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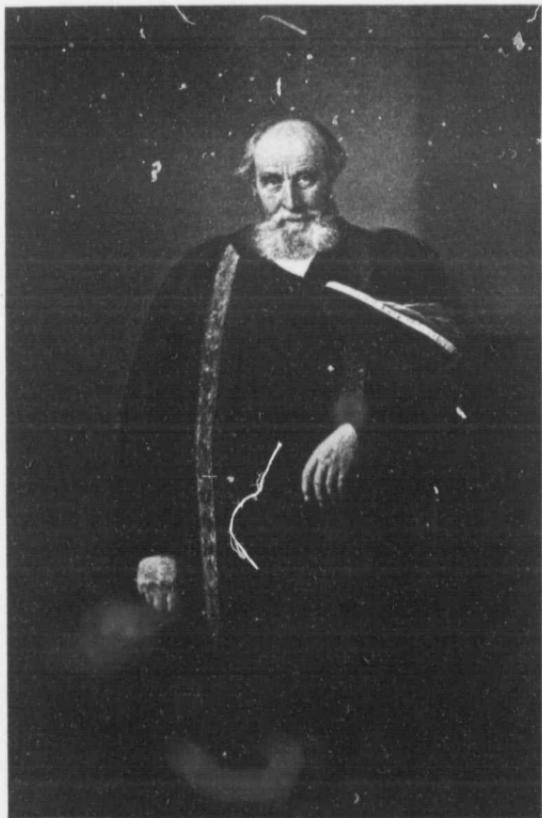
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SIR WILLIAM DAWSON

BY

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Photographer

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Sir William Dawson, C. M. G., M. A., LL. D., F. R. S.

Principal of McGill University 1855-1893

From a painting now in the Peter Redpath Museum, McGill University.

SIR WILLIAM DAWSON

Sir William Dawson was Principal of McGill University for thirty-eight years. He was appointed to the post in 1855, and resigned his place in 1893. His public life began in 1843, when he undertook his first formal duties as a lecturer upon Natural History at Dalhousie College, in Halifax, Nova Scotia. His active career covered a period of forty-four years, and his actual life extended to seventy-nine. He was born on October 13th, 1820, in Pictou, and died in Montreal on the 19th November, 1899. His life, therefore, falls into three periods; the thirty-five early years spent chiefly in Nova Scotia and Scotland, thirty-eight years at McGill, and the slow gradations of decay, which occupied six years more.

During this long career many honours were awarded to Sir William Dawson, as a natural and necessary outcome of his work and character. These were academic, scientific, social and theological; and a recital of the more important distinctions which were conferred upon him will best serve to indicate the range of his activities, and his importance in the world.

In 1856, he attained to the degree of Master of Arts in course at Edinburgh, and in 1874, he was made a Doctor of Laws. He had previously obtained the same degree in McGill in 1857, and that of Doctor of Civil Laws at the University of Bishop's College in 1881. His scientific honours would be long even to name. He was made Fellow of the Geological Society of London in 1854; Fellow of the Royal Society in 1862; President of the Royal Society of Canada in 1882, the year of its foundation; President of the American Association in 1882; President of the British Association in 1886, and President of the Geological Society of America in 1893.

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In 1882, he was marked out for social distinction, when he became a companion of the Order of St. Michael and St. George, with the "courtesy title" of Sir. Henceforth he was known as Sir William Dawson, though his name was, in reality, John William, and he habitually subscribed himself J. Wm. Dawson. Finally, his importance in the theological world was recognized when he was made Vice-President of the British and Foreign Bible Society. In addition, he was Associate,

Fellow, Honorary or Corresponding Member of at least thirty other important British or Foreign Academies, Societies, Institutes and Associations. In all these events even a formal biographer would find sufficient material ready at his hand.

The life of Sir William Dawson was one of singular publicity and openness. His career was bound up with the educational, scientific, social and religious movements of nearly half a century in Canada and in the world at large. He touched life at all these points, and there is abundant information as to the part which he played in their development. It would be a worthy enterprise to set forth adequately all the facts in his life, and bring them into relation with contemporary events. The most which can be attempted here is to set forth the facts themselves, to give some impression of the man, and indicate the process by which he stamped indelibly his personality upon McGill University and upon his generation. Yet in this small undertaking we may get some notion, to employ a favourite word of his own, as to what he meant to the world.

The amount of work which Sir William Dawson accomplished was great, and it is only by comparison that one can convey any adequate idea either of its compass or of its volume. Men who are in the habit of writing will gain some notion of his industry from the statement that he left behind him nearly 14,000 pages of printed matter. Professors in the University may be weaned away from brooding over their own wrongs by the reflection that for many years he delivered twenty lectures a week and wrote the text-books besides. Geologists may check their own work by his accumulation of material which is sufficient to fill a museum. And all this was merely a by-product of his main business, which was the direction of a rapidly growing University.

