

I might be enabled to pursue a more detailed examination of the geology of the line of country to be traversed by the projected Intercolonial Railway. Many delays and political changes intervened, however, and in the meantime, without my knowledge, events were shaping themselves which led to my removal from Nova Scotia, and which gave me work of a different character.

## CHAPTER VI

EDINBURGH AND MCGILL

IN 1854, Edward Forbes, one of the finest minds engaged in the study of natural science in Great Britain, and destined apparently to take the lead of all others in solving the difficult questions which lie on the confines of biology and geology,—the Gordian knot, afterwards attempted to be cut rather than untied by Darwin and Huxley,—was removed by death from the professorship of Natural History in Edinburgh, to which he had been appointed only the year before. The question of a successor was one of much interest to scientific men generally, and as the chair embraced both geology and zoology, it naturally became a question which of these would be dominant in the choice, especially as there were very few men so well versed in both as Forbes had been. Lyell wrote to me at once on the subject, advising me, as an old Edinburgh student and a representative of the geological side, as well as a student of zoology, to become

a candidate. He also offered his support and that of other men of influence. The opportunity was not one to be hastily rejected. Edinburgh was to me a second home, and it had been the early home of my wife. I knew many of its scientific and educational men, and there was a great opening for a school of practical natural science in connection with the University. There were, too, splendid opportunities of working up the fossil fauna and flora of some portions of the Scottish coal-fields, and one might hope to give a great stimulus to the study of natural science in the University, where much of one's own early training had been obtained.

I therefore offered myself as a candidate, and wrote to friends in Edinburgh, while strong letters of commendation were sent in by my London friends. The British Association was to meet in Glasgow in the following summer, while my "Acadian Geology" was to be published in Edinburgh before that time; so, as I was advised that no appointment was likely to be made until a later date, I determined to attend the meeting, and at the same time personally to press my candidature. I had gone to Halifax, to take my passage for England by the Cunard steamer,

when a message arrived, to the effect that, contrary to expectation, the appointment had been hurried through in favour of Dr. Allman, who was the candidate of the Biological party, and more especially favoured by the medical professors. Then it was, that there occurred one of those coincidences, which impress us with the belief in a kind providence overruling our affairs. Almost simultaneously with the news of the failure of the Edinburgh candidature, a letter arrived in Pictou, from the Hon. Judge Day, the president of the Board of Governors of McGill University, Montreal, explaining the movement in progress for its improvement, and offering me the position of principal. I had made no application for this appointment, and knew little of McGill, except that it had some reputation as a medical school—whilst its academical faculty was in a comparatively undeveloped condition. Nor did I, at the time, know to whom I was indebted for suggesting my name. The office was a very different one from that in Edinburgh, involving much work of a purely educational kind, and likely to remove me further from my cherished work amongst the rocks of the coal period. It is not improbable that,

in other circumstances, it might have had little attraction. But the Edinburgh candidature had familiarised me with the idea of a change of habitation, and the arrangements necessary thereto had been made. I soon learned, also, that my friend Sir Edmund Head, who had been promoted to the office of Governor-General of Canada, desired that, if possible, I should go to Montreal. Accordingly, I transferred my passage to the next steamer, that I might consult my wife and father,—my mother having passed away some years before. It was finally decided to accept the Montreal offer, provided that a chair of natural history could be added to the principalship, which was readily agreed to. I was to go over to Scotland to attend the meeting of the British Association. My wife, with our three children, was to be ready, on my return, to go on with me to Montreal, and my father, when he could close up his business affairs, was to join us there. Thus, I went to Scotland, not as I had intended, as a candidate for the Edinburgh chair, but in an independent position, as the principal-elect of McGill University.

