

those delicate links in the chain of research, by which the Archaeologist of another generation may hope to trace out the origin and the fortunes of a great branch of the human family. If it has been found, even in Great Britain, that scarcely five per cent of the rare and interesting remains from time to time brought to light, are recoverable after a few years, unless they are lodged in some public museum, we may be very sure that a proportion even larger of such remains as Canada furnishes, are lost for want of such an institution. There is reason to believe that there is at this moment in Canada, one of the most ancient and interesting of Scottish mediæval remains the Quigitch,—the *Crozier* of that favourite Celtic Saint, St. Fillan, who flourished in the middle of the seventh century, still in the possession of the heirs of the family which has been honoured with its custody. 'sin the time of King Robert the Bruce, and before' since the days of the Bruce we can nevertheless but regret that if it were possible to rescue it from the chances that befall all sublimity possessions; from fire, or theft, or the Sheriff, there should be no museum in which to deposit it. To return, however, to Indian antiquities, let me mention topography, or rather the naming of places. When the last *Pine-wood* of Chinguacouy (Chiniquak kon schi) is levelled, when art has provided another outlet than the river mouth in Nottawasaga, when a few generations more shall have hopelessly corrupted the spelling and pronunciation of those, and of many other aboriginal names still to be found on the map, of all monuments of a race and language, perhaps, the most unduring: how will philologists puzzle themselves over 'authenticities' which hundreds now living could remove, but which to them may be as inscrutable as the language of Nineveh. I allude to these subjects here, because they offer an immediate field for the exertions of the Institute, and is one which it is peculiarly able to enter upon, as including among its members so many gentlemen whose pursuits must be constantly bringing them into contact with objects of the kind referred to. Thou again in Natural History. Only last summer an American Professor and his pupils, chose the neighbourhood of Toronto for the scene of their search after new and undescribed fishes. I forget what the Professor's success was, but the fact shews his remarkable confidence in our own neglect of the objects around us. I remember once, in the Island of St. Helena, sending a colored servant to a distant and somewhat inaccessible rock, called the Barn to fetch me some specimens of land shell, reputed on the Island to have been long extinct, but of which dead specimens were known to be abundant in that locality. To my own surprise, Joseph who had no lazy theory to save his own exertions, brought me back half-a-bushel of living ones. The dwellers in Jamestown had reckoned much too confidently on the authority of their ignorance. And if their little Island—smaller than any Canadian county, and settled by Europeans a century before an English foot had been set in Upper Canada—could yield such novelties, we need not deem our search hopeless here. Turn which way we will, enquiries meet us on which an active mind may employ its best energies, and yet glean but the surface treasures of that exhaustless mine which Art and Nature offer to human industry. But, gentlemen, we should undervalue this Institute if we regarded it merely as a means of amassing information, however valuable, or of contributing to personal distinction, however well earned. It is in the refreshing influence of mind upon mind, in the re-union of those whom separate pursuits or different walks in life tend otherwise to put asunder,—in holding up to practice the mirror of theory, in animating theory with the life of practice, that societies like this, when actively conducted, exercise so beneficial an effect. Who can tell how much encouragement may be given by a word of sympathy, how often a friendly hint may clear up a difficulty, or timely discussion avert a blunder. Or what essential moral benefit it may be to some minds, in teaching lessons of modesty, of diligence, or of patience, to be brought

into contact with other minds of greater gifts and higher attainments, and learn that the place they aspire to must be earned before it can be enjoyed, that there is no royal road to knowledge in any of its branches. But I feel that in pursuing this theme I am in danger of mistaking the authority of my office as your Vice-President for the weight of the speaker. It is not for me before such an audience, to enlarge on subjects which many around me could enforce much better. Well has Baron said, that "all works are overcome by an amplitude of reward, by soundness of direction, and by conjunction of labour. The first multiphth endeavour, the second preventeth error, and the third supplieth the frailty of man; but the principal of these is direction." Suffer me, gentlemen, to conclude my remarks by expressing the hope that few of those gentlemen whose responsible and honoured positions give us a right to appeal to them, will quit this room without resolving to give to our young institute the weight of their support and the aid of their experience.

Dr. MELLVILLE, a member of the Council of the Institute, expressed gratification at seeing so many distinguished visitors present on the occasion of their first meeting after having obtained their charter. He was highly delighted at seeing the Presidential Chair so admirably filled, and begged to return the thanks of the Council for the eloquent address the chairman had delivered. It had been said that this country was too young for such an Institution, but he thought a cursory glance around the room would nullify such an opinion. He believed that, with few exceptions, the models and works of art which so gracefully adorned the Hall, were the productions of residents in Canada. The list of papers which they had just heard read by the Secretary were an evidence of the energy and zeal brought to bear upon the objects of the Institute. Many a delightful and agreeable evening they had enjoyed listening to the discussions of these papers. It was true that the interests of general Literature appeared to have been neglected by the charter, but he trusted that this would be remedied, now that they had the prospect of being connected with the Athenæum. He begged to return the thanks of the Institute to the Hon. Attorney General, whom he was happy to see present, for the great interest he had manifested in obtaining their charter, which, but for his exertions, they would not have obtained. As a proof of the energy displayed by the Institute he might say that the figure of a warrior they saw standing on the table to the left, was growing two months ago in the woods of Etobicoke. This, however, was but a small earnest of what would be accomplished through the instrumentality of this Institute.

