

*Jonas Howe Pamphlets  
(1915)*

**ANNUAL REPORT**

OF THE

NEW BRUNSWICK

**NATURAL HISTORY SOCIETY.**

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MEMORIAL SKETCH

OF

**PROF. CH. FRED. HARTT,**

BY

GEO. U. HAY.

*(Have this in Soc. Trans. also)*

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ST. JOHN, N. B.:

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1881.

ANNUAL REPORT

NEW BRUNSWICK

NATURAL HISTORY SOCIETY

MEMORIAL REPORT

PROF. CHAS. T. HART

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MEMORIAL SKETCH OF THE LIFE AND WORK  
OF  
PROF. CH. FRED. HARTT.

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READ BEFORE THE N. B. NATURAL HISTORY SOCIETY, DEC. 7th, 1880.

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NEARLY three years ago when the intelligence was flashed to St. John that Ch. Fred. Hartt had fallen, it was felt that science had lost one of its foremost men. Not yet arrived at middle age, with all the enthusiasm of youth still upon him, with his life work giving promise of a glorious fulfilment, it seems only human that a pang of regret should mingle with our thoughts of him and what he might yet have accomplished had his life been spared. In his short but brilliant scientific career none rejoiced more heartily in his hard earned successes than did his early co-laborers in this society; none mourned more sincerely his untimely end. His scientific achievements are the property of the world; and yet we cannot but feel that in our own rugged climate, amid the fostering influences of our own educational institutions, in a home where Christian principles were held as the most sacred trust, were nurtured those talents and capabilities which gained such signal triumphs. As one of the founders of this Society, it is fitting that we should record our testimony of his achievements in science and more especially of his early labors and researches in our midst. Circumstances, with which we are all familiar, have hindered the accomplishment of our wishes in this respect. At a meeting of the Council of this Society, on its re-organization this year, it was at once

proposed that a sketch of his life and labors be prepared. In endeavoring to carry out the wishes of the Society in this respect, I have regretted many times that one of those members who worked with him had not undertaken the task. In the assistance which has been so kindly given me, I have endeavored to present as accurate a sketch as possible of his labors and geological researches, especially in this vicinity.

I first met Prof. Hartt about nine years ago on his return to Cornell University, after his fourth visit to Brazil, when his lectures in New York City, at Ithaca and other towns in New York State, drew upon him the attention of scientific scholars throughout the country. The demands upon his time were enormous. Besides attending to his University duties, he was engaged in arranging the large geological and archæological collections which he had brought from Brazil, and in delivering courses of lectures outside the University, to assist in defraying, in part, the expenses of his expedition. Shortly after—in 1874—he commenced the unfinished work of his life—the geological survey of the empire of Brazil, a task which presented such difficulties that none but “lion-hearted scientists,” as Mrs. Agassiz in her book on Brazil has termed him and his fellow workers, could accomplish; a task that in the short space of a few years was brought to such fruition that men of science the world over have come to regard it as one of the most accurate and important geological surveys ever attempted.

Prof. Hartt was born at Fredericton in 1840. Shortly after, his family removed to Nova Scotia, and he was educated under the guidance of his father at Horton Academy and graduated from Acadia college at the age of twenty. He gave evidence in very early life of a fondness for natural history, even in childhood collecting and examining specimens of mineral and plant life, and showing an extraordinary aptitude for understanding books on natural history. Joined to a passionate love of nature, he possessed a careful and enquiring mind, and his persevering and accurate habits of study admirably fitted him for the minute and searching explorations which he afterwards undertook and so successfully accomplished. He possessed great versatility of talent. A language, music, drawing were

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easily acquired by him. While at College he learned the elements of Portuguese from a shoemaker in the village, and this acquisition no doubt proved useful to him when he afterwards visited Brazil. He attained such proficiency in Portuguese that he lectured with great success to cultivated audiences in Rio Janeiro. His skill as a draughtsman and his command of language always drew to his lectures interested hearers. During his college course he made extensive explorations in Nova Scotia, chiefly in the Annapolis Valley, in the Gaspereau Mountains, and at Blomidon. While at Wolfville he made meteorological observations for the Smithsonian Institute, the drawings which accompanied these observations receiving much commendation. In addition to the many geological discoveries which find mention in Dawson's *Acadian Geology*, he also made a large collection of insects while at college. Many of the specimens which he collected in those early years have been very widely distributed, the Museum at Cambridge, Mass., being especially rich in the minerals of Nova Scotia and New Brunswick, collected largely by Prof. Hartt. The results of his keen observation and the original investigations which he carried on, even before he left college, brought him under the notice of Prof. J. W. Dawson, who greatly encouraged him in his early scientific researches. Prof. Hartt graduated from Acadia in June, 1860, with a class, many of whose members are now in the midst of a successful career, as Th. H. Rand, D. C. L., Judge Weatherbee, and Dr. Wickwire, of Halifax; Silas Alward and A. H. DeMill, Esqrs., St. John, and others.

