

The extension of settlements to the Black Hills and of the Northern Pacific Railroad beyond the Missouri River, have developed immense beds of lignite coal—characteristic of the tertiary formation—and Canadian exploration has traced these beds north to the valley of the Souris or Mouse river, and thence westward near the international line to the Rocky Mountains, where they join the broader carboniferous formation which flanks the Rocky Mountains from New Mexico, in latitude 35 deg., to the mouth of the Mackenzie River, in latitude, 70 deg.

But between the silurian development of the Red River district and the immense Saskatchewan basin, and the cretaceous and tertiary formations, which contain these beds of lignite, where are the devonian rocks—the true coal measures? Can these be a total fault? It seems incredible; and with the progress of exploration and settlement, I shall confidently anticipate that they will be discovered and exploited for the coming population of the great northern interior of this continent.\*

But, for the present, public attention is directed to the lignites of the west. In the vicinity of the Rocky Mountains they have long been noticed and described by travellers. The lignite beds of the Upper Missouri were noticed by Lewis & Clark, in 1803-4; those of the Laramie plains, now in Wyoming, by Fremont in 1842; those of the Raton Mountains, in New Mexico, by Gen. Emery, in 1848. Recurring to North West British America, Sir George Simpson, in his *Overland Journey Around the World* in 1841-2, describes "a seam of coal near Fort Edmonton ten feet deep, which had been traced for a considerable distance along both sides of the North Saskatchewan River." But the reader cannot fail to be interested in some notes of Sir John Richardson's observations and inquiries upon the subject of coal in the valleys of the Mackenzie and Peace Rivers. "The coal when recently extracted from its bed," he observes, "is massive, and most generally shows the woody structure distinctly. Different beds, and even different parts of the same bed, when traced to the distance of a few hundred yards, present examples of 'fibrous brown coal,' 'earth coal,' 'conchoidal brown coal' and 'trapezoidal brown coal.' Some of the beds have the external characters of a compact bitumen, but they generally exhibit on the cross fracture concentric layers, although from their jet-like composition the nature of the woody

\*In corroboration of the foregoing theory of the presence of the true coal measures near the course of the Red River—probably in the "mountains" or first plateaux adjoining its alluvial and silurian plain—is the following paragraph in Mr. Taylor's *Geographical Memoir* (1856) first cited: "Henry R. Schoolcraft, in a communication to Silliman's *Journal of Science* (March 1855), refers to recent information of a reliable character, that on the western coast of the Lake of the Woods and south of the national boundary, large deposits of coal exist. If so, a corresponding formation unquestionably exists along the west shores of Lake Winnipeg." While this Report is passing through the press, there is much excitement at Emerson and vicinity in regard to a late coal discovery a few miles eastward.—A.B.