I am not putting forward a claim to having read this mass of printed material, nor should I have understood any considerable portion of it, if I had undertaken that labour. Yet I confess to a knowledge of all which has been written upon the various events of his life, and would mention with especial satisfaction his own record of fifty years of scientific and educational work in Canada, as embodied in his Autobiographical Notes which have been arranged by his son. The ingenuousness and singular sincerity of these Notes make them an adequate source of information, and one of the most charming bits of biography with which I am acquainted. In them also there are passages of beauty and poignancy. Two examples will serve for illustration:

"What shall I say of my mother? What can any one say of a loving mother to the careless world? She was a woman of deep affections, and of many sorrows, aggravated by a disposition not too hopeful

or buoyant. Her girlish years had been saddened by the death of her parents, and by the mournful breaking up of the old home. Her early married life had been clouded by the financial losses of her husband, by the loss of her only brother, and later, by the death of the younger of her two boys, a stroke from which she never fully recovered."

And again: "I remember but one incident in my intercourse with my brother, which I repent of; even yet it causes a pang, though it was sixty years ago. One day, not long before he was seized with the illness which proved fatal to him, he asked me to assist him with a difficult piece of Latin translation. I was busy with some affair of my own, and refused. He went away disappointed. Such little acts of unkindness may form bitter drops in the cup of life, even when repented of and forgiven."

In addition to these notes there is extant a large body of panegyric and eulogy. Creditable as it is to the writers, it is of no great value for purposes of biography.

It is a curious survival of an idea from the days when none but clerics possessed the accomplishments of writing and reading, that a clergyman is best fitted for the work of education. Accordingly, when a Principal for McGill University was required in 1852, diligent search was made for a clergyman who was in possession of certain educational qualifications, in addition to those which are proper to a minister of the gospel. On the other hand there was a body of opinion against giving to the University a tinge of denominationalism, and it was strengthened by the attempt which had been made by Dr. Bethune before his retirement in 1846, to bring the Institution within the pale of the Church of England. After the retirement of Dr. E. A. Meredith to assume a political appointment, the Principalship would have fallen to Archdeacon Leach, had it not been feared that his archidiaconal qualities might revive the old controversy. Accordingly, Sir William Dawson was chosen, a man who, it was believed, possessed the sobriety of a minister, without those qualities which are conferred by ordination. And in truth from this point of view alone the choice could not have fallen upon a better man.

Sir William Dawson was of Scotch descent, of the Dawsons of Crombie, and being a younger branch his people were of the class of farmers. In the family there was an Irish strain, accompanied by a tradition of Catholicism in religion, and of Jacobite leanings in politics. Indeed, Sir William's grandfather had been out with the Pretender in Forty-Five, but he afterwards married a wife of the Protestant faith, a Mitchell of Frendeaght, and went over to the Presbyterian religion with her. His father, James Dawson, being also a younger son, passed

an apprenticeship in Huntly, and, at the age of nineteen, experienced that mysterious change which is commonly called conversion. The following year he came to America, and landed, after many trials, on the shores of the pretty land-locked inlet of Pictou Harbour. He fell upon prosperous times, and in five years found himself in good circumstances, with every prospect of acquiring wealth and influence. When he married, in 1818, he was a merchant and shipowner; but in 1823, he was overwhelmed in the great commercial collapse which befell the community. There is nothing more tragic in life than a good man overtaken by financial necessity, and it was under this shadow that Sir William passed his earliest years. In the end, however, things came right, and the young man had the privilege of contributing to that happy issue out of his first earnings.

In every Scotch family there is a fixed belief that the intellectual attainments of the most gifted member can only find adequate expression in the ministry of the church, and the young child showed aptitude for that service. After his academic course was finished, he applied himself to the study of the Hebrew language, and allied subjects; and even when in Edinburgh, as a student of geology, he did not abandon these pursuits. He never recovered entirely from this bent, and to the end he retained a certain Hebraistic turn of mind; that is why we say he was peculiarly fitted for the principalship of a University, at a time when it was recovering from the thralls of denominationalism.

One of the finest characteristics of the Scotch family is another fixed belief that education is the most useful thing in the world. The Dawsons possessed that belief in all its intensity, and in spite of limited means the young lad, after a preliminary training in a dame's school, was early sent to the Pictou Academy, an institution founded on the plan of the parish schools of Scotland, which are to this day one of the most useful inheritances from the days of John Knox. The first ambition of these emigrants was to establish a school, and it is yet on the records of one early community that such an institution was of "more value than a grist-mill and six heifers." From the Pictou Grammar School, which yet sustains its reputation as a *studium generale*, the young man, then in his twentieth year, proceeded to Edinburgh, after due consideration of such an important step in the little family council.