At the meeting of the British Association I renewed my acquaintance with many old

friends, and gained some that were new; especially the Duke of Argyll, that year President of the Association. With Professor Nicol, of Aberdeen, whom I had known as a student in Edinburgh, I enjoyed an excursion to the Isle of Arran, and discussed with him the views he was beginning to form, as to the structure of the older rocks of Scotland,—views at first regarded as very heterodox, but which have since been fully vindicated. After the meeting, I went up to London, and had much pleasant intercourse with Lyell, and other eminent men, and saw something of the educational and scientific work in progress there. Amongst other leaders in science, I met Sir Richard Owen, and took advantage of his advice in regard to the introduction of zoology as a branch of academical study. I was also able to note what he had done in this direction, in the Hunterian Museum; as I had previously seen and studied the small but excellent collection that Forbes had formed at Edinburgh. Zoology, I knew must be taught at Montreal, if in no other way, as an introduction to geology, and my previous knowledge was not so much structural, as classificatory, and in relation to the animals of that part of the world with which I was

familiar. An important matter, at this time, was the accumulation of books, specimens, and apparatus likely to be useful in McGill, but as I had only my own private means wherewith to make purchases, much that would have been of the utmost service had to be passed by. Nor was I, at the time, aware how very destitute McGill College was, both of specimens and of apparatus, for natural history work. It will be well perhaps to mention here that, once again, when the principalship of Edinburgh became vacant by the death of Sir David Brewster, in 1866, and before the establishment of the new chair of geology, I offered myself to Edinburgh for both of these offices, though without making any active canvass. I did not receive the appointment, but after a few years had at least the satisfaction of knowing that geology had secured, by a handsome endowment, an assured place in the curriculum of my Scottish *alma mater*.

In September 1855, I returned to Nova Scotia, and meeting my wife and our children at Halifax, as arranged, we proceeded, by way of Boston, to Montreal, which has since been our home. During the journey we became acquainted with Mrs. John Molson of Montreal, who gave us much information in regard to

what was before us in that city, and who has ever been a kind friend, whilst members of her family have been amongst the earliest benefactors of the University, next to McGill himself.

McGill University, founded by a wealthy merchant of Montreal, and endowed with University powers by Royal charter in 1821, had not for a long time fulfilled the anticipations of its founder and its friends. Up to 1852 it had, with the exception of the Medical School connected with it, been in a very languishing condition. At this time several public-spirited gentlemen of Montreal, perceiving that the McGill endowment was the nucleus of the educational interests of the English-speaking people of Lower Canada, determined, if possible, to revive the institution. They procured an amended charter, more elastic and less cumbrous than that originally granted, secured the appointment of an able and influential Board of Governors, and under their management, it had, after 1852, entered on a new career. But it still needed endowments and a working head. Vigorous efforts were being made to secure pecuniary aid, and inquiries were instituted by the President of the Board of Governors

for a principal, the office in the meantime being filled gratuitously by Dr. E. Meredith. The principalship should naturally have fallen to the vice-principal, the Rev. Dr. Leach, a man of ability and influence, who had for many years laboured, in the most disinterested manner, to sustain the work and credit of the University; but he was the incumbent of an important city charge, which he was unwilling to relinquish, and it was also very desirable that no aspect of denominationalism should be given to the University, and that, if possible, new men should be added to the staff. Dr. Leach himself cordially acquiesced to this, but for some time it proved impossible to secure the services of a man acceptable to all the members of the Board.

At this juncture Sir Edmund Head became Governor-General of Canada. He was known to be a man of high educational and literary gifts, a zealous university reformer, who had taken an active part in the Royal Commission for his own University of Oxford, and had done much for education as Governor of New Brunswick. He was also, under the new charter, ex-officio visitor of the University. The Governors of McGill, therefore, took an early opportunity of waiting on him to solicit

his aid and influence. Sir Edmund entered cordially into their plans, and on their mentioning to him their difficulty as to a principal, in the hope that he might be able to offer some advice, he, to their surprise, suggested my name. The members of the deputation listened respectfully; but I have been told by one of them that they were both startled and disappointed, as they had expected that Sir Edmund would have been able to indicate some man of mark in England, whilst my name was scarcely, if at all, known, and not likely to carry with it much prestige in Canada, which had at that time little in common with the maritime provinces. After due inquiry, however, it was decided to make me an offer of the appointment, which, as already stated, I happened at the moment to be in a position to accept, and on which I could enter with the more advantage, as a *protégé* of the new Governor-General—a fact which no doubt had its influence both with the Board of Governors and with the public.

