eastward, overlapping toward the Cretaceous shore, beyond the Knoxville and Horsetown beds, which form the lower part of the Shasta-Chico series. The Chico thus comes in unconformable contact with the Jura-Trias and Carboniferous and extends inland from the Lower Cretaceous, as indicated upon the map, to the dotted line. The subsidence and consequent transgression of the sea that gave rise to the landward overlapping of the later beds of the Shasta-Chico series began soon after the great upheaval at the close of the Jurassic, and continued to at least the middle of the Upper Cretaceous (Diller).

In the Tertiary the Tejon beds of California are conformable with the Chico, and they were regarded by Gabb, and also by White, as faunally continuous. The Tejon is absent in northern California, and in Oregon it rests unconformably upon the Shasta-Chico series. (Diller, 1893.)

In Washington, the Puget group of White, underlying the Tejon, is a non-marine formation containing beds of coal. It extends from near the Columbia to the Puget Sound region, and is several thousand feet in thickness. From its Molluscan and Plant remains it has been supposed by Newberry and White to represent a part of the Laramie or Tejon group. *Baculites Chicoensis* shows the presence of Chico beds on the Snoqualmie and other rivers at the western foot of the Cascade Range. The same beds are found at Lucia Island, just north of Puget Sound, and connect with the coal-bearing Nanaimo beds of Dawson upon the eastern side of Vancouver Island. Their correlation with the Chico of California is well established by fossils. (Diller.)

In Vancouver and Queen Charlotte Islands, over the Lower Cretaceous, there are (1) the Middle Cretaceous, consisting of sandstones, shales, and conglomerates (which are 9700′ thick in the latter), and (2) Upper, consisting of shales and sandstones (1500′ thick in the latter). G. M. Dawson (1886).

In Greenland, the plant beds of the vicinity of Disco Island, described by Heer, above the Fromé group, or Lower Cretaceous, consist of (1) the *Atané* group of the Middle Cretaceous, corresponding nearly to the Colorado group, and (2) the *Patoot* group of the Upper, corresponding nearly to the Montana group.

LIFE.

1. Lower Cretaceous.

Plants. — The beds have afforded the earliest remains of the modern group of Angiosperms. They are associated with many species of Cycads, and the flora has therefore a transitional character between that of the Jurassic and the Upper Cretaceous. Remains of more than 300 species have been described by Fontaine from the Potomac formation (*U. S. G. S.*, 4to, 1889). Among them are 75 Angiosperms, 22 Cycads, over 90 Conifers, and 140 Ferns. In 1894, 30 Cycad trunks were found in Maryland.

Some of them occur in the Wealden (or Neocomian) of England, as *Pecopteris Browniana*, *Aspidium Dunkeri*, *Sphenopteris Mantelli* (Fig. 1353), and two Conifers of the genus *Sphenolepidium*. Four of the nine species of *Sequoia* or Redwood (the genus to which the giant trees of California belong) agree with species described by Heer from the older Greenland Cretaceous. The Cycad trunks of Maryland are of the species *Cycadeoidea Marylandica* (*Tysonia M.* of Fontaine). No species is identical with any of those from Triassic beds. The Angiosperms include species of *Ficus* (Fig. 1351) or *Ficophyllum*, *Sassafras*, *Aralia*, *Myrica*, *Platanus* (or Plane tree), etc.; and several of the genera, as those of *Ficophyllum*, *Protœiphyllum*, have compre-