

are thin. On the other hand, in the eastern part of the province, where the coal basin is widest, where the beds are nearest to its centre, and where they become directly continuous with the highly productive Carboniferous rocks of Nova Scotia, the country is, except at one or two points, a *terra incognita* as regards what lies below the surface. It would seem, therefore, very desirable that this ground should be thoroughly tested, but before incurring the expense necessarily involved in instituting any extensive series of borings, all available facts bearing upon the choice of location, probable depth, etc., need to be carefully collected and estimated. It is to aid in this direction that the present report has been prepared.

Object
of present
report.

It will be obvious that the question involves many different considerations, thus, the topography of the country, as being directly determined by the attitude of the underlying strata, has an obvious bearing upon the question of that attitude, as this has upon the position and spread of any coal seams which may be present. The erosion which the country has undergone, whether by the operation of glaciers or rivers, or both, has led to the removal of vast quantities of rock, and it is a subject for consideration as to how much has been thus removed, and whether such removal involved any productive coal-measures or not. In the river valleys and along the coast are the natural sections which afford the only information, short of boring, which the region offers, and these need to be carefully studied and compared. The evidences of displacement, whether by differential movements involving large areas, or confined to particular lines determining faults, require consideration. The fossils, obtained at many different localities, need to be compared, with a view to determine the horizons they represent. And, finally, a comparison of the coal-bearing rocks of New Brunswick with those of Nova Scotia, where the system is so much better displayed and has been so long and carefully studied, is of the utmost importance, for such comparison should tend to show whether the surface rocks of New Brunswick are the representatives of the lower portion only of the coal formation (in which case it would be useless to seek for serviceable seams) or of the middle or upper. The data afforded by new borings need also to be collated and compared.

Comparison
of fossils
necessary.

In the following pages an attempt will be made to discuss the question of possible coal supply from each of these several stand-points, with the exception of that of a comparison of the Carboniferous systems of New Brunswick and Nova Scotia, which will be the subject of another and concurrent report by Mr. H. S. Poole.