In the same year, 1860, he came to St. John, where his father established a High School, in which he was assisted by his son. But the geology of this region proved of such absorbing interest to him that his mind became restive under the routine work of a school. But he afterwards made one of the best of teachers when he mastered his favorite study,—ever enthusiastic and thoroughly absorbed in science, his pupils everywhere, interested in the same pursuits, shared his deep and earnest enthusiasm. His passion for science never flagged from the moments when pausing by the roadside he broke open and gazed at the fragments of rock, until death laid its hand upon him in the midst

of his life work in Brazil. It was this intense devotion to science, his kind and genial nature, his unselfish labors, that endeared him to his pupils; and all who came in close contact with him cherish kindly remembrance of his bright cheery smile, and his earnest, thoughtful, and withal active and determined nature.

While yet at Acadia College he had correspondence and exchanged specimens with Mr. Matthew, of this City, and during his last year at College they made a visit to the principal mineral localities around the Basin of Minas,—to Windsor, Blomidon, Partridge Island, Swan Creek, Five Islands, and other points. Mr. Matthew speaks of the visit as a very pleasant and enjoyable one, Mr. Hartt being an ardent collector and a most genial companion, humorous and good-natured, and ready to relieve the tedium of their rest at a country inn or farm house by a tune on his flute. As soon as Mr. Hartt had made his home in St. John, he, with Mr. Matthew, entered upon a minute and thorough examination of the rocks of this vicinity, upon which Mr. Matthew himself had been for some time engaged. "To these gentlemen," says Dr. Dawson, "belongs the honor of first rendering intelligible the complicated geology of this district, and of discovering and almost exhausting its rich Devonian Flora and Fauna." "The collection and determination of the Cambrian fossils of what is now known as the Acadian group," he continues, "and the excavation of the numerous fossil plants of the Devonian of the same district, constitute, in my judgment, two of the most important advances ever made in the Palæontology of Eastern America, and are even yet bearing fruit." By the advice of Dr. Dawson, Mr. Hartt accepted the invitation of Prof. Agassiz to become a student in his Museum of Comparative Zoology at Cambridge. Here he remained for the greater part of the next four years—from 1861 to 1864—without however discontinuing his explorations in this vicinity, his vacations being spent in St. John.

Very soon after his arrival in St. John from Acadia College, he, in connection with the few earnest lovers of natural science that St. John possesses—may they never grow less—formed a club for the study of Geology, under the name of the "Stein-

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hammer Club." The following gentlemen composed the membership: Chas. Fred. Hartt, Geo. F. Matthew, Pres., R. P. Starr, W. R. Payne, Sec'y, J. B. Hegan, Wm. Lunn. Shortly after, at the suggestion of Dr. Dawson, of Montreal, this Club was changed into a public society, under the name of the "New Brunswick Natural History Society." Mr. Hartt was one of the most active members of the Society; and it was in the work which he undertook with some of the members who yet belong to it that he developed those extraordinary and systematic powers of geological investigation, that unflagging zeal in the cause of science that has placed him in the front rank of scientific explorers, and which led him to undertake and accomplish in little more than a decade of years such a work as few in the scientific world have been able to equal.

Many specimens were contributed by Mr. Hartt to the Museum of this Society, and he always displayed an active interest in it by writing many articles for its sessions. Through the public spirit of this Association, which purchased Mr. Hartt's Devonian collection to aid him in his arrangements to study under Prof. Agassiz, a graceful deed was performed in helping a member desirous of entering a larger field of usefulness. And Prof. Hartt's subsequent career fully justified the confidence placed in him by his associates, and by the citizens of St. John. Launched in the field of study opened to him at Cambridge and entirely devoted to the absorbing pursuit which daily opened out to him more and more treasures, he did not lose his connection with this Society, nor neglect to add to its museum.

