

earth more and more highly organised types of animal and vegetable life ; the modern species being, on the whole, more specialised, i.e., having separate organs, or parts of the body, to perform different functions, which, in the earlier periods and in beings of simpler structure, were discharged in common by a single part or organ.

Professor Adolphe Brongniart, in an essay published in 1849, on the botanical classification and geological distribution of the genera of fossil plants,* arrives at similar results as to the progress of the vegetable world from the earliest periods to the present. He does not pretend to trace an exact historical series from the sea-weed to the fern, or from the fern again to the conifers and cycads, and lastly, from those families to the palms and oaks, but he, nevertheless, points out that the cryptogamic forms, especially the acrogens, predominate among the fossils of the primary formations, the carboniferous especially, while the gymnosperms or coniferous and cycadeous plants abound in all the strata, from the Trias to the Wealden inclusive ; and lastly, the more highly developed angiosperms, both monocotyledonous and dicotyledonous, do not become abundant until the tertiary period. It is a remarkable fact, as he justly observes, that the angiospermous exogens, which comprise four-fifths of living plants, — a division to which all our native European trees, except the Coniferæ, belong, and which embrace all the Compositæ, Leguminosæ, Umbelliferæ, Cruciferæ, Heaths, and so many other families, — are wholly unrepresented by any fossils hitherto discovered in the primary and secondary formations from the Silurian to the oolitic inclusive. It is not till we arrive at the cretaceous period that they begin to appear, sparingly at first, and only playing a conspicuous part, together with the palms and other endogens, in the tertiary epoch.

* Tableau des Genres de Végétaux fossiles, &c. Dictionnaire Universel d'Histoire Naturelle. Paris, 1849.