the European chalk, and containing similar microscopic organisms. This extends far north into the British territory,[1] indicating farther subsidence and the prevalence of a vast Mediterranean Sea, filled with warm water from the equatorial currents, and not invaded by cold waters from the north. This is succeeded by Upper Cretaceous deposits of clay and sandstone, with marine remains, though very sparsely distributed; and these show that further subsidence or denudation in the north had opened a way for the arctic currents, producing a fall of temperature at the close of the Cretaceous, and partially filling up the Mediterranean of that period.

Of the flora of the Middle and Upper Cretaceous periods, which must have been very long, we know something in the interior regions through the plants of Dunvegan and Peace River;[2] and on the coast of British Columbia we have the remarkable Cretaceous coalfield of Vancouver's Island, which holds the remains of plants of modern genera, including species of fan palm, ginkgo, evergreen oak, tulip tree, and other forms proper to a warm temperature or subtropical climate. They probably indicate a warmer climate as then prevalent on the Pacific coast than in the interior, and in this respect correspond with a meagre transition flora, intermediate between the Cretaceous and Eocene or earliest Tertiary of the interior regions, and named by Lesquereux the Lower Lignitic.

Immediately above these Upper Cretaceous beds we have the great Lignite Tertiary of the west—the Laramie group or recent American reports[3]—abounding in fossil plants, proper to a temperate climate, at one time regarded as Miocene, but now known to be Lower Eocene.[4] These beds, with their

[1] G. M. Dawson, Report on Forty-ninth Parallel.

[2] Trans. Royal Society of Canada.

[3] Ward, Repts. and Bulletins Am. Geol. Survey.

[4] Lesquereux's Tertiary Flora; White and Ward on the Laramie Group; Stevenson, Geological Relations of Lignitic Groups, Am. Phil. Soc., June, 1875.