

Lieut.-Colonel
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23 February 1857.

212. Then if you had not much time to consider the state of the Indians, had you much time to consider the physical condition of the country?—The physical condition of the country meets one's eyes in all directions, whereas the Indians are but rarely met with; and I did not speak their language, and did not always have an interpreter with me, but I used to converse with the residents at the forts.

213. How do you judge of the fertility of a soil which is not cultivated?—By those portions which are cultivated; by the known facts of science affecting cultivation, and by the proportion of alluvial soil visible at the surface.

214. Over that territory did you find large woods?—I have placed before the Chairman a map on which the region of prairie is indicated by a green tint; north and east of that region there are woods.

215. All to the north of Lake Superior is woody country?—Until you get to a very considerable distance north; but I beg to say that the wood in that country, the pine, which is the most prevalent wood, will grow in any crevice in which there is any moisture, and I have seen pines of large size growing on a granite rock as hard as this table, simply by the moisture which was found in the crevices. You cannot infer that that is a soil fitted for agricultural purposes from the fact of there being wood.

216. Not from the fact of there being pine-wood, but if other hard wood grows you may do so?—Yes; those woods having a tap root, but a great number have not.

217. Is not that the mode by which people who explore a country for agricultural purposes determine the capability of the country for agriculture, namely, from the wood upon it; in America, I mean?—It is one of the modes; it is a superficial one.

218. Where you find large quantities of trees of five feet in diameter, and large beech trees, would you not at once say that that is a cultivable soil?—Unquestionably; but there is not a tree of any description five feet in diameter in the Hudson's Bay territory on the east side of the Rocky Mountains; the largest pines, which are the largest trees there, seldom exceed three feet in diameter.

219. Supposing there were trees of three feet in diameter, would you not say the soil was good?—Yes. I have seen that in islands possessing a depth of alluvial soil brought down by floods. The island on which Fort Simpson, on the Mackenzie River, is built, is of that description; and very fine timber is to be found there.

220. You say that you have not seen any evidence that the climate has ameliorated?—I have seen none.

221. Are you at all aware historically of the state of Europe in centuries past?—Yes; I am aware that there is reason to suppose that the climate of Europe in former times, before cultivation was so general, was colder than it is now; the winters were colder. Having given considerable attention to that subject, I may state generally that the result of my inquiries leads me to this conclusion, that the effect of cultivation anywhere in America is to diminish the extremes of temperature both in summer and in winter, but to leave the mean annual temperature not much affected by it. Meteorological observations were commenced at Toronto, in Canada, in 1840. I was myself engaged with them about 11 years; and I of course had experience of a great variety of hot winters and cold winters, and summers also. Since I left it, which was in the year 1853, they have had extremes in both directions that fall far without the limits of my observation; they have had three winters of such severity as I never encountered in all that period, and they have had hotter summers; it therefore shows that conclusions based on data not derived from observations over a long series of years, comparable and accurate ones, are very likely to deceive us.

222. The sensations of a man are very misleading; but supposing, for example, that formerly the territory bore reindeer, and that the rivers of that territory were annually frozen, and that now reindeer will not live there and the rivers are never annually frozen, would you not say from those data that the country had ameliorated in climate?—I should say so, if I was acquainted with no other facts; but I am acquainted with a fact with regard to the habits of the reindeer which