While pursuing his course of study at Cambridge, and carrying on at the same time during his summer vacations his geological investigations with Mr. Matthew about the shores of the Bay of Fundy, Mr. Hartt was invited by Prof. Bailey to take part in a geological survey of Southern New Brunswick, undertaken at the request of the Provincial Government. The result of this survey was published in 1865; and this, with Prof. Dawson's Acadian Geology, gives us in detail the main portions of the work carried on by Prof. Hartt in this Province and Nova Scotia. These may be briefly summed up as follows:

While on the survey with Prof. Bailey and Mr. Matthew, Mr. Hartt's quick eye was ready to detect the faintest trace of organic remains which the rocks might contain. In this excursion, as at all times, he showed his preference for Palæontology over the chemical and structural part of the geologist's work, and so the fossils collected were placed in his hands for examination. It was while at work on this survey that he was able to combine the results of his previous explorations with his recent careful habits of study at Cambridge under the skilful guidance of Agassiz. Thus many collections of his own and of the members of the Society who worked with him were carefully worked up by Mr. Hartt in the museum at Cambridge.

It had been ascertained several years before Mr. Hartt came to St. John through the observations of Dr. Gesner, Prof. Robb and Mr. Matthew, that the series of Devonian Ledges on the Lancaster Sea Beach, were fossiliferous, some plant remains having been found there by these gentlemen. Under the complete and systematic explorations of Prof. Hartt and his co-laborers the rich fossil treasures of these ledges were exposed. "In May, 1861," says Mr. Hartt, "I discovered a large number of fossil plants, principally ferns, a remarkable Crustacean, *Amphipeltis paradoxus* and a *Spirorbis*. Messrs. Matthew, Payne, Hegan and Lunn took part in the explorations, which were carried on during the summer; Mr. Matthew discovering among other things a new species of *Eurypterus*, *E. pulicaris*, while Mr. Payne secured a single specimen of a trilobite, the only one the locality has afforded. These discoveries proved so interesting and valuable to science that Prof. Dawson paid a visit to the locality, and the results of his examinations were shortly after published.

In the summer of 1862 Mr. Hartt spent thirty days at the Fern Ledges, discovering many new species of plants, and more perfect specimens of those which had been previously collected. But a more valuable and unexpected discovery was that of the remains of insects—five species in all—the very oldest known to geologists, and which flitted about in the old Devonian forests, perhaps hundreds of thousands of years ago.

A description of these insects from the pen of Prof. Scudder, the distinguished entomologist, may be found in Dawson's

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Acadian Geology, pp. 524-526.\* The first one discovered by Prof. Hartt and determined by Prof. Scudder has been named *Lithentomum Harttii*.

Prof. Hartt, in 1864, in conjunction with Prof. Bailey and Mr. Matthew, made the first large collection of fossils from the Acadian or primordial group in the vicinity of St. John. In the new collection were many finely preserved trilobites. This was the first positive evidence of the existence of primordial strata in New Brunswick.

In 1864 Mr. Hartt added to his previous discoveries that of the pre-carboniferous age of gold in Nova Scotia, and carefully investigated the carboniferous limestone deposits in the neighborhood of Windsor and Stewiacke. He collected and studied with great care the fauna of the separate beds in this system. His early withdrawal from this important field left much of his work unfinished. Much of the material which he had collected was handed over to Prof. Dawson, who has supplemented the results of Mr. Hartt's explorations, as may be seen by reference to his "Acadian Geology."

At his death Prof. Hartt had still some original material relating to the geology of New Brunswick and Nova Scotia. Although his work in these Provinces was necessarily done in a brief space of time and with much rapidity, nothing however trivial that affected his work was left unfinished. A piece of fossil or sketch of any geological formation laid away, was always carefully labelled and minutely described, and the minutes and half-minutes which are wasted by some and by others not thought of sufficient importance, or in which much can be accomplished, were by him carefully and systematically used in describing portions of his work to be laid away for future reference.

