

I say survives ; for we have but a remnant of its forms living, and comparatively little that is new has probably been added since. The confusion which has obtained as to the age of this flora, and its mistaken reference to the Miocene Tertiary, have arisen in part from the fact that this modern flora was in its earlier times contemporary with Cretaceous animals, and survived the gradual change from the animal life of the Cretaceous down to that of the Eocene, and even of the Miocene. In collections of these plants, from what may be termed beds of transition from the Cretaceous to the Tertiary, we find many plants of modern species, or so closely related that they may be mere varietal forms. Some of these will be mentioned in the next paper, and they show that modern plants, some of them small and insignificant, others of gigantic size, reach back to a time when the Mesozoic Dinosaurs were becoming extinct, and the earliest Placental mammals being introduced. Shall we say that these plants have propagated themselves unchanged for half a million of years, or more ?<sup>1</sup>

Take from the western Mesozoic a contrasting yet illustrative fact. In the lowest Cretaceous rocks of Queen Charlotte's Island, Mr. Richardson and Dr. G. M. Dawson find Ammonites and allied Cephalopods similar in many respects to those discovered farther south by the California Survey, and Mr. Whiteaves finds that some of them are apparently not distinct from species described by the Palæontologists of the Geological Survey of British India. On both sides of the Pacific these shells lie entombed in solid rock, and the Pacific rolls between, as of yore. Yet these species, genera, and even families are all extinct—why, no man can tell, while land plants that must have come in while the survivors of these Cephalopods still lived, reach down to the present. How mysterious is all this,

<sup>1</sup> Among these are living species of ferns, one of them our common "Sensitive Fern," of Eastern America, two species of Hazel still extant, and Sequoias or giant pines, like those now surviving in California.