INCORPORATED BY ROYAL CHARTER.

President:

HON. CHIEF JUSTICE ROBINSON.

First Vice-President—PROFESSOR CROFT,

Second Vice-President—PROFESSOR HIND.

Treasurer—DALRYMPLE CRAWFORD.

Corresponding Secretary—REV. PROFESSOR IRVING.

Secretary—G. W. ALLAN.

Curator—PROFESSOR CHAPMAN.

Librarian—SANDFORD FLEMING.

Council:

PROFESSOR CHERRIMAN,	FRANCIS SHANLEY,
ALFRED BRUNEL,	PROFESSOR HODDER,
THOMAS HENNING,	PROFESSOR WILSON.

TORONTO:

THOMPSON & CO., PRINTERS, KING STREET.

1854.

THE PRESIDENT'S ADDRESS.

(*Delivered January 7th*, 1854.)

Gentlemen of the Canadian Institute,

The duty which, by your appointment, falls at this time upon me, of saying something of the condition, objects, and prospects of this Association, is rendered much more agreeable than it might otherwise have been, by the prosperous state of its affairs, as exhibited in the last report of the council.

The liberal spirit in which the Legislature has patronised your efforts at so early a stage; the ready and kind attention of the Executive Government to such requests and suggestions as have been made to them in connection with the objects of the Institute;—the great accession within the last year of new members, many of them gentlemen who from their position, public spirit, and scientific attainments, may be expected to render you important service; the growing circulation of the useful and highly interesting Journal published by the Association; and the many valuable gifts of books, and of minerals, and other objects of interest in various departments of Natural History: these circumstances have all combined to place the Institute, even at the present moment, in a position most gratifying to its members, while they afford grounds for very encouraging hopes as to its future usefulness.

But in venturing to draw from the past these flattering presages of the future, we must not forget to make allowance for the advantages which we have lost in the departure from the Province of our late President, whose active and zealous services in behalf of the Association, have been so instrumental in bringing it to its present state.

It is not merely that his familiarity with rather a wide range of scientific subjects qualified him for taking much more than an ordinary part in the proceedings of the Institute; but his eager thirst for knowledge, his ardent devotion to the interests of science, his indefatigable industry, his strong religious sense of the obligation which we all lie under to the common family of mankind; and as much as all these, his hopeful turn of mind which made it always difficult for him to believe that any thing

would be found to be impracticable by which a great public good might be attained;—these all made him an invaluable fellow-worker with you, especially in laying the foundation for your future system of proceeding. Some portion of his spirit inevitably communicated itself to those with whom he was associated; and thoroughly unselfish, and disinterested as he was seen to be in all his aims, he proved to be an efficient applicant on behalf of the Association whenever an occasion offered, being a suitor whom all were reluctant to disappoint, and all willing to oblige.

I need offer you no excuse, I am persuaded, for not suffering myself to be restrained by the domestic tie which exists between Capt. Lefroy and myself from paying this just tribute to his services—That circumstance has but given me a better opportunity than I should otherwise have had of appreciating his disposition and exertions. It can hardly, I believe, lead me to take a more affectionate interest in his reputation than will always be felt by those whom I am addressing.

It is abundantly evident, gentlemen, that the Canadian Institute, from the zealous efforts of several able and efficient supporters, is occupying at this moment a more considerable place in public estimation than it could have been expected to attain so early; but if we stop for a moment on the vantage ground that has been gained—to look round us, and to glance at the past as well as at the future, I believe we may come satisfactorily to the conclusion that if it shall be the good fortune of this Association to work out any important good for Canada, it still need not be seriously regretted by us that it did not begin its work sooner, or rather that such an Association was not sooner formed.

Many things seem to have concurred to render the time chosen for its commencement an auspicious starting point, and it will be more favorable perhaps to its future success that the Institute has had from the first a vigorous growth, and has occupied early a position recommending it to public countenance and favor, than that it should have been forced into existence before it could have found adequate support. It could only then have lingered in a sickly state, not attracting much attention, nor giving rise to any sanguine hopes;—and it would have been more difficult to have

infused life and energy into such an Institution, than at a fitting time to create a new one. Less competent, as I am, in other respects to form an opinion upon this point than many others who are present, I have the advantage of being able to judge perhaps more clearly, from actual observation, of the past condition of Upper Canada; and I do not believe that much time has really been lost, (if any has been,) in making this kind of effort for the advancement of science.

