

secondary period, that of the Trias. At that time mighty coniferous trees—with but proportionately few genera and species, but standing together in immense masses of individuals—formed the principal part of the mesolithic forests. This fact justifies us in calling the secondary period the “era of the pine forests,” although the remains of Cycadeæ predominate over those of coniferous trees in the Jura period.*

From the pine forests of the mesolithic, or secondary period, we pass on into the leafy forests of the cænolithic, or tertiary period, and we arrive thus at the consideration of the sixth and last class of the vegetable kingdom, that of the *Metaspermæ*, *Angiospermæ*, or *plants with enclosed seeds*. The first certain and undoubted fossils of plants with enclosed seeds are found in the strata of the chalk system, and indeed we here find, side by side, remains of the two classes into which the main class of Angiosperms is generally divided, namely, the *one seed-lobed plants*, or *monocotylæ*, and the *two seed-lobed plants*, or *dicotylæ*. However, the whole group probably originated at an earlier period during the Trias. For we know of a number of doubtful and not accurately definable fossil remains of plants from the Oolitic and Trias (sic) periods, which some botanists consider to be Monocotylæ, whilst others consider them as Gymnosperms. In regard to the two classes of

* The primary stock of the Coniferæ divided into two branches at an early period, into the Araucariæ on the one hand, and the Taxaceæ, or yew-trees, on the other. The majority of recent Coniferæ are derived from the former. Out of the latter the third class of the Gymnosperms—the Meningos, or Gnetaceæ—were developed. This small but very interesting class contains only three different genera—Gnetum, Welwitschia, and Ephedra; it is, however, of great importance, as it forms the transition group from the Coniferæ to the Angiosperms, and more especially to the Dicotyledons.