, '64....Captain Rooke, S.F.....
March 27, '65....Captain P. G. Fortin.....Laprairie.
Nov. 29, '65...Professor Westwood.....Oxford, England.
Professor Daniel Wilson.....Toronto.
G. F. Angas, Esq., F.Z.S., &c,London, England.
Jan. 29, '66...Alexander Agassiz.....Cambridge, Mass.
March 26, '66....Rev. T. Robinson.....Abbotsford.
Feb. 25, '67...H. Woodward, Esq.....British Museum.
Bryce M. Wright, Esq.....London, England.
Thomas J. Moore, Esq.....Liverpool, England.
Nov. 25, '67....Sandford Fleming, Esq.....Halifax, Ont.
Feb. 24, '68...John Macoun, Esq.....Belleville, Ont.
Oct. 26, '68...Bt. Major G. E. Bulger, F.L.S.,India.
&c., &c.