It thus became my lot to devote such energies as I possessed, not to the formation of a school of natural science in my Scottish *alma mater*, but to the building up of a new

and poorly-endowed university in a province where the English minority has always had the utmost difficulty in sustaining its educational institutions and religious privileges. Yet, on this account, the position had its charms for a young man accustomed to hard work and to difficult undertakings.

The actual condition of affairs on my arrival in Montreal, and some of the earlier efforts made, and improvements set on foot, may perhaps best be described in the extracts which follow, from a lecture delivered in 1893, thirty-eight years after my appointment:—

“When I accepted the principalship of McGill I had not been in Montreal, and knew the college and the men connected with it only by reputation. I first saw it, in October 1855. Materially, it was represented by two blocks of unfinished and partly ruinous buildings, standing amid a wilderness of excavators’ and masons’ rubbish, overgrown with weeds and bushes. The grounds were unfenced, and pastured at will, by herds of cattle, which not only cropped the grass, but browsed on the shrubs, leaving unhurt only one great elm, which still stands as the ‘founder’s tree,’ and a few old oaks and butternut trees, most

of which have had to give place to our new buildings. The only access from the town was by a circuitous and ungraded cart track, almost impassable at night. The buildings had been abandoned by the new Board, and the classes of the Faculty of Arts were held in the upper story of a brick building in the town, the lower part of which was occupied by the High School. I had been promised a residence, and this, I found, was to be a portion of one of the detached buildings aforesaid, the present east wing. It had been very imperfectly finished, was destitute of nearly every requisite of civilised life, and in front of it was a bank of rubbish and loose stones, with a swamp below, while the interior was in an indescribable state of dust and disrepair. Still, we felt that the governors had done the best they could in the circumstances, and we took possession as early as possible. As it was, however, we received many of the citizens, who were so kind as to call on us, in the midst of all the confusion of plastering, papering, painting, and cleaning. The residence was only a type of our difficulties and discouragements, and a not very favourable introduction to the work I had undertaken in Montreal.

"On the other hand, I found in the Board of Governors a body of able and earnest men, aware of the difficulties they had to encounter, fully impressed with the importance of the ends to be attained, and having sufficient culture and knowledge of the world to appreciate the best means for achieving their aims. They were greatly hampered by lack of means, but had that courage which enables risks to be run to secure important objects. I may mention here a few of these men. Judge Day was a man of acute legal mind, well educated and well read, a clear and persuasive speaker, wholly devoted to the interests of education, and especially to the introduction into the college course of studies in science and modern literature. Christopher Dunkin was a graduate of the University of London, educated first in Glasgow, and afterwards in University College, and had held a tutorial position in Harvard before he came to Canada. He had made college work and management a special study, and was quite competent to have been himself a college president or principal, had he not had before him the greater attractions of legal and political success. Hew Ramsay, was an admirable example of an educated Scotsman, of literary tastes and business

capacity. David Davidson was also a product of Scottish college training, and a warm and zealous friend of education, with great sagacity and sound judgment. James Ferrier should have been mentioned first. He was a member of the old Board of the Royal Institution, and senior member of the new, but voluntarily resigned the presidency in favour of Judge Day, in the interest, he believed, of the University. He was longer with us than any of the others, and no one could have been a more devoted worker in the cause of education. Such men as these, and their colleagues, insured public confidence, and a wise and enlightened management.

"The University at this time comprised three faculties—those of law, medicine, and arts. The faculty of Law, then recently organised, had two professors and two lecturers. The faculty of Medicine, the oldest and most prosperous of the three, had ten professors and a demonstrator. The faculty of Arts had four professors and a lecturer, and all of these, except one, gave only a part of their time to college work. They were, however, able and efficient men.