The voyage over was made in 1840 in the *Harvest Home*, laden with timber, John Thompson, Master. The destination of the ship was Newcastle-on-Tyne, rather an indirect method of approach to the capital of Scotland; but in those days passengers had to go where they could, and not where they would. The voyage was not without the usual incidents of storm and boisterous seas, and the *Harvest Home* entered

the English Channel half a wreck. As she passed in leisurely succession the cliffs of Cornwall and Devonshire, the rocks of Portland, the green fields of the Isle of Wight, the banks of Beachy Head and the chalk cliffs of Dover, the young student was enamoured of their beauty, and filled with curiosity as to "what fossils they might contain." Finally, a landing was effected in the busy town of Newcastle, and this nimble minded youth passed the only evening there in "a debating club for young men." The journey to Edinburgh was undertaken in a stage-coach, when it appeared that the inside of the conveyance was wholly occupied by the luxurious young colonial. This was another lesson in economy.

The single year which was spent in Edinburgh was not precisely one of idleness. The diligent student was well equipped for his work by the researches which he had undertaken in Pictou into the Natural Sciences—chemistry, physics and especially geology. He attended lectures; he spent much time in the museum; he read in the library; he made notes, abstracts and drawings from books which had hitherto been inaccessible; he undertook frequent excursions in the neighbourhood of the city for "exercise and practice in observation." Also, he made the discovery, surprising to him, "how little even some of the more eminent geologists seemed to know, and how uncertain was their diagnosis in the field." A similar observation has been made since this time by students who were less astute. Whilst in Edinburgh, he made the acquaintance of Jameson, Forbes, Balfour and Alexander Rose, and of Mr. Sanderson, the lapidary, who taught him "the art of preparing transparent slices for the microscope." There are men yet living who have witnessed Sir William engaged upon that fascinating employment in the basement of the Peter Redpath Museum.

We shall first turn to that side of Sir William Dawson's life which was scientific, and we shall be obliged to commence at an early period in his long career. His home had much in it to foster a study of nature, and both of his parents encouraged him in the pursuit. A wild garden filled with trees and shrubs; rough pastures; woods and swamps, within easy distance; a narrow harbour open to the sea-tides, and fed from the landward side by numerous rivers—these were suitable hunting grounds for a young naturalist, and they yielded a rich store of plants, fossils, insects and birds.

At an early age he was engaged in the familiar occupation of fashioning a slate pencil from a flake of shale, and he was surprised to find upon the stone a "delicate tracing in black of a leaf like that of a fern." This was his earliest discovery in geology, and he prosecuted his researches diligently, until at length he had "a little collection

laid out in a cupboard where he kept his childish treasures." This little cupboard was the birthplace of the Peter Redpath Museum. The specimens were referred with much trepidation to one or two local geologists; exchanges were made, and the scientific career of this assiduous collector had begun.

The treasures of those boyish days were faithfully preserved, and brought to Montreal, where they were long afterwards destroyed by fire. The first book of a scientific nature, which he possessed, was a copy of Mohs's Mineralogy, and from it he learned that most important of all lessons,—correlation of science—that the mysteries of solid geometry and trigonometry had been materialized in the crystals of quartz, calcite, and zeolites, which he had collected from the ballast piles on the wharves, or from the quarries and cliffs of the coast.

These studies bore fruit in a lecture which he delivered before a local society at the rather immature age of sixteen, upon the Structure and History of the Earth, which was a considerable undertaking for so young a child.

There was a visit as far as Boston, and a comparison of the molluscs to be found south of Cape Cod with those in Northumberland Strait. But the most important excursions were to the cliffs on Cumberland Bay, an arm of the Bay of Fundy, known as the South Joggins; to Minas Basin which afforded intricate studies in the complicated relations of the volcanic rocks with beds of sandstone and carboniferous shales; to Cape Blondin, that remarkable outflow of volcanic rock over the Triassic sandstone which underlies it.

Upon his return from Edinburgh in 1841 he fell in with Sir Charles Lyell and Sir William Logan. From Lyell he learned that great man's secret, which was the continuity of geological history, and the identity of effects. From Logan he learned the importance of correct observation and a reverence for facts as preliminary to a formulation of theories. With him he wrought in many a field, and laid the foundation of much of his fame. The joint discovery with Lyell of reptilian remains in the erect trunk of a fossil tree at the South Joggins was pregnant with results, one of which was the publication, in 1855, of his "Acadian Geology." This important book contained an account of the first discovery of reptilian remains in the coal formations, of the first known palæozoic land shells, and of *albertite*, that curious product of the lower carboniferous age.