This is pretty well proved, I think, from the small success which was found to attend some exertions of a similar description, though less comprehensive in their character, which have, from time to time, been made in Upper Canada.

And here we may naturally ask ourselves whether it is, or is not, to the discredit of this country that up to this period more has not been done by voluntary efforts for the promotion of science, and more distinction gained in its pursuit? I should be glad to be able to prove, quite satisfactorily, that we lie under no peculiar reproach in that respect. At all events let the facts be fairly stated.

Two generations have passed away since a civilized people began to occupy Upper Canada;—our own Journal, in a late article full of interesting matter, informs us that for twenty years of that time we have had a population over 300,000—for ten years exceeding 500,000, and we may be certain that at present our numbers are beyond a million.—Upon the first impression it would seem, on a comparison with other countries, that, under such circumstances and in all this time, some native Canadian might have been expected to start from the canvas more distinctly than any has done;—that some one gifted with peculiar powers would have gained for himself a name likely to endure, and would have conferred celebrity upon the country of his birth, by some striking discovery in art or science, or at least by a proficiency in some liberal pursuit, that would have attracted general attention, and established even abroad a deference to his name as an authority.

We might refer to some other countries, particularly in the North of Europe, where, in communities not so populous, there have, from time to time, arisen men so distinguished by the

gifts of genius, and by the use they made of them, that their names have been handed down from age to age, and are regarded now with a veneration scarcely diminished by the splendid modern discoveries which have disproved some of their theories, and rendered useless many of their inventions.

But we must consider, on the other hand, that these men have generally flourished in older communities than ours; that the discoveries made, and the distinction obtained by many of them, were the fruits of a "learned leisure," which in Upper Canada hitherto scarcely any have enjoyed; and, besides, that these shining lights have commonly appeared at distant intervals in the course of centuries, with larger spaces of time perhaps between them than would cover our whole history as a people.

The more rapid and general spread of knowledge, too, has had the effect in our time of placing educated men upon more equal ground in regard to their attainments; so that a striking elevation is not so easily gained. And there has been another more formidable impediment peculiar to our condition as a new country, for Upper Canada may still be called such, though it is fast losing any claim to particular allowance upon that score—I refer here to the fact that among the million who now inhabit this upper portion of the Province, even those who came hither in mature years from other countries, with minds highly cultivated, have, with very few exceptions, been unavoidably engaged like the multitude around them, in the anxious labor of some profession or employment, by which their daily subsistence was to be earned. Those born in the country have had their time and their thoughts equally engaged by efforts to gain for themselves a competency which few have had the fortune to inherit from their fathers. And *so* it has happened, (though I think not entirely *so*) that Upper Canada, if I may assert this without seeming to disparage any just claim to excellence, and distinction, can not yet be pointed to as the birth place of any who have won for themselves the celebrity that waits on genius successfully cultivated, nor perhaps even of any who have greatly signalized themselves by an enthusiastic devotion to art or science. When I hesitate to say that we can wholly and clearly ascribe this want,

which I think we must acknowledge, to the influence of any or all of the causes that I have mentioned, it is because I can not forget that in other countries we do see, every now and then, starting up, as if to relieve the monotony of life, poets, philosophers, mathematicians, mechanics, linguists, artists, whose very existence has seemed bound up in some one particular pursuit, who, under every disadvantage of position—oppressed by want—disheartened at times by neglect—unaided by instruction, and having access to no advantages which may not be enjoyed here, have worked their way to eminence, and have made their names like house-hold words, likely to endure to the end of time—men

> Whose honors with increase of ages grow
> As streams roll down, enlarging as they flow.

