

with the marine Niobrara farther south. This flora is probably continued along the Rocky Mountain region by that of the Mill Creek series, which, however, has more the aspect of that of the Dakota period.¹ It is less rich in cycads and conifers, and has species of *Platanus*, *Macclintockia*, *Cinnamomum*, *Laurus*, *Magnolia* and *Aralia*. The aggregate of the Dunvegan and Mill Creek series may thus be regarded as Middle Cretaceous or Cenomanian and Senonian, and corresponding in the main to the Atané of Greenland. It belongs to the northern and western sides of the same great Cretaceous mediterranean sea on whose shores the previous Kootanie flora had flourished.

East of the Rocky Mountains this is succeeded by prevalent marine conditions, with the local interposition of the Belly River series, containing beds of coal, but so far a meagre flora, including *Sequoia Reichenbachii*, *Brasenia antiqua*, *Trapa borealis* and species of *Acer* and *Populus*.

Passing across the mountains to the Pacific coast, we meet with the abundant and interesting flora of the Cretaceous coal-measures of Vancouver Island, a truly Upper Cretaceous assemblage, to which the present paper refers as well as the earlier one cited in the note.² It evinces a still warmer climate than those previously noted, or than the succeeding Laramie; but it is not improbable that already some difference existed in this respect between the Pacific coast and the interior region of the continent. It probably coincides with the Patoot flora of Greenland.

Later than this, and in its floral character assimilated rather to the Eocene of other countries, we have the Laramie series proper, indicating a period in which the great interior plateau east of the Rocky Mountains had ceased to be an open sea, and had been reduced to the condition of swamps and lakes, the former holding a rich flora of temperate aspect, even as far north as Alaska and Greenland. The Laramie flora has been recognized locally on the west coast as well, but its greatest areas are in the interior plains, where it undoubtedly overlies the Fox Hill or Danien beds. It is, perhaps, most remarkable for its richness in coniferous trees, *Taxites*, *Sequoia*, *Thuia*, etc., and for the great development of the genus *Platanus*, as well as for its containing some ferns of modern species (*Onoclea sensibilis*, *Darallia tenuifolia*).³

The Miocene Tertiary is represented on the Canadian plains only by the gravels of the Cypress Hills, holding mammalian bones referred to the White River series; but on the Similkameen River and elsewhere in the interior of British Columbia there are beds holding an interesting insect fauna and a number of fossil plants. Among these are several swamp and aquatic species, *Equisetum*, *Azollophyllum*, etc., and conifers of the genera *Pinus*, *Taxodium*, *Glyptostrobus* and *Salisburia*, along with species of *Myrica*, *Populus*, *Salix*, *Alnites*, *Acerites*, *Carpinus*, *Nelumbium*, etc. The climate evidenced by these plants is still temperate, but probably scarcely, if at all, warmer than that of the coast of British Columbia at present.⁴

It would thus appear that, while we have no evidence of a tropical climate in Northern Canada in the Cretaceous or Kainozoic periods, the successive floras point to equable

¹ 'Trans. Royal Society Canada, 1885,' part iv., p. 11.

² 'Trans. Royal Society, 1882,' part iv., p. 24.

³ For details see 'Trans. Royal Society Canada, 1885,' sec. iv., p. 16; 1886, sec. iv., p. 19; 1887, sec. iv., p. 31; 1889, sec. iv., p. 69.

⁴ 'Trans. Royal Society Canada, 1890,' sec. iv., p. 76.