

a coniferous tree, which, to judge by the still extant remains of the wood and the bark at different ages, approaches very nearly to our white and red pines, although forming a distinct species. The amber-tree of the ancient world (*Pinites succifer*) abounded in resin to a degree far surpassing that manifested by any extant coniferous tree; for not only were large masses of amber deposited in and upon the bark, but also in the wood itself, following the course of the medullary rays, which, together with ligneous cells, are still discernible under the microscope, and peripherally between the rings, being some times both yellow and white."

"Among the vegetable forms inclosed in amber are male and female blossoms of our native needle-wood trees and Cupuliferæ, while fragments which are recognized as belonging to thuia, cupressus, ephedera, and castania vesca, blended with those of junipers and firs, indicate a vegetation different from that of the coasts and plains of the Baltic."*

We have now passed through the whole series of formations comprised in the geological portion of the present work, proceeding from the oldest erupted rock and the most ancient sedimentary formations to the alluvial land on which are scattered those large masses of rock, the causes of whose general distribution have been so long and variously discussed, and which are, in my opinion, to be ascribed rather to the penetration and violent outpouring of pent-up waters by the elevation of mountain chains than to the motion of floating blocks of ice.† The most ancient structures of the transition forma-

* [The forests of amber-pines, *Pinites succifer*, were in the southeastern part of what is now the bed of the Baltic, in about 55° N. lat., and 37° E. long. The different colors of amber are derived from local chemical admixture. The amber contains fragments of vegetable matter, and from these it has been ascertained that the amber-pine forests contained four other species of pine (besides the *Pinites succifer*), several cypresses, yews, and junipers, with oaks, poplars, beeches, &c.—altogether forty-eight species of trees and shrubs, constituting a flora of North American character. There are also some ferns, mosses, fungi, and liverworts. See Professor Göppert, *Geol. Trans.*, 1845. Insects, spiders, small crustaceans, leaves, and fragments of vegetable tissue, are imbedded in some of the masses. Upward of 800 species of insects have been observed; most of them belong to species, and even genera, that appear to be distinct from any now known, but others are nearly related to indigenous species, and some are identical with existing forms, that inhabit more southern climes.—*Wonders of Geology*, vol. i., p. 242, &c.]—*Tr.*

† Leopold von Buch, in the *Abhandl. der Akad. der Wissensch. zu Berlin*, 1814–15, s. 161; and in Poggend., *Annalen*, bd. ix., s. 575; Elie de Beaumont, in the *Annales des Sciences Naturelles*, t. xix., p. 69.