The Chairman declared a truce of half an hour, during which, a pretty general promenade was made to an adjoining room, where, tea, coffee, and confections were amply provided. Others preferred examining the various articles in the Hall. Order having been restored,—

PROFESSOR HIND made some interesting remarks on the climate of this part of the Province. He said we were, he hoped, at the termination of one of the severest winters that has been felt in Upper Canada for a great number of years. This same severity as regards temperature had however been felt over the whole of the United States. He then proposed and answered very fully the question,—What is it that generally speaking renders the Canadian peninsula less liable to suffer from the intensity of cold, and the extremity of heat that characterizes the United States? We had a climate singularly ameliorated by three or four vast bodies of water. Upper Canada formed a kind of peninsula among the Lakes. He had prepared several diagrams by which to exhibit this distinction. Here Mr. Hind exhibited and explained at some length three diagrams to demonstrate that our temperature was not so extreme as that of the Western States. He contrasted the temperature of Fort Preble, on the Atlantic coast, in latitude 43 de-

grees, 39, and Fort Armstrong, Illinois, in latitude 41 degrees, 24, with that of Toronto, and showed that the mean temperature of Fort Preble, east of the Lakes, was 46, 67, and of Fort Armstrong, west of the Lakes, was 51, 64, while that of Toronto, subject to the ameliorating influences of the Lakes, was 44, 39. Fort Armstrong is fully two degrees south of Toronto, yet its mean temperature in January is nearly a degree lower than at Toronto, while the mean temperature of the hottest summer month is upwards of eleven degrees higher there than at Toronto. Fort Preble, in the east, about the same latitude as Toronto, has a mean temperature for January of three degrees lower than Toronto, and for July upwards of three degrees higher. The influences of climate on agricultural productions was also estimated by the humidity of the atmosphere during the agricultural months. The rapid growth of vegetables in Western Canada was due to the serenity of the summer sky, and the uniform distribution of rain over the agricultural months. In the Western States, generally, the distribution of rain throughout the year, renders the cultivation of wheat, the grasses, and the root crops, more hazardous than in Western Canada. The mean annual number of clear days on the Lakes is about 120, remote from the Lakes 210. Cloudy days on the Lakes 140, remote from the Lakes 75.

The Chairman in thanking Professor Hind for his address, said that he felt himself bound to take up the cudgels in defence of this much abused winter. He believed that the memory of the oldest inhabitant was at fault in this instance, as within the space of 20 years there had been four winters more severe than the present; these were the winters of 1830; 1835, 1836 and 1842. The last if it was not more severe was nearly similar, and the accounts were about balanced. So it was not that this winter was the most severe, at least as far as could be tested by the thermometer, but there might have been some unhealthy influences in the atmosphere of which the medical gentlemen present might be able to give them some account.

PROFESSOR CROFT explained at some length the manufacture of Water Gas. He said a great many plans had been adopted, but most of them were entirely involved in mystery. The process he would allude to was that of a French chemist; it seems to promise well. The material from which the gas is prepared is so much cheaper than coal, that if it can be employed at all it will be an immense saving. The gas does not require so much purification as gas from coal, it also possesses little disagreeable smell, and the little that it does possess can be removed with the greatest ease. The discoverer took advantage of a well known principle in connexion with Hydrogen Gas. If you prepared Hydrogen Gas and caused it to burn, the flame produced by it gives out scarcely any light at all, but if you introduce a substance of a solid nature, such as a piece of platinum wire the light will become exceedingly brilliant. The Professor here explained that the gas might be made in the same retorts as other gas by passing the vapour of water through the retorts filled with red-hot charcoal. It was purified in the same way and might be burned in the same jets, with this difference, that over the jet was placed a platinum wire to throw out the light. This gas he considered far superior to coal gas both as regarded ease of preparation, cheapness of material and purity of flame. One point, however, rendered it doubtful whether it could be employed generally—that is—when hydrogen gas becomes mixed with atmospheric air it will explode violently, and the explosions which would take place with the hydrogen would be very dangerous. If, for example, any leakage took place in the gaugometers, there would be an explosion, and this substance possessed the property of escaping through very small crevices. He was afraid that serious accidents might result from the use of it. Its nature is said to be changed, however, by being catalyzed or by being passed through the oil of turpentine. The method adopted by Paine is nothing more than the naphthalizing of the gas, and its illuminating power is