I suppose after all, the solution is that we must look upon these prodigies as the gifts of God vouchsafed to a Country when he thinks fit; and that in the order of Providence, the day of Upper Canada has not yet come—for we must say of genius, as the Poet has said of taste,—

> —This nor gems, nor stores of gold
> Nor purple state, nor *culture* can bestow,
> But God alone, when first His active hand
> Imprints the secret bias of the soul.

It will not, however, I trust be long before Canada will have her sons whom future generations will have a pride in remembering, for as respects her political condition, and the public provision made for instruction, such is her actual state, and such the prospects of the future which are opening upon us, that we can scarcely name a country of which it can be said that those who are to be born in it will have fairer opportunity and freer scope, for the cultivation and use of their intellectual faculties.

We can not, it is true, hope for many years, or, should I not rather say, for many ages, to possess seats of learning which can rival the time-honored universities of the United Kingdoms; but in what portion of the British Empire is instruction more accessible to all?—I mean instruction to such an extent as is necessary for developing and cherishing any latent spark of genius, or

discovering the germ of any peculiar talent, and for facilitating the early progress of youth in the pursuit of any science to which their nature may particularly incline them.

Throughout a large portion of Upper Canada, and in many entire Counties, the difficulties of a first settlement in a thickly wooded Country have been overcome by the patient, though tedious and toilsome labour of the axe-man, for which the inventions of science have not yet provided a substitute. The second and third generations of farmers are now occupying fertile lands, cleared by the toil of those who have gone before them. Very many of these are in comfortable circumstances, able to appreciate and enjoy the advantages of education, and not without the ambition to improve them, and to ascend to positions among their fellow-men, which, in Canada, as in other portions of the British Empire, are open to all. Our commerce, too, expanding with the rapid and enormous increase of our productions is accumulating wealth—and wealth brings leisure. We shall soon have a larger class of men among us who, having succeeded to something more than a bare competency, or having secured an independence by their own exertions, will be exempt from the daily toil which is the common lot; and some of these we may hope will be inclined to devote themselves to the pursuits of Science, and to encourage and assist the efforts of others.

The current literature of the day now circulates as freely, and almost as cheaply in Upper Canada as it can do any where. The system of education in the Common Schools, extended as it is to the remotest parts of the Province, brings instruction within the reach of almost every household. The formation of public Libraries in connection with this system; the multiplication of grammar schools; the establishment of Colleges fully adequate in number to the wants of the Province; and the formation in most of our large towns of Mechanics' Institutes, all show a population alive to the importance of intellectual culture; and I believe those who have acquired experience in Europe and in Canada in the business of instruction, will not hesitate to declare that there is no want of good natural capacity in the Canadian youth.

What useful part may be taken by this Association in encouraging a taste for Scientific pursuits, is in some measure foreshadowed in the numbers of the Canadian Journal.

Besides the papers read and discussed here by members, which form, properly speaking, the proceedings of the Institute, we find collected in the Journal, and presented in a convenient form, notices of important discoveries in the Arts and Sciences, and discussions of various scientific questions, which have engaged the attention of learned bodies, or of individuals possessing a profound knowledge of the several subjects, and the advantage of every aid which the most favorable circumstances could supply.

Some of these discussions relate to questions which are not of a nature to be affected by any peculiarities of situation or climate, but have an universal interest, so that the truths which may be ascertained, and the results arrived at, are useful in one country as well as in another. Others may turn upon particular diversities, arising from local causes, and may from that very circumstance furnish grounds for useful comparison. It is a great advantage to have such facts, and the reasoning upon them collected and presented in a convenient form, unmixed with political and other controversies of a merely temporary interect, and unincumbered with the crowd of advertisements which swell the bulk of daily and weekly newspapers. In a Country, too, which is advancing by such rapid strides in population and wealth, and which is making such remarkable exertions to procure for itself those advantages which till lately were confined to older and more opulent communities, it is deeply interesting to collect and preserve for future comparison and reference, the history of its developement. Those who come after us will feel that no light obligation has been conferred upon them by the Association which has taken the trouble of recording the first movements made in our great public enterprises, thus enabling them to see the time and manner of originating them, and to compare the predictions of their promoters with the results which have followed. Again, the early history of our settlements; the gradual growth of our towns aud cities; the increased and improved quality and the varying proportions of our agricultural productions;—the