But it was in the extensive and distant empire of Brazil that Prof. Hartt was destined to achieve the greatest results of his energy and genius. In a series of five expeditions, covering thirteen years, he explored a great extent of country, examining much of it step by step, mapping out large districts of territory, accumulating a vast mass of geological material,

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\* Prof. Scudder has since published a very complete monograph on these insects in the memoirs of the Boston Society of Natural History.

publishing much that was new and valuable; and when the pen dropped from his hand he had prepared much of the MS. of reports of his final work. The sequel is too well known to all to need repetition here. The intense heat of the Brazilian summer, his failing health, caused by too close application to arduous and important duties, and his anxiety and impatience under unlooked for delays and annoyances, made him fall an easy prey to that dreaded scourge of the Tropics—yellow fever. In the language of a very dear and intimate friend of his, Prof. Daniel S. Martin, we can say: "A Canadian by birth and education; an American by residence and adoption; a Brazilian, it may be said, by the chief labors and discoveries of his riper years; a scientist always and everywhere; he was no common man, and in his sad and, as we cannot but feel, untimely death, the science of two continents is called to mourn for one who cannot be replaced."

Without going carefully into the details of his explorations in Brazil, which the limits of this paper will not permit, I shall condense in as brief a manner as possible the object and results of the several expeditions.

Prof. Hartt's first visit to Brazil was made in the year 1865, when he went out as geologist to the Thayer Expedition, led by Prof. Agassiz, the primary object of which was to study the fresh water fishes of Brazil, although much attention was devoted to the geology of the country, of which almost nothing was known at that date. A few European naturalists who spent but little time in the country had published their impressions, but these rather took the form of popular sketches than of papers of scientific value. A few fossil remains, found in the eastern part of the empire, were all the spoils that had been gathered from this interesting region. From a scientific point of view it was a vast undiscovered country, promising an abundant reward to the enterprising and ardent scientist. Prof. Agassiz rapidly explored the surface geology of a portion of the country and hastily assumed that the ice sheet of the glacial epoch had extended over the valley of the Amazon. It was not until after his third expedition that Prof. Hartt was able to prove, after a most patient and thorough investigation that no trace of glacial action

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existed in the valley of the Amazon, and that instead of being geologically a barren and uninteresting region, as had been supposed heretofore, it abounded in rich fossiliferous deposits.

The results of Prof. Hartt's first and second expeditions to Brazil were published in a large octavo volume of 600 pages, entitled, "The Geology and Physical Geography of Brazil," and is an illustration not only of the maturity to which he had brought his geological studies, but also of his great versatility of talent. The numerous maps and sketches by which the work is illustrated were drawn by himself, and the descriptive portions of the work are well written and interesting. Although his later trips yielded such rich scientific results, yet so carefully and accurately was the material of this book compiled that very little, if any, of it needed correction.

In 1868, on his return from his second trip to Brazil, he was appointed to the chair of natural science in Vassar College; but he resigned in the course of the same year to accept the chair of geology in the new University of Cornell, which he held until he assumed charge of the geological survey of Brazil.

Soon after his appointment at Cornell, he was married to Miss Lucy Lynde, of Buffalo. When I met Prof. Hartt in 1872, he was deeply interested in not only the geology of Brazil but also its archæology. His third and fourth expeditions had been especially rich in discoveries along the valley of the Amazon where previously fossiliferous deposits had been supposed to be impossible of occurrence. The land was very low and thickly overgrown with a rank vegetation. But contrary to expectation he found extensive Huronian and Carboniferous deposits, for the examination of which he was particularly fitted by the training he had received among the rocks of the same formation in New Brunswick and Nova Scotia, finding in those Brazilian coal measures almost the same flora and fauna he had explored but a few years before near St. John. His archæological discoveries were also extensive. He amassed a vast deal of information regarding the language, customs and mythology of many Indian tribes of Brazil, and the pamphlets which he published and the lectures he delivered on the results of his observations among the Indians and his explorations of their shell heaps and mounds created a wide interest, both scientific and popular.

In May, 1875, Prof. Hartt received from the Emperor of Brazil the appointment of Chief of the Imperial Geological Commission for the survey of that empire, with whose physical history he had already so thoroughly identified himself.