"Our great difficulty was lack of the sinews of war, and the seat of Government being,

at the time, in Toronto,<sup>1</sup> I was asked by the governors to spend my first Christmas vacation in that city, with a view of securing some legislative aid. There was as yet no direct railway communication between Montreal and Toronto, and of course no Victoria Bridge. I crossed the river in a canoe, amidst floating ice, and had to travel by way of Albany, Niagara, and Hamilton. The weather was stormy, and the roads blocked with snow, so that the journey to Toronto occupied five days, giving me a shorter time there than I had anticipated. I received, however, a warm welcome from Sir Edmund Head, saw most of the members of the Government, and obtained some information as to the Hon. Mr. Cartier's contemplated Superior Education Act—passed in the following year—which secured for the first time the status of the preparatory schools, whilst giving aid to the universities. I was also encouraged by Sir Edmund and Cartier to confer with the Superintendent of Education, and with the Governors of McGill on my return to Montreal, with reference to

<sup>1</sup> After the burning of the Parliament buildings at Montreal, and pending the selection of a permanent seat of Government, the Canadian Parliament met alternately in Quebec and Toronto.

the establishment of a Normal School in connection with the University. This was successfully carried through in the following year.

“The direct aid, however, which could be obtained from the Government, was small, and the next movement of the Board of Governors was our first appeal to the citizens of Montreal, resulting in the endowment of the Molson Chair of English Language and Literature with \$20,000 (subsequently augmented to \$40,000 by Mr. J. H. R. Molson), and \$35,000 from other benefactors. This was a great help at the time, and the beginning of a stream of liberality, which has floated our university barque up to the present date.

“To counterbalance these successes and advantages, in the early part of 1856 the building occupied by the High School and by the Faculty of Arts was destroyed by fire, along with some of the few books that had been collected, and some of our apparatus, and a large part of my private collections, which I had been using for my lectures. The specimens, apparatus, and books were not insured, and the insurance on the building was quite insufficient to replace it, so that this was a great pecuniary loss, but one which our Governors bore with



admirable fortitude and equanimity, and took immediate steps to repair. For the remainder of the session the college classes were transferred, in part to the original college buildings, above Sherbrooke Street, and in part to the Medical Faculty's building, on Côté Street. The classes were not interrupted, and plans were at once prepared for the erection of a new and better building.

"At the same time, in the hope that the Faculty of Arts might be able before many years to occupy permanently the college buildings proper, the improvement of the grounds was begun by planting and making walks. At first I did this at my own cost, as a labour of love, merely asking permission of the Board. In connection with this the Hon. John Young, Major Campbell of St. Hilaire, and, at a later date, Mr. Charles Gibb, presented us with trees and shrubs, both native and exotic, so that a large number of species eventually came to be represented in the grounds.

"We had proposed, that, so soon as the students in arts should exceed fifty, we would venture to occupy the old buildings. This happened in 1860, and we accordingly pro-

ceeded to move up and take possession of the centre block, the east wing being used for residences. The movement was a fortunate one, for it suggested to our friend Mr. William Molson, the erection of a third block, corresponding to the eastern one, to be named the William Molson Hall, which was to contain the convocation room and library. This was the original limit of Mr. Molson's intention, but driving up one day in company with Mrs. Molson, to note the progress of the work, she suggested that it would be a pity to leave it unfinished, and that it would be well at once to connect the three blocks of buildings into one pile, according to the original plan. The hint was taken, plans were prepared, and one of the connecting buildings became our first museum, whilst the other provided a chemical and natural science room and laboratory. Both buildings, as well as the library, were seeds of greater things. The library was provided with shelves for 20,000 volumes, whilst we possessed less than 2000, and at first it was distressing to see its emptiness; but the time has long passed, when, after crowding with additional bookcases and extending it into an adjoining room, we began