When Sir William Dawson was appointed Principal of McGill the demands upon his time and attention were such that he was obliged to forgo largely the work in his favourite fields of investigation. For several years he worked, chiefly in the summer, at the Pleistocene forma-

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tions, and to that end established himself at Little Metis. In his little cottage of Birkenshaw, "embowered in trees and overlooking the St. Lawrence estuary," he spent many happy and useful seasons until the end of his life. From that place he went afield, and examined the coast deposits of New England and the formation of the White Mountains. He dredged the lower St. Lawrence, and was able to recognize in the cold Canadian waters nearly every species found in the Pleistocene days. The results of those labours were embodied in "The Ice Age of Canada," which was published in 1894. Two summers were spent in the Gaspé district, and the enquiry was extended to the Chaleur Bay, to the St. John River, and to an examination of fossil remains which had been collected in Ohio and New York. The result was to double the known flora of that early period, and to show that the Devonian age admitted of subdivision into three distinct periods. His guiding principle was to assign dates to the several floras and subfloras, and to make fossil plants the criteria of geological age. This entailed the accumulation of an enormous mass of material, which yet remains as a monument of his industry. More recent researches have shown that the mass of this flora is referable to the carboniferous system; and he appears to have been led into error by trusting too implicitly to the records which were then extant.

Travels still further afield were undertaken. In 1865 he visited Europe again. He remained some time in Paris, and spent a day at Amiens, "to see that ancient city and the gravels of the Somme." This was at the time when certain discoveries had been made of "prehistoric" human remains, which some persons thought gave information upon the genesis and development of the race in addition to that which had been supplied by the Hebrew chroniclers. Sir William Dawson, however, attached no great importance to these discoveries. The journey was continued over the Jura to Mont Blanc and its surrounding peaks, and as a result of his examination he "became a confirmed sceptic as to the erosive action of glaciers." Upon his return to England he was present at the meeting of the British Association for the Advancement of Science, at Birmingham, and twenty years later he occupied the President's chair in the same city. At this latter meeting a curious event occurred. In his Presidential address Sir William referred to the probability of an earthquake occurring on the Atlantic coast, on account of the accumulation of sediment from the American rivers. That very night the city of Charleston was shaken to the ground, and for some unexplained reason Sir William was blamed for the occurrence.

Another visit to Europe was made in 1870, when he became acquainted with the work of Wyville Thomson upon deep-sea sponges,

which was of great importance when he afterwards became interested in the extinct species of the Quebec Group. Also he visited Ireland, and in addition to much other information he gained "a strong impression of the abundant moisture of its climate." In 1883, he visited Europe again, and extended his travels to "Bible Lands," being under the impression that "everything from the site of Eden to the scenery of St. John's visions in Patmos, appeared to admit of further illustration from nature." Nothing very satisfactory came of these researches, an account of which was contained in two books, "Egypt and Syria," and "Modern Science in Bible Lands," published by the Tract Society, London. His last formal work was a series of studies in 1884-85, upon the fossil plants which had been collected by the Geological Survey of the North-West Territories. These were published in successive volumes of the Transactions of the Royal Society of Canada, and collected in 1890 as the "Geological History of Plants."

We shall now be compelled to undertake a long adventure if we would follow Sir William Dawson in his educational career. It began formally in 1850, by his appointment as Superintendent of Education in Nova Scotia, at the suggestion of Joseph Howe and John Young, who had known him in his boyhood, and were then members of the Government, as well as of the Board of Dalhousie College, where their favourite candidate was delivering a course of lectures and "first obtained some confidence in his ability to interest students." An argument which carried some weight in deciding him to accept the appointment of Superintendent was the opportunity it would afford for visiting all parts of the Provinces and coming in touch with local collectors of fossil remains. His behaviour in this office was characteristic. He introduced improvements "without interfering in any good work already in operation"; by "certain conciliatory arrangements" he kept denominationalism out of education; as preliminary to a meeting to discuss educational needs, he "would be in the locality before the day fixed, conferring with the leading men." At the meeting he would "invite discussion as to the special needs of the district, which almost invariably brought out statements respecting the defects of education in that locality much stronger than any he could have ventured to make."

One can readily imagine the pain which these revelations gave to the young superintendent, and how in "summing up the proceedings," he would point the way out of the evils which they themselves had confessed. During these three active years one of his labours was "A Contribution towards the Improvement of Agriculture, with practical hints to Farmers on the Management of Live Stock and on General Husbandry." Before he left Nova Scotia he saw a Normal School

established, and shortly afterwards a compulsory assessment for the purposes of education.