The New York *Tribune*, of May 4th, 1878, contains the most concise account of the results of the Expedition which I have yet seen. It says:

The Geological Commission, or fifth expedition, with all its facilities and its unbroken two years and a half of work, must not be expected to have made the same striking discoveries, such as had been made by Professor Hartt before. He had already obtained the key to the geology of the country, and the labors of the Commission consisted mostly in tying together his discoveries and in greatly extending and elaborating them. The field parties moved too rapidly to allow of their making many topographical maps, and yet the existing maps of Brazil were so poor as often to render necessary their doing so. The region of the river Mæcuru, wholly unknown to science, and of the rivers Trombetas and Curua were carefully examined and mapped. The Carboniferous rocks, before known only to the south of the Amazonas, were traced to the north, where they contain the same fossils. The known area of Devonian beds was greatly enlarged, and underneath them was found the Silurian formation, containing fossils in places, and overlying the metamorphic region lying toward Guyana. To the south of Amazonas were found the same succession of beds, in a reverse order, demonstrating the existence of a palæozoic basin of which one can distinctly make out the three divisions, Silurian, Devonian and Carboniferous, the latter as a consequence of its super-position exposing the largest surface area.

The main portion of Brazil is made up of metamorphic rocks, which also form most of the coast line, and along the coast at intervals as far south as Bahia contain very fossiliferous Cretaceous basins. The work of the Commission has greatly increased the knowledge of these regions, and also those south of Rio, where fossiliferous palæozoic rocks are again found. In the province of Sergipe were found large tracts of partly metamorphosed deposits, supposed to be palæozoic. They form a large mountain range called Itabyana. Coal was found in three of the southern provinces. Its existence there was known before, but its character and relations had never been determined. It occurs only in thin beds, and is very impure, containing much sulphur and yielding a large per cent. of ash. Unless better coal is found and in larger quantities, its mining will be a total loss to the miner. The coast regions of the southern provinces also contain very extensive shell heaps, differing entirely in character from those of the north of Brazil. The gold and diamond regions were examined in many places, and the result of some of the explorations in the gold regions of "Minas Geraes" has been the formation of a rich company of Americans for the working of some of the mines. An able photographer accompanied most of the parties in the field, and over 500 negatives, mostly of larger size, testify to the faithful manner in which he carried on his part of

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the work. Many of these views were exhibited at the Philadelphia Exposition two years ago.

The Falls of Paulo Affonso, on the river of San Francisco, the Niagara of Brazil, were carefully examined, mapped and pictured. They were very poorly known before, and the same can be said of the penal island, called Fernando de Noronha, situated about 200 miles off Cape St. Roque. This island differs entirely from the main land, being of volcanic origin, and furnishing splendid illustrations of dykes and formations of basaltic columns, representing on a small scale the Giants' Causeway, in Ireland, and Fingal's Cave, of Staffa.

In testimony of the different explorations above enumerated stands the museum of the Commission in Rio de Janeiro. It occupies a large three-story building which it fills from top to bottom, and its contents are arranged in complete systematic laboratory style. Twelve hundred large trays hold the fossils, rock specimens and antiquities, which together take up four large rooms. Four rooms are also filled by the reef specimens, consisting of an immense collection of dried corals, and large alcoholic collections of general invertebrates and fishes. Then come the chemical and photographic laboratories, of which the latter is one of the largest in Rio. General work rooms make up the rest of the building. A large series of casts of antiquities had been made for exchanging with foreign societies, but as yet they remain unused.

The most of the field reports were ready for publication, especially those of the Amazonas region and of the Southern Provinces, also all the descriptions of palæozoic fossils, and many of the Cretaceous, as well as those of a large share of the antiquities. At the time of his death, Professor Hartt was just beginning to publish these reports, and was in the hope of issuing much printed work this Spring. He has not lived to see the good of his labors, but he has left behind him a monument of his own building such as remains to the memory of few. He has carried American scientific teachings and modes of working into the heart of a foreign country already supposed to be far advanced in European scientific ideas.

In addition to his work on the Geology and Physical Geography of Brazil, Prof. Hartt had written before he went to Brazil in 1874, the following works: A quarto volume of 300 pages on "Brazilian Antiquities;" a work of 300 pages on the Mythology of Brazilian Indians; a Grammar and Dictionary of the language of the Tupé Indians, of about 400 pages. At the time of his death he had prepared voluminous reports as Chief of the Brazilian Survey. These, with his contributions to scientific journals throughout the country, show an almost marvellous capacity and industry.