unforseen turns which the trade of Canada will have taken under the freedom of intercourse permitted to her; the extension and improvement of our navigation; the stupendous railway undertakings; the introduction and growth of manufactures; and what is really more important than all, the developement of civil and religious institutions; upon all, or most of these points, the pages of the *Canadian Journal* may be made the means of disseminating and preserving much valuable information,—as I think we may say they have already done, in regard to several of the subjects which I have alluded to. Some of these, though they refer to facts and topics of great public interest, may not (except in their bearing upon questions of political economy) be considered to come within the range of Science, which has been defined to be "Art, attained by precepts, or built on principles," and they may not come directly within any of the objects specified in the first section of the regulations of the Canadian Institute; yet information upon them cannot but be useful and welcome to the public, and in disseminating such information by the circulation of the Journal, the Institute will be felt to be rendering a valuable service, and a service to science, in that wider sense by which it may be understood to comprehend every species of knowledge. For valuable papers relating to several of the physical sciences, we shall, I hope, continue to be indebted to a class of gentlemen who made, indeed, the first movement towards the establishment of the Institute. I mean the Civil Engineers, whose profession compels them, in the study and practice of it, to look below the surface of things; to devise new applications of mathematical principles, and mechanical powers, and to consider and make allowance for the great laws of Nature: for it is upon her mysterious and unerring laws that many of their operations are founded. We may expect too, that their opportunities of research, and their habits of observation, will lead to valuable contributions being made to our museum of mineralogy, and to the study of geology among us. We can not indeed, presume to say what description of physiological researches may not receive some assistance from the cause I allude to, for there is such an affinity between the several branches of natural Science, that there is always a prospect of good, especially in a large and imperfectly explored country like this, from any circum-

stance which sends abroad among the works of Nature a number of men whose minds have been turned and trained to the observation of her laws, and who have been accustomed to reason and to act upon what is known concerning them.

In connection with some of the speculations and studies of natural philosophers, Canada will always present a very interesting field from the circumstance that a large portion of it to the northward, while it is even now easily accessible by means of its numerous chains of lakes and rivers, and is becoming every year more so from the nearer approaches of railways, yet from its inaptitude for cultivation, continues, and is likely to continue in its primitive state, exhibiting to the lover of nature, and to the inquirer into her works, her romantic woods, rocks and rivers, her shrubs, mosses, insects, and all her wonders, animate and inanimate in their aboriginal state, undisturbed and unaffected by the operations of man.

It will be felt, I think, in future times, to be a great charm of this country that nature, on so vast a scale, can be seen in all her majesty and freshness, by so ready and easy a transition from a contiguous territory, populous and fertile, and abounding in all the comforts and advantages of civilized life.

It is, perhaps, no disadvantage that I have little space left, without wearying you, to say any thing of the future prospects of the Canadian Institute, for in speaking of the future we must be dealing, more or less, in uncertain speculation.

The degree of success which has been obtained in so short a period of time, gives at least good encouragement; and as I have already stated, the attempt to gain some foot-hold for scientific discussion, seems to have been made at a juncture very favorable.

The public mind is at present little distracted by angry political discussions—there has been a long period of tranquility which may create stronger confidence in the stability of our Colonial relation. The greater activity of trade, and greater abundance of capital arising from various causes, occasion Canada

to be more looked to than formerly as a country presenting advantages for the profitable investment of money.