To one who loved Sir William there is a delight in re-creating the scenes of those early days; to picture him as the "shy and rustic boy" thrown amongst his "superiors in some kinds of culture, and in knowledge of the world" whom he encountered in the metropolitan city of Halifax of the year 1835; to see him "travelling in a vehicle of his own" through the wilds of Nova Scotia to give aid and encouragement to distressed teachers; skirting those rugged shores in open boats, or sleeping in a "house lathed but not yet plastered, so that when lighted at night it resembled a series of bird-cages." Even after his removal to Montreal we may imagine him on his way to Toronto, "crossing the St. Lawrence in a canoe, amidst floating ice, and travelling by way of Albany, Niagara and Hamilton." It seems incredible that this great city of Ontario was ever so isolated from the civilized world.

We now approach the circumstances of Sir William Dawson's appointment as Principal of McGill University. Sir Charles Lyell introduced him on board ship to Sir Edmund Head who was then Governor of New Brunswick. When the Governor required expert advice in connexion with the University of Fredericton, he sent for the Superintendent of Education of Nova Scotia. In 1854, Edward Forbes was removed by death from the professorship of Natural History in Edinburgh, and at the suggestion of Lyell, Mr. Dawson, as he then was, became a candidate for the position. The candidature was unsuccessful, but almost at the moment of its failure a letter arrived from Judge Day, President of the Board of Governors of McGill University, containing an offer of the position of principal. It transpired afterwards that this letter was instigated by Sir Edmund Head, who had now become Governor-General of Canada. Under these favourable auspices the offer was accepted, and McGill University obtained its great Principal. Upon his journey to Montreal he fell in with Mrs. Molson, which was another lucky chance.

McGill University was at that time little more than a name to its Principal. He knew that it had been founded by James McGill, that a Royal Charter had been obtained in 1821, which was amended into a less cumbersome form in 1852. He was also aware that little had been done to carry out the terms of the endowment, save for the work of the medical school, but he did not suspect the condition of affairs which he was to find upon his arrival in Montreal:

The University, materially, 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. 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 storey of a brick building in the town, the lower part of which was occupied by the High School. The Principal's residence was a portion of one of the detached buildings, the present East Wing. It had been imperfectly finished, was destitute of nearly every requisite of civilized 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. The University comprised three faculties—those of Law, Medicine and Arts. The Faculty of Law, then recently organized, 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.

In 1893, when he resigned the Principalship, this University had 35 students in Law, 311 in Medicine, 348 in Arts, 159 in Applied Science, 58 in Veterinary Medicine, and 54 in affiliated colleges, 105 teachers in training at the Normal School, making a grand total of 1,074. The financial balance sheet for the year ending 30th June, 1893, showed an investment account of only five thousand dollars short of two millions, and an income considerably over one hundred and fifty thousand dollars. The life of Sir William Dawson lay between these two events.

One of the most important problems with which the Principal had to deal was the education of women. About the years 1880 certain opinions became prevalent as to the relative status of women, and a question which had been regarded as settled by "nature" was opened up for fresh consideration. This disturbance was not confined to Montreal. In New England a campaign had been undertaken, long before, "to arouse women from their prone and slavish attitude," and their champions with more gallantry than sense proclaimed their superiority to men in some relations, and at least an equality in all: "Let them be sea-captains if they will," cried one enthusiast!

In Montreal, the controversy turned upon the question of education, and a demand was made that the University should apply to women the methods which were employed for men—not on the ground that they were the best for women, or for men either, but that they were the same. As if this were not enough, the demand was made that the

educational process should be carried on with the two sexes side by side. The Principal held the opinion that there was an essential distinction between the male and the female in nature, character and temperament, and that there were certain other peculiarities also, which suggested distinct educational methods. In short, he held that it was a fundamental educational error to give university lectures to mixed classes, and there are many perfectly sensible persons who still adhere to that view. Much of history and nearly the whole of literature is concerned with the relationships between the sexes, and not fit subject, he held, for discussion in a mixed company of inexperienced young persons.

As early as 1869 the higher education of women, as it was termed with a certain assumption of fact, was a subject of formal consideration by the University. Even before that, things had come to such a pass that Hannah Willard Lyman, who conducted a university school, was invited to attend with her young ladies a course of lectures in Natural Science, which were being given in the Normal School. Sir William was the lecturer; the classes of men were small; the ladies occupied a separate part of the hall; Miss Lyman always accompanied them, so we can well believe that "no difficulty arose, so far as he knew." Yet, "the experiment was unsatisfactory, and it was tacitly dropped by mutual consent." The Principal spent several years in collecting information, in order that he might "be armed for all contingencies"; and at length the contingency arose. In 1884 an adventurous band of young women made formal demand for University teaching, in mixed classes if no other method were available. The situation was embarrassing; but, by a singular coincidence, a friend of the University, who had ample means of discovering the mind of the Principal, came forward with an adequate endowment for separate classes. Sir William had his way, and the "Donaldas" as young men who are now old used to designate them, went together to their own place in the East Wing.

