

these beds. Their horizon would appear to be Middle Cretaceous, and probably near to that of the marine Niobrara group of the United States geologists, which was deposited in a vast Mediterranean Sea, whose northern shore seems to be represented by the Peace River beds. This gives great importance to these plants, which fill up a portion of the gap previously existing between the flora of the Dakota group and that of the Upper Cretaceous of Vancouver Island.

A small collection made by Dr. G. M. Dawson on the Susquehanna River, some distance to the west of the localities on the Peace River,* shows, in a highly indurated black shale, leaves of a species of *Pinus* and of a laurel.

Further to the south, and at the eastern base of the Rocky Mountains, are the coal beds of the Bow and Belly River, which are Upper Cretaceous, of the "Pierre group" age. The shales associated with these coals have as yet afforded few fossils. The most abundant is a species of *Sequoia*. Leaves of *Dicranites*, *Carpolithes*, and obscure exogenous leaves also occur.

3.—*Laramie of the North-West Territories.*

From the Laramie or Lignite Tertiary series, overlying the more typical Cretaceous, and by some geologists regarded as itself Upper Cretaceous, while regarded by others as Lower Eocene, a number of species of plants have been obtained, all, so far as known, distinct from those of the Cretaceous beds above referred to. Many of them are identical with those described by Newberry and Lesquereux from the Fort Union beds of the United States, and by Heer in his memoirs on the fossils of McKenzie River.

Some of these, collected by Dr. G. M. Dawson on the 49th parallel, I described in the Report of his Survey. Others collected by Dr. Selwyn have been described in the Report of the Geological Survey (1879-80.) A few others were recently obtained, but have not yet been catalogued or described. It is proposed to catalogue all the species determined up to this time in the sequel of this memoir.

The following table, prepared by Dr. G. M. Dawson, will serve to show the ages of the several deposits so far as yet ascertained:—

* Report Geological Survey of Canada, 1879-80, p. 104 B.