The progress which is being made in the construction of railways (there being now, in Upper Canada, nearly 400 miles of rail-way in use, where ten months ago there was not one mile completed,) must inevitably give to the Province a very different position in the estimation of other countries, and cannot fail to have a great effect in attracting to it men of liberal minds and means. There must be many, no doubt, who not having been under any absolute necessity of emigrating, are yet very sensible that they might find their advantage in doing so—but have been deterred from taking the step so long as they must have submitted to the many discomforts and disadvantages inseparable from bad roads and the consequent difficulty of access to market. Men of cultivated minds, and accustomed to social comforts and enjoyments, will, in future, hesitate less to disperse themselves freely over all portions of this new country, when a few hours travelling, unattended by fatigue or discomfort, will transport them to and from the large towns. Such persons will soon be able, without subjecting themselves to any severe privation, to make their choice of a place of residence in Canada, according to their preferences of climate or soil, or proximity to lakes or rivers, or guided by the price of land, or by the description of settlers whom they would choose for neighbors, or by any other predilections—for it will be in their power to consult their peculiar tastes—without condemning themselves to exclusion from what others are enjoying.

The tendency of this great change, to people Upper Canada more generally, and in more equal proportion, with a class of educated men, is an advantage by which such an institution as this can hardly fail to profit. And I believe, without meaning to disparage any advantages which other colonies may present, that we may expect to gain no inconsiderable degree of wealth and intelligence from a re-action which seems inevitable, of that movement which of late years has been carrying such multitudes to the Australian Colonies. It has seemed as if the sacrifice of the lives, and health and fortunes of thousands were necessary

to produce a conviction of the rather obvious truth that the circumstance of gold being among the natural productions of a country, does not ensure the acquisition of wealth, nor even of independence to all who can make their way to it,—but that, on the contrary, it has a tendency to place many, if not most, of those in a false and distressing position, who rush thither in the eager spirit of adventure.

Now that so many are returning with disappointed hopes, many more must be warned by their example not to run so perilous a hazard; and of those who have rational motives for seeking new homes, but may hesitate hereafter to wander to countries so remote, upon very doubtful prospects, we may expect to have the pleasure of receiving our fair proportion; and whatever may be the accession of intelligence that may accrue to the country from this cause, some portion of that gain, I trust, will be felt by the Canadian Institute.

In contemplating any extension of the labors and objects of this Association, and considering in what additional manner or degree it may be made to contribute to the advantage and enjoyment of those who have leisure and inclination to indulge in scientific pursuits, we must find ourselves at once embarassed by the want of a suitable building belonging to the Institute in which its proceedings can be carried on, and its library and museum accommodated and arranged with a due regard to order and convenience. This want, too, we must apprehend, may soon press with greater force than at present, since it is uncertain how long we can be permitted by the kind consideration of the government, to occupy the spacious, and, in some respects, convenient building which we are now in. Perhaps a careful examination of what we might reasonably hope to be able to accomplish, might convince us that we need not long delay taking measures for providing for the Institute a permanent home of its own.

There are many reasons which should stimulate us to make such an effort; but it may be safely left to the Council to consider the proper time and manner of proposing it.

I owe it to myself, gentlemen, not to conclude without assuring you that if due credit had been given to my earnest protestations of unfitness, I should not now have been found inadequately filling a place, of which the duties could be much better discharged by many whom I see about me. I beg, therefore, that you will be just enough to make this allowance for me; that I am here by no fault of mine; for I am but too conscious that I have the least possible pretensions to Science, excepting whatever knowledge I may have gathered in the course of a long application to one particular science which I apprehend may not be universally in favor. In the regulations first promulgated by the Council, I saw it stated "that there were three classes of persons who might with propriety join the Institute." In the first of these I was well aware that I could not claim a place. In the second class, which was stated to consist of "those who may reasonably expect *to derive some share of instruction* from the publication of your proceedings in the Journal," it seemed to me that I might be included;—and perhaps also in the third, which was defined as consisting of "those who, although they may neither have time nor *opportunity* for contributing much information, may yet have an ardent desire to countenance a laudable, and, to say the least, a patriotic undertaking." I confess I was amused by observing the delicate tact with which the framer of these regulations substituted in his description of the third class the word "opportunity" for "*ability*," which was plainly in his mind; but being willing to understand and accept the word in its hidden sense, I ventured to enter by a door so widely and considerately opened; but I entered it only for the purpose of receiving instruction, not with any idea of communicating it.

THOMPSON & CO., PRINTERS, KING STREET.