That he possessed all the qualities of a great leader and a brilliant scientific teacher is apparent from the abundant results of his comparatively short life. His industrious career furnishes

a fruitful example of the rewards resulting from enthusiasm and energy when applied steadily in one direction. His early death teaches us also that there is a limit to human effort and industry. Nothing is arranged according to our plans. The best workmen are called away before their work is finished. Great leaders fall while the band that follows them is still in the wilderness. Great teachers die and leave their disciples apparently paralyzed. What noble, fruitful lives in the scientific world are being struck down before their work is accomplished! How hard it seems when a great workman is called away in the midst of his life work; and yet could the light of divine wisdom and love fall upon and enlighten our view for an instant, we would see that it is only one of the indissoluble chains leading to a grand final result but whose accomplishment we are not permitted to see. Well is it for us if we can leave the result to Him and with trust and resignation murmur—Thy will be done. And if we look closely we are permitted to behold good arising from what appears to us confusion and disorder. The life of a great leader may be called a fruitful one. He gives to others an inspiration as a legacy when he falls in the midst of his work, and young and strong successors catch the burden from his dying hands and bring his plans to an accomplishment—to a fulness of accomplishment—that could never have been attained by the individual worker.

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EXTRACTS FROM THE ANNUAL REPORT OF THE COUNCIL  
OF THE  
NATURAL HISTORY SOCIETY OF NEW BRUNSWICK

FOR THE YEAR 1880.

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INTRODUCTION.

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It is now nineteen years since this Society was organized with the purpose of stimulating a taste for the Natural Sciences in this community. At its inception it had the advantage of the zeal and helpfulness of a number of devoted young students, many of whom have since died, or removed elsewhere. Meetings were held and much useful work done during the years extending onward from 1861 to 1871. The last Annual Meeting was held in 1874, since which year until the spring of last there were no regular meetings, though the property of the Society was held together and remained in the hands of the Council appointed in 1874.

Another generation of young men have now come upon the scene, and the meeting for the re-organization of the Society in March last, was well attended.

The Secretary states that the next meeting of the Society was called on the 5th March, 1880, was attended by many of those who had been active members of the organization in former times. At this meeting a number of new members were elected and officers appointed to fill the places in the Council, which death or removal had rendered vacant, and from that time to

the present Regular Meetings have been held. During the past season the following papers and addresses were read or delivered:

- March 15.—By W. F. Best, Esq., "The Glaciers of the Alps."  
 April 2.— " W. F. Coleman, M. D., "Refraction of Light in the Eye."  
 April 29.— " Wm. Jack, Esq., "Borderland of Instinct and Intelligence."  
 May 4.— " W. F. Best, Esq., "Undeveloped Resources of N. Brunswick."  
 June 1.— " Robert Chalmers, "Botanical Notes."  
 July 6.— " Prof. L. W. Bailey, "Classification."  
 August 3.— " do. do. (Continued.)  
 Sept. 9.— " M. Chamberlain, Esq., "Language of the Milicete Indians."  
 Oct. 12.— " P. R. Inches, M. D., "Contagion."  
 Nov. 3.— " L. C. Allison, M. D., "Sharks."  
 Dec. 7.— " G. U. Hay, Esq., "Biographical Sketch of the late C. F. Hartt."  
 Jan. 4.— " Ed. Jack, Esq., "The Antimony Mine of Prince William, N. B."

A Field Meeting was also held at Rothesay on the 24th of May last.

The Librarian's report shews the addition to the Library of the Society of nineteen bound volumes and eighty-four pamphlets, presented by kindred societies, by private individuals, and by the United States Government:

DONATIONS TO THE LIBRARY.		Bd. Books.	Pamphlets
From the University of Christiania, 4 vols. "Insects of Norway,"	11 Pamphlets,.....	4	11
" Bremen Society of Natural History, proceedings of same,.....	.....		2
" Essex Institute, Salem, Mass., Bulletin of that Society	.....	5	4
" Prof. J. W. Dawson, (the author,) Genesis and Migration of Plants. ....	.....	1	
" Chevalier Huguet LaTour, 16 Pamphlets,.....	.....		16
" Peabody Museum of Archæology, Report of that institution,.....	.....		3
" G. F. Matthew, Proceedings of Societe Malacologique de Belgique,.....	.....		15
" Boston Society of Natural History, Proceedings of the Society,.....	.....		6
" L. B. Botsford, M. D., Birds of Canada,.....	.....		1
" Natural History Society of Montreal,.....	.....		11
" Henry Wilmot, Esq., Progress Reports of Geological Survey of Canada, 7 large pamphlets, with maps, &c.,.....	.....		
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