

vey is confined to a few districts where minerals are known or supposed to exist. The coal lands of the North-West, or of Nova Scotia, or in the mining districts about Rainy Lake, are all proper places for a geological exploration; but it makes very little difference to the intending settler what stratum underlies a particular part of the great plains of the North-West unless for the purpose of guessing what sort of soil is on top. But the plains of the North-West are very uniform, and a few borings a few hundred miles apart will settle the question of soil for large districts, and, in fact, it is always pretty well settled. We know what kind of soil we may expect *a priori* in any particular part of a district; but the most important thing for the settler to know is what he will grow upon the soil. He reasons that if plants grow there with which he is familiar in his own country, whether it be Europe or Old Canada, then the grains with which he is familiar will grow there too, and we know by experience that this reasoning is pretty correct. I do not complain of a geological survey being carried on where it is necessary; but I think, at the same time, that explorations in natural history should also be carried on, if we are to know what the country possesses, and what it will produce. We have all felt during the last few years that the lands of the North-West have been sold and given away in various ways, without a due appreciation of their value. Some idea of that value is now beginning to dawn upon all of us; but I do not think we shall have a proper idea of the value of these lands until we have such a survey as I have spoken of, as the law intends we should have, and as common sense dictates. With regard to directing the survey, the hon. gentleman says that he has not interfered with Mr. Selwyn, because he is a scientific man, and it would be like interfering with an expert. That is right enough. As to the other details of the work, he should not interfere with Mr. Selwyn as to the manner of surveying any particular neighborhood; but it is part of the policy of the Government to declare at what places the surveys should be made, and then to leave the director to conduct them in the proper manner which he has done. If it is the practice of the Government to place an expert at the head of the Department, and leave him to do whatever he chooses, the hon. gentleman could secure some land speculators in Winnipeg at very reasonable figures, if he would leave them to do the business of the Department without interference; and the work would be done thoroughly, but it does not follow that it would be properly done. Nor does it follow that because a man is a scientific man, he should know in what part of the country public policy requires surveys to be carried on; on the contrary, if a man is a scientific man, he is not likely to trouble himself about policy so much as about interesting scientific research. It might be a matter of great interest to him to know that Devonian strata existed at a certain place, without caring for the capabilities of the district for agriculture or stock raising; but that is not the interest of the Government, whose duty it is to find out what that country is good for; and I say that it is the duty of the responsible Minister of the Department to direct these surveys to be conducted with that view. It is quite true, if we should decide upon having a natural history survey, that Mr. Selwyn would not be qualified to direct it with the same efficiency that he does the geological branch. That is quite probable; but for that very reason the services of some man who is posted in natural history should be obtained; and I do not know anyone better qualified to conduct a natural history survey than Professor Macoun. If it is necessary to establish a separate branch, and I do not say it is, either Professor Macoun or some other man of experience in natural history, would be a very proper person to conduct it. Where would have been the "boom" in the North-West but for the explorations of Mr. Sandford Fleming, Mr. Horetzky,

and others, whose reports advertised the capabilities of the North-West to the world? And it is by such explorations that we are going to learn the value of that country more than by geological explorations. I hope, therefore, that the hon. gentleman will reconsider this matter, and decide to undertake the kind of survey I have suggested.

Sir JOHN A. MACDONALD. I did not say that I left it altogether to the Director to make the selection. I said I left pretty much the direction of the surveys to him; but if the hon. gentleman will look at the work laid out for the year 1883-84, he will see that the Director has selected, after conference with the Government, that part of the country of most interest to the settler in the North-West.

Mr. CASEY. To the geologist?

Sir JOHN A. MACDONALD. No; for coal and minerals. I forgot to answer the hon. gentleman about Professor Macoun's collection. Negotiations are now going on, and part of this vote is to be applied to the purchase of this collection, and \$6,000 to the purchase of Mr. Hirschfelder's collection of the flora in the Indian country of the North-West.

Mr. BLAKE. For a long time I have entertained very strong opinions, which I have expressed in this House and elsewhere, of the importance of some such steps as my hon. friend Mr. Casey has suggested. Some efforts have been made, it is true, but in a desultory and perfunctory way, considering the importance of the question, towards increasing our knowledge of the soil and its products in the North-West. We have had the information contained in the surveyor's field notes; but, of course, surveyors, although habituated to observation from being in the country, are not trained in the various topics which would make their reports much more reliable than those of ordinary land prospectors, and the results so obtained must necessarily be deficient in accuracy and in precision. Professor Macoun was called upon to make a very rapid and necessarily cursory investigation of the country. Our present survey has been very much devoted to the question of geology. I am not saying one word against continuing; on the contrary, I agree in the wisdom of continuing our efforts towards increasing our geological knowledge of the country. What was done before Confederation is no measure of what is required now, because the Province of British Columbia, of enormous extent, and the whole North-West Territories of still vaster extent have been added, and we must make efforts which, compared with our former efforts, would be entirely disproportionate, if we come up to the exigencies of the occasion. So far as the North-West is concerned, that portion of the geological survey which is devoted to the ascertainment of the extent of the fuel supply, is as important as any other object. But I have long said that I believe with very great strength of conviction, that what we ought to do is to go very strongly into a natural history survey. Continue your geological explorations of those parts of the North-West which are attractive to geologists, and afford a fair scope for geological survey—and that geological survey should be thorough and exhaustive if it is to afford a permanent record of very great value—continue your geological explorations in the older Provinces; but let us send out two or three parties for a somewhat rapid, but still practical and thorough examination of the different sections of the North-West with a view to their natural history.

Sir JOHN A. MACDONALD. I suppose the hon. gentleman includes botany.

Mr. BLAKE. Of course; the flora and fauna and the physical conditions of the country, which are on the surface, and are important to the general public in learning what manner of land that is; what the barometer says, and the thermometer says; what can be gathered from those