to desire larger space, now happily supplied by the magnificent Peter Redpath Library. The museum, equally empty, received in the first instance a portion of my own collections, and others obtained in exchange and by purchase, from my own resources. In this way it was possible, almost from the first, to fill it respectably—for a museum without specimens is even more forlorn than a library without books. Dr. Carpenter's magnificent collection of shells was added in 1869. The whole furnished the nucleus for the Peter Redpath Museum, which stands at the head of Canadian educational museums. The other connecting building became the home of our chemistry and assaying, in which Dr. Harrington, with the aid for a time of the late Dr. Sterry Hunt, built up our schools of practical chemistry, and of mining and assaying, which have trained so many young men for useful chemical and manufacturing employment, for mining enterprises, and for the Geological Survey, and have sustained indirectly the honour course in geology in the Faculty of Arts. Thus, our resuming possession of the old buildings was successful, and fruitful of new enterprises, and Mr. Molson's timely aid laid

the foundation of greater successes in the following years.

“About this time, a number of our graduates resident in Montreal, formed themselves into the nucleus of a university society, which has continued to grow and expand up to the present time, and has still room for further extension, especially by the formation of branch or local associations, of which the Ottawa Valley Graduates' Society has set a first and brilliant example. One of the early efforts of this society was the institution of the ‘Founder's Festival,’ a social gathering on Mr. McGill's birthday. It was continued with spirit for some years, but failed to attract graduates from a distance, and was ultimately dropped in favour of other functions.

“In 1860 we entered on a new departure, by the affiliation of St. Francis College, Richmond; and this was followed in a year or two by Morrin College, Quebec. In this matter, both Judge Day, the president of the Board of Governors, and Judge Dunkin, were very earnest,—believing that these affiliated colleges might form important local centres of higher education and might give strength to the University. They have not, it is true,

grown in magnitude, as we had hoped, but so far they have maintained a useful existence, and have unquestionably done educational good; most certainly they have enabled some deserving and able men to obtain academical education, which would otherwise have been denied them. In the circumstances of the Protestant population of the province of Quebec, this is an end worthy of some sacrifice for its attainment. The only additional college of this class, is that of Stanstead, added at a comparatively recent date. In 1865, the Congregational College of British America, an institution for theological education only, was removed to Montreal, and became affiliated to the University; it has been followed by three other Theological Colleges (Presbyterian, Episcopal, and Wesleyan). The value of these to the University no one can doubt. They not only add to the number of our students in arts, but to their character and standing, and they enable the University to offer a high academical training to the candidates for the Christian ministry, in four leading denominations."

My work, during all the early years of my college life in Montreal, included about twenty lectures weekly, besides the care of the man-

agement and interests of the institution, and frequent efforts for its extension and enlargement. It was therefore impossible for me to do much in special or practical work with students. This had, in fact, to be limited to weekly excursions during the summer months, and in winter, to classes in mineral determination and the study of fossils. In all of this work, I had no assistance, except such as could be furnished by a few of the senior students themselves, and as the college was too impecunious to provide the necessary apparatus or specimens, it fell to my lot to do this also. Such little expenditures I did not grudge, so far as my means allowed, but I sometimes grieved over the necessary limitations of what I could do for those students who seemed interested in natural science, and often regretted that my own time and strength for original work were so very limited.

I had at first intended, in the long vacation, to make my headquarters in Montreal, and to do my field work from it as a centre, but we found that this was incompatible with the health of our children, and that it would be necessary to go, for a couple of months, at least, to some cooler place. I endeavoured, however, to make this work in with such

geological investigations as I might be carrying on, either in search of new facts, or in aid of my college work. In this way, our summer excursions were made to various resorts, in Nova Scotia, on the New England coast, in the White Mountains, and to places on the lower St. Lawrence River. For several years, in connection with work on the Pleistocene, it became expedient for me to spend much of my summer in the last-named locality, and finally, in 1875, we had a small summer cottage built at Little Métis. This place is in itself a healthy and desirable one, and formed a convenient half-way house between my home in Montreal and my former Acadian hunting grounds. It is near to both Pleistocene and Palæozoic deposits, and has good dredging ground in the vicinity, which affords interesting examples of varieties of molluscs, akin to those northern forms found in the Pleistocene clays. Here, in perfect quiet, with such members of our family as could join us, we have since spent many happy and profitable summers. Here, too, I have found time and opportunity to write most of my books and scientific papers, varying sedentary occupations with collecting expeditions, ranging from Quebec to the Bay of Chaleurs, and to Nova

Scotia. Our little cottage of "Birkenshaw," at Métis—embowered in trees, and overlooking the St. Lawrence estuary, here practically an open sea—is thus associated with some of the happiest, and I believe also the most useful, days of our married life.

