

lished as a map prepared under the direction of Sir William Logan, with subsequent corrections, and giving Sir William and his staff credit for the twenty years' work which they had done.

Q. It was a great wrong to Sir William Logan?—Yes. I understand that Dr. Selwyn says that Sir William Logan wished the map suppressed. Of course I can not tell as to that. I say it with all respect, that Sir William was wrong in the position which he took in regard to these rocks, and that I was right, and subsequent investigations, not only in North America, but in the Alps and other parts of the world, have shown that Sir William was wrong in his views; but Sir William had a right to have the map published if he chose.

Q. Do you not consider that this volume, representing the work of 1880-81-82, is rather meagre, for the immense amount which the Survey has cost, and supposing that it were valuable as a report itself, should it not be more widely distributed? We are told that 4,000 copies of it have been printed, 2,000 of which are put in a book store at Montreal, and also at another book store in Ottawa, for sale. Should not the public have the benefit of this report?—Yes, provided it is worth distributing. I cannot suggest any better mode than that prevailing in Pennsylvania; they stereotype the forms so that an additional edition can be struck off without much trouble. They also publish forty or fifty of these volumes, one on each different subject, and they are bound together in cloth, and sold from 30 to 50 cents each. A limited number are sent to libraries and public institutions free, and also distributed by way of exchange. These separate reports on the different subjects, sometimes embrace only one county, and sometimes several counties, or in other words, small mining and geological districts, extending over one or more counties.

Q. Speaking generally, I should infer from what you have said, that what is most needed at present, is a good head to the Survey?—Yes; the Director, I think, should have some clear and well-defined notions upon the great leading questions of geology, mineralogy, natural history, lithology, stratigraphy and palæontology, which must form the basis of all intelligent work.

*By Mr. Wood:*

Q. I think I understood you to say, that the United States Survey dealt largely with the character of the soils, and the extent of the cultivation of corn and cotton? I think they have a Bureau of Agriculture?—What I referred to was, the work which has been lately done by the State of Alabama, and what has been done by the State of Alabama might, with advantage, be done by every State. The general Geological Survey of the United States was only recently organized, and is just getting into working order, and is bringing under its general system all that had been done by the independent State Surveys, in the different regions, and to connect it with the Territorial Survey, which has always been under the charge of the Federal Government. A proper study of the great coal and iron fields, of the great Appalachian coal and iron regions, requires a Survey extending over many States, and hence the desirability of making it the work of the Federal, rather than of the State Survey.

Q. The point that occurred to me was, that they would be to the same extent doing the same work?—I have consulted with the Director of the United States Geological Survey on many of these points. Whether the Federal Survey will attempt to discuss the agricultural questions, as has been done in Alabama, or leave them to the Bureau of Agriculture, is a question for the future.

Q. Can you state where, in your opinion, the line should be drawn? How far should the Geological Survey go in these matters and what would more properly belong to the Department of Agriculture?—The Geological Survey should occupy itself with all matters touching physical geography, the nature and origin of the soil, their relation to the rocks below and their relation to drainage and water supplies, as to whether the soils are stratified clay or sands, &c., and as to the question of the waters which may be got by sinking wells or boring. Since, in some regions like the North-West, where water supplies could be got by sinking wells or boring, it would be important to know whether fresh or salt waters fit for irrigation or domestic use could be obtained. Then there is also the question of the selection and