

rally be to fix upon a plan of such a building, or portion of a building, as will answer reasonably well for present purposes, and to ascertain what sum would be sufficient to complete it. We should then soon be able to satisfy ourselves whether the cost could or could not be met by such efforts as are within our power. I have no apprehension that it could not be; on the contrary, I am persuaded it would be found by no means impossible to proceed with reasonable despatch, and without interruption to the completion of a suitable building.

And there can be no question, as I think we must all feel, that we are bound so to act as to show that we are not indifferent to the interest which has been so kindly manifested by the Legislature in favour of this Association. The encouragement which has been given to us does indeed impose upon us a corresponding responsibility, and makes it a duty to show that we are not unworthy recipients of the public bounty.

In connection with this consideration of duty, it is not out of place to allude to a proposition which has been made by a very zealous friend of science, and urged, indeed, upon the Institute with a laudable earnestness and perseverance. I refer to a suggestion of Major Lachlan, one of the members of the Institute, who resides in Montreal, that we should endeavour to make provision for taking and recording, at different points in Upper Canada, a series of simultaneous meteorological observations, such as might materially assist, if conducted with care and perseverance, in elucidating the laws and explaining some of the phenomena of nature. Indeed, Major Lachlan, in a clear and well-considered paper, which was read before the Institute, pressed more than one object of this description upon its attention; and I shall best state his suggestions by using his own words:

He proposed, in the first place, that there should be in some manner established, through the intervention of the Society, a well-organized chain of daily simultaneous meteorological observations at a number of well-selected stations throughout Canada, with Toronto for its centre, to be connected with a similar arrangement which he ventured to hope might be set afoot in each of the Lower Provinces, and so conducted as to be readily connected with the extended system of meteorological registers already in operation in the United States, under the fostering auspices of the Government, and the various philosophical Associations of that country. He recommended, also, in the second place, the establishment of a simultaneous record of the rise and fall of the great Canadian Lakes, throughout their whole extent.

No one, I think, can rationally question the value of these suggestions. It is obvious that if this Association could be made the means of accomplishing such objects upon a system well considered and steadily carried out, they would be rendering a service to the cause of science which could not fail to be highly appreciated, and they would be placing themselves in a most favourable light, not merely with our own Government and people, but with all friends of science on this continent and elsewhere.

It may be objected that it is too early to engage in an attempt of this magnitude, for that our resources are inadequate to the undertaking. I confess my inability to dispose satisfactorily of this difficulty, because I have not a sufficient knowledge of what ought to be the details of an extensive system of this kind, to be able to count the cost. But it is clear that to count the cost, with the assistance of those who are able to estimate the difficulty, must be the first step; and I would with much diffidence suggest that it seems a reasonable mode

of dealing with such a question, that we should first consider what would be the probable expense attending the proposed system of simultaneous observations (carried on in the first place throughout Upper Canada,) upon a scale as extensive as would be desirable, both in regard to the number of stations, and the variety and minuteness of the observations to be recorded. Then having arrived at a safe opinion upon that point, the next step would be to determine how that expense, which no doubt would be large, could be brought within the compass of our means, by a reduction in the number of stations, or by limiting the range of observations to be conducted at each point.

One considerable charge, no doubt, would be for the instruments that would be required, because, to be of any value for such a purpose, they should be of the best construction; but I do not imagine that a serious difficulty would be found in meeting that charge.

The expense of arranging the observations when collected and returned, and of classifying and comparing them, and printing the results, would no doubt be rather formidable, but I take the greatest difficulty to be, the finding or providing a person capable of conducting such observations at each station which it might be desirable to establish, and more especially at some of those points remote from towns and settlements, where the observations that might be taken would possess a particular value, but where we could scarcely expect to find gentlemen residing who could be relied upon for conducting accurately observations which require some degree of leisure, minute and patient attention, and competent intelligence, and skill to use the instruments entrusted to them.

Any difficulty of this kind, however, applies rather to the number and position of the points of observation to be maintained, than to the practicability of establishing some system of the kind on a scale, which though confined as to extent, might still be eminently useful to the cause of Science, and supply valuable materials for confirming or disproving theories which in themselves are of great interest, and can only be established or refuted by such means. I take the liberty of suggesting that if something satisfactory in this way can be effected by any exertion at all within our means, and with such public aid as we might hope to procure, it would be unwise to incur unnecessary delay. It is only from a series of observations of each particular kind, conducted through a succession of years, that results can be obtained on which reliance can be placed. We should be impatient, therefore, to begin what can only produce fruits so gradually, and there is a particular reason against delay which appears to me to have much force in it.

Among the speculations which interest men of science, we find it frequently discussed, what effect has been produced upon climate by the progress of cultivation in countries which originally were covered thickly with timber. Now we have at this moment large tracts in this Province, particularly in the north-western part of Upper Canada, in which the change from wilderness to cultivated fields is going on most rapidly—some in which it is but just commencing, and others in which it is not yet actually begun. In all portions of this immense tract, the process of clearing the land of its timber is certain to go on with speed; for the advantages of Upper Canada as regards climate, fertility of soil, means of transportation, and proximity to markets are now at length known and understood, and population is pouring into the new townships with surprising rapidity. It is to be considered too, that our system of assessment laws ensures reports being annually made of the number of