With reference to social relations, my wife and I had determined to take our stand on the principles of total abstinence from alcoholic beverages. This was not merely in accordance with our own tastes and convictions, but was, in our view, a duty, which we owed to students who might look to us for an example, as well as to our own family. At first, this determination was not, I fancy, understood or appreciated in Montreal. In 1855, the old French and Scottish custom of New Year visits was in full force there, and our visitors were naturally numerous. To their surprise, instead of wine, invariably offered on these occasions, they were provided only with tea and coffee. It often happened, too, that at the various dinners and entertainments to which we were invited, we were the only guests present who did not take wine. This made us to a certain extent singular, at the time, but customs have very much changed since then.

As our residence afforded but limited space for gatherings on any large scale, scarcely a year passed that we did not give some entertainment in one of the college halls. In this way, we entertained the Evangelistical Alliance of Canada, on the occasion of their meeting in Montreal, and later, the American Association for the Advancement of Science, the Association of Protestant Teachers of the Province of Quebec, and many other public bodies.

As regards the students of the University, there was always a tacit understanding between them and myself, that, in addition to the hours devoted to lectures and to office duties, they were welcome, at any time, to visit me at my house, and this privilege was very frequently taken advantage of. Special invitations were, of course, given to such students as brought with them letters of introduction. Besides this, evening gatherings, at regular intervals during the session, were arranged, and cards of invitation for these sent to the different classes or years in rotation. At such gatherings there was usually music, sometimes a short recitation or address on some topic of interest, and scientific instruments, specimens and photo-

graphs were shown, simple refreshments provided, and every effort made to cause those who attended to feel thoroughly at home. As to the value of extending such hospitality to students, especially to those who may have come from distant homes, there can I think be no question; we have ourselves received very many pleasant testimonies of appreciation, both from students themselves and from their relations and friends. My only regret is that, owing to limited time and opportunity, it has not been possible to do much more on similar lines. In recent years, since the number of students in the several faculties has greatly increased, our example in this matter has been followed by some of the professors, as well as by a few of the citizens of Montreal, and it is my hope that such hospitalities to students may become a permanent and established custom.

It may be noted here, although it applies equally to the whole history of the University since the reorganisation of McGill, that there have been no serious breaches of discipline, no college emeutes or rebellions, and none of that cruel treatment of junior students, unfortunately common in some similar institutions. On the whole, there has been a commendable

spirit of loyalty towards the University, and much fellow-feeling and forbearance amongst the students themselves. This speaks well for the Canadian student; and I earnestly hope that no alteration or decadence will take place in these respects. Nothing conduces more to the success of the individual student, as well as to that of the University as a whole, than such a generous and friendly rivalry, in honourable and kindly conduct, as has in the main hitherto characterised the students of McGill.

## CHAPTER VII

## MCGILL NORMAL SCHOOL

My last educational work in Nova Scotia, in 1854, had been in connection with the establishment of a Provincial Normal School. Amongst my first, in the Province of Quebec, was the inauguration of a similar institution in connection with McGill University. This might, at first sight, seem to be a chimerical undertaking for a nearly bankrupt institution, especially as some provision already existed for the training of teachers in connection with the school of the Colonial Church Society in Montreal. Our connection with this project occurred, however, in a manner which appeared to make it, in some measure, an outcome of our poverty itself. The only permanent resource of the University at this time was the disposal of the property of the McGill estate. It seemed desirable, in the public interest, that this should not be forced into the market, at a time when land in the outskirts of Montreal was of very small value, since, if