

the journey up the Saskatchewan it was traced to the Neepewan,—a distance of 300 miles,—where it is either succeeded or covered by cliffs of calcareous clay. It is probable that the limestone formation not only extends over a vast portion of the plains, but also runs parallel to the Rocky Mountains as far as Mackenzie River. Between it and the Rocky Mountains, rocks of the coal formation occur; and beds of burning coal have been known for many years on the upper parts of the Saskatchewan, as well as on the last-named river. One of the most marked characteristics of the limestone formation is the entire exclusion of foreign beds. It was never observed in association with any other rock, except, perhaps, on Elk River, where it appeared in contact with compact earthy marl and slaggy mineral-pitch, or bituminous sandstone; and on Coppermine River, where rolled fragments of a similar stone were found connected with layers of dark flinty slate. Salt springs and lakes exist from twelve to twenty miles to the northward of Carlton House.

In Athabasca Lake Sir John Franklin's party came again upon the edge of the primitive formation. Fort Chipewyan seemed to stand upon a granite rock, and a little to the eastward a reddish granite is associated with gray gneiss. Granite is the most abundant rock on Slave River; but it disappears about a mile and a half below the Portage des Noyes, and the banks from thence to Slave Lake are alluvial. At the mouth of the Yellow Knife River, and in Lake Prosperous, mica-slate prevailed; and between Rocky and Carp Lakes the granite contains many beds of mica-slate, often passing into clay-slate. Here the country is tolerably wooded, and white spruce occupy the rocky situations, *Pinus Banksiana* the sandy spots, and aspen the low moist places.*

At Carp Lake the hills are of lower altitude, the valleys are less fertile and have fewer trees, and these features seem to characterize the commencement of the gneiss formation, which extends over the great district to the eastward of the Coppermine River, termed by the Indians the *Barren Grounds*. The soil is inimical to almost every species of vegetation. The summits of the hills about Fort Enterprise are composed of a durable red

* Appendix to Franklin's First Journey to the Shores of the Polar Sea, p. 520.