

OBSERVATIONS ON THE PHYSICAL GEOLOGY OF
THE WESTERN DISTRICTS OF CANADA.

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The investigation and illustration of the geological structure of the surrounding country, whether we regard it simply as a matter of scientific interest or of practical utility, must ever form one of the most prominent objects of such Associations as that of which this *Journal* is the organ. To those whose previous studies have given them a taste for, and aptitude in, such pursuits, no subject can possess greater interest, or add greater zest to the enjoyment of their excursions, whether of business or pleasure; while even to those whose acquaintance with geological science may be but superficial, the knowledge of those causes which have operated in determining the configuration of our coasts, and in producing the most prominent features of the scenery by which we are surrounded, must be a source of great and elevating enjoyment. Again, as a striking instance of the benefit of such investigations in a utilitarian sense, I need only advert to the fact that both in Canada and in the neighbouring State of New York, before the deductions of geological science were brought to bear upon the public mind, large sums of money were squandered in abortive attempts to find coal in rocks below the carboniferous series. In exposing the absurdity of such attempts, and thereby rendering the resources thus wasted available in more profitable channels, the science of geology has conferred on this Province a service which will amply justify the expenditure of the sums granted by Government for the prosecution of these researches.

Sir Roderick Murchison computes that the money expended in England alone, before geology was understood, in searching for coal where it would now be considered madness to expect it, would be sufficient to effect a correct general geological examination of the entire crust of the globe.

I propose, in this and subsequent papers, to lay before the readers of the *Canadian Journal* the results of such investigations into the physical geography of the western districts of Canada as I have had it in my power to make during a residence of upwards of eight years in those parts of the Province. The region embraced in these ex-