This incident is typical, and it is related at some length to illustrate the Principal's tenacity of purpose and abundance of resource. Once his mind was made up difficulties did not exist. If a Chair required to be filled, a casual meeting occurred between a desirable candidate and some of the more important Governors. If a department required strengthening, an important official personage called attention at the proper moment to the woful lack of means,—it might be when another important financial personage was receiving some academic distinction. Again, the Principal might be obliged to confess with despair that he was compelled to abandon some University project dear to his heart, or to acknowledge the humiliation which he felt over an approaching meeting of some great association which would spy out the nakedness

of the land. Somehow, these events were usually marked by an announcement which was of as much importance to McGill as to the association of scientists referred to.

There is one matter of the chiefest importance which it is necessary to apprehend clearly, for it lies at the root of the success of McGill University. The Principal entertained views of the most singular distinctness upon all possible subjects, which he was resolute to hold and propagate. He was equally resolute that other men should hold their own views, and be free to set them forth. In matters of administration he required no interference, nor did he seek with eagerness for advice, suggestion or opinion. Sir William Dawson was Principal of McGill University, and his mind was quite clear as to the fact. Right or wrong, he entertained a firm belief that it was his business to direct its policy, and he expected support from every member of the staff for the policy which had been laid down. He did not regard it as an inalienable right of a professor to express contrary views, or protest in public against a line of action which had been decided upon. On one or two occasions, when this difficulty arose, the Principal had no hesitation in applying the rough remedy of corporation discipline. But in the matter of teaching he permitted every man to teach what seemed good in his own eyes. Of course appointments were made with due care. He took no exception, for example, to the philosophical application of a theory which he refused to accept as a working hypothesis in science. This independence of thought, this sanctity of opinion, and freedom of expression has ever been the glory of McGill.

Any writing is the merest trifling, which does not give some account of that side of Sir William Dawson's character which was religious. He came of Calvinistic parents. His father was of an intensely religious temperament, which some Calvinists are not, and his mother was a woman of deep piety. In addition to this, the Dawson home in Pictou was the meeting place of that noble band of missionaries, James Ross, James McGregor and Thomas McCulloch — such men as, happily, were found in the early communities, and prevented the people from lapsing into savagery. These early settlements were also in touch with the New England emigration, where the debased Puritanism which had succeeded to the lofty enthusiasm of the earlier emigrants had broken down utterly as a working force in the world, and was succeeded by that wide humanitarian movement which so quickly spread over New England.

The leaders of this movement had finished with justification, covenants, assurance and the perplexities of eschatology, and were more concerned with righteousness, temperance, peace, unity and the aboli-

tion of slavery. The Dawsons were brought into an intimacy of relation with this spiritual brotherhood, and Sir William preserved the tincture to the end of his life. In the matter of temperance alone — which, however we may qualify it, means abstinence from alcohol — he was faithful to the end; and there is yet no evidence that the forty generations of students who frequented his hospitable house suffered materially from the absence of that form of beverage. His views upon the use of tobacco also were entirely in accord with those which were so sedulously propagated by that eminent moralist, James the First.

Indeed, it is probable that Sir William Dawson accomplished his great work for the University by reason of his religious temperament. The sentiment of religion is widespread, and it attracted many friends. The more openly religious amongst the students gloried in his formal teaching in places set apart for that purpose, and those of a Gallionian habit of mind were more indirectly influenced. There are many men to-day, who, through natural incapacity, did not profit greatly by his lectures upon geology and biology, and yet retain as one of their most precious memories the evenings spent in the delicate atmosphere of his home.

The dignified personality of Lady Dawson was not the least of the attractions of these evenings. She was of the Mercers of Edinburgh, and Sir William first met her when he was a student in 1841. A long correspondence followed, and upon his second visit they were married. It was permitted to them to realize the prayer of Tobias: "Grant that we may grow aged together"; for, in 1897, they celebrated the fiftieth anniversary of their marriage. Six children were born to them, and five survived their father, though Dr. G. M. Dawson, Director of the Geological Survey of Canada, has since died.

In spite of all which Sir William Dawson accomplished, his name will be remembered not so much for what he did as for what he was. Those who were brought in contact with him will understand what is meant by that. Those who knew him not will fail to understand, for personality is too subtle a thing to be transmitted by other means than personal contact. There was something peculiarly benignant in his presence, something gracious and gentle in his aspect, a winsomeness in his speech and a tenderness and benevolence in his manner. Young men are peculiarly sensitive to the influence of those qualities, and Sir William created in the hearts of the students a sentiment of unbounded affection. Even the medical students who are especially sure in their instincts, though not generally credited with the gentler virtues, were touched with emotion at the habitual graciousness of his demeanour towards that outcast faculty.

