

many terrestrial, lacustrine, and marine plants. Fossil fruits of existing genera, as pandanus, cocos, pinus, ulmus, acer, salix, &c., present the essential characters of the modern flora. The local accumulation of tropical plants and fruits in cold and temperate climates has been alluded to in the previous lectures, and is in accordance with the zoological character of the eocene epoch.

In the newer tertiary are imbedded the remains of trees and plants of species still living in the countries where these deposits occur. The fossil foxes and turtles of *Æningen* (page 250) lie buried amidst beds of poplars, willows, maples, linden-trees, and elms;\* and the brown coal of the Rhine (page 269) is composed of similar vegetables. In the beds in actual progress, the most delicate vegetable remains are preserved; thus in the lacustrine marls of Scotland, the leaves and seed-vessels of the *chara* are found in a state of fossilization, scarcely distinguishable from the *gyrogonites* of the tertiary strata of the Paris basin.

From this review of the botanical epochs which the present state of geological inquiry enables us to establish, we perceive that, from the most ancient formation in which traces of vegetation remain, the sea has supported the usual orders of marine plants: and that on the land, ferns and other cryptogamia,

\* See an interesting account of the fossil plants of *Æningen*, by Professor Braun, of Carlsruhe; Dr. Buckland's *Essay*, p. 510.