Sir William Dawson was a great man and a good man, and when all is said his greatness lay in his goodness, in his character; for there have been educationalists with a wider outlook upon life, and it may be a deeper perception of its meaning; there have been scientists of a clearer vision, with a more detached viewpoint and a colder gaze; there have been teachers more closely in touch with the spirit of the time; religious men with a wider toleration of the weakness and foolishness of humanity, and a keener realization of the force of the temptations by which it is beset.

With all his love for rocks and fossils Sir William Dawson was more interested in life than in geology, and still more in those elusive manifestations of life, which do not lend themselves readily to scientific demonstration. To stop at the plain and ordinary nature of things was infidelity. To look alone at things as they are was robbing Nature of its spiritual import. Therefore, in all his observations he kept one eye upon Nature and the other upon its "presiding divinity," and many persons thought that his accounts of neither the one nor the other were rendered clearer thereby. This habit of mind is well revealed in those tracts and books which would be long to name: "The Case against Evolution," "Points of Contact between Revelation and Natural Science," "Science the Ally of Religion," "Gold, Bedolah and Shoham Stone," "The Origin of the World according to Revelation and Science," "Nature and the Bible." These writings did not increase Sir William Dawson's reputation amongst men of science. It is altogether doubtful if they served the cause of religion.

Any account of the life of Sir William Dawson would be glaringly deficient, which did not make some formal mention of his eminence as a homilist. Indeed, towards the end, most of his energy was employed in the proclamation of divine truth, in the expounding, and application of Scripture for the correction of heretical opinion. Upon the great questions which lie beyond the normal range of the human mind he was disposed to arrive at conclusions with imperfect information, and even to adhere to them in the face of considerable evidence to the contrary. Indeed, when he had attained to the plenitude of his power, and the fullness of his years he was inclined to play the part of a pontiff, and *trancher* a discussion with this stroke — that those who withstood him were actuated by a zeal for the truth, which was less disinterested than his own.

Strange to say, his failure as a homilist lay in this — that he did not go far enough. Like other good and great men he allowed himself to assume the existence of a conflict between science and religion,

between two spheres of activity which have nothing to do with each other; and, in his "endeavour to discover points of contact between the teachings of nature and those of the Lord from Heaven," he lost sight of the great truth which Paul proclaimed from Mars Hill: that it is in Him all nature lives, and moves, and has its being. He spent too much time in proving what does not require proof, which indeed is not susceptible of being "proved" by the methods which he employed.

Scientific truth is of little value in comparison with those emotions which we call religious. The great Hebrew prophets neither knew, nor cared, how the world was created, though they do occasionally give fascinating accounts of the event, to which too much importance need not now be attached. An operation which was finished in six days was to them as productive of great thoughts, as if it had occupied as many periods of geological time. To them it was as unimportant that the thing could not be satisfactorily done in six days, as it was that a golden calf could not be manufactured in a night. But Sir William Dawson took his stand by the printed word, even though he was willing to admit that "the subject was encompassed with difficulties and misapprehensions." He was of the same mind as Boswell when he said to Lady MacLeod: "If once you quit this rock there is no knowing where you may settle. You move five miles first, then to St. Andrews, then to Edinburgh, and so on till you end up in Hampstead or in France." Once leave a man free upon these subjects, he thought, and he will take the liberty of becoming an atheist. We now know that such a result does not necessarily follow.

Nor did Sir William Dawson disdain to enter upon the dangerous ground of prophecy on his own account — led away by the example of the Seer of Patmos, a name which he applies to an article of thirty-eight pages, reprinted from the *Homilistic Review*, June and July, 1898. But that great visionary was content to cast his thought into the form of allegory, hyperbole and metaphor, and so effectually that his ecstatic writing — to employ Balzac's phrase — is yet involved in "difficulty and obscurity." In his interpretation of this apocalypse Sir William Dawson committed the indiscretion of being precise, and in a chart which is annexed to this little book, he assigns to the Beast or Little Horn, the years 1897-99, "as the number of his name."

The fascinating task of revealing the mystery of this revelation has always possessed an attraction for religious men; but, as a rule, they have been content to fix their dates in the far-distant future. Sir William Dawson, with that fearlessness which characterized him, was careless of the curious fool of the future, who can find no sillier occupation than unearthing exploded prophecies; and he boldly wrote down

the year 1898. When the year had passed without any sign to signify that the Beast had come into his own, some mocked, and said that the *Eozoon Canadense* was as mythical as the Beast.

He did not perceive that religion is a thing quite apart from theology, that science is quite apart from both, and that the conflict between them was merely a figment of the theological imagination. In this respect he was not in advance of his generation, but in the end he got left behind and alone, save for the company of that eminent pseudo-scientist the Duke of Argyll. Much of his energy was consumed in theological activity, reconciling differences which did not exist. Himself, a religious and scientific man, he developed a position of antagonism towards other men of science, and towards men who were neither scientific nor religious.

He failed to realize that religious aspiration is a primal instinct in humanity, and has nothing to do with such evidence as is revealed about the creation of the world in obscure legends of Semitic origin, or with the rightness or wrongness of geological doctrine. When it was discovered that those narratives did not contain a complete revelation of the important matter of the creation of the world, men turned eagerly to the facts of geology. They had made those legends the foundation of their religion; and when they were shaken, they made the scarcely more successful attempt to find a basis upon the crust of the earth, as if the precise manner in which the world was created had anything whatever to do with religion.

Sir William Dawson habitually adopted the Calvinistic view as to the worthlessness of humanity. This is well illustrated in the concluding passage of the preface to his Autobiographical Notes, in which he says: "Whether the object referred to be the scale of a moth's wing, or the structure of a mountain, it has for the time being to be regarded as the work of God, and therefore transcendently above either the speaker or the hearer." The modern view is that speaker and hearer, professor and undergraduates, theological students, and medical students also, are the handiwork of God, and at least equal in value to the scale of a moth's wing. Indeed, there is independent authority for estimating their place in the universe to be even higher than that which is assigned to the sparrow. This self-abasement was one of the doctrines of Calvinism. But we now believe that humanity is not a poor worm of the dust, but a noble creation for a divinely appointed purpose. And yet this humility was one of Sir William Dawson's most winsome qualities. He abased himself, and so was exalted in the eyes of the world.

Sir William Dawson was an eminent controversialist, and was competent to give as good as he got. By a sly turn of phrase, by a certain indirect implication, or even by a slight bitterness of speech, he was often able to turn a position which looked difficult to face.

These qualifications for argument were abundantly developed in those numerous excursions which he made into regions with which science has nothing to do, but he became really formidable in defence of the scientific positions which he adopted. The controversy over the *Eozoon Canadense* is a case in point. This humble material thing was put forward by him as the earliest example of life which was known to biologists, and by his opponents the innocent mass of rock was "assailed with as much bitterness as if it were a personal enemy." Probably the animus was directed as much against the discoverer as against the thing itself. What the present state of the case may be, I do not undertake to say, but certainly on account of the disturbance which it created affords instructive and amusing reading, even in these days when we have more important things to bother about.

Up to the year 1892, Sir William Dawson, being then in his seventy-second year, "felt strong and well, and was not aware of any failure in energy." In September of that year he suffered from an attack of pneumonia, "the friend of the aged." After addressing to the students who were "ever his dear young friends," a letter which was suffused with love and vibrating with feeling, he spent the winter in the South. On the 26th of May following, he sent a formal communication to the Governors resigning the Principal's post, which he had occupied so worthily and so long. Then he repaired to his little cottage at Metis. In the autumn he returned to Montreal, and took up a private residence on University Street, within easy reach of the Museum and Library, where he hoped to spend a few more years "in the study of God's wondrous works as well of His Word."

Six years were so spent, and recent students will remember the venerable and bowed figure, clad in the long silk gown and academic cap. This was Sir William Dawson, pursuing his avocation with all the enthusiasm of youth, going to and from library and museum under the arching eims and spreading maples of the Campus, which he had caused to be planted forty years before. Students who knew him not in the days of his strength would pause as if for a benediction, and the gracious uplifting of the hand, the gentle inclination of the head, the sweet voice were rarely wanting. The end came on the 19th of November, 1899.

Sir William Dawson's life "signifies once more this word: *"The removing of those things which can be shaken, that those things which cannot be shaken may remain."* Much of his geological theory has been shaken, and his theological speculations have largely passed away. The influence which he exerted, consciously or unconsciously, upon those with whom he came in contact, by reason of his fidelity to the great trusts which had been imposed upon him, by reason of the nobility of his nature, his generosity and kindness, his goodness of heart and pureness of life — these will endure.

In conclusion I cannot refrain from adding the verses which were made by Mr. Logan upon the occasion of Sir William Dawson's burial. They contain much truth, and are good poetry besides.

I knew him not as those who shared the way
 He traversed, or who came beneath his sway;
 But, casual crossing of his path, I found
 That where he walked it was perpetual day.

Perpetual day of noble act and thought,
 Science and faith unto one purpose brought,
 Good for his fellow beings, and our lives
 Are better for the lessons he has taught.

His school of thought abided not the new,
 (Yet who has come that hath the perfect view?)
 But, if a life that profiteth be aught,
 His life, his work, his thought, his faith, were true,

All to one cadence like a perfect chord,—
 And as the clod beat on the hollow board,
 The sunlight broke, and from the sky a voice,
 "Blessed are they who slumber in the Lord."

ANDREW MACPHAIL.