

cation of our modern botanists, that of the botanists of an earlier time. In a passage already quoted Solomon is said to have discoursed of plants, "from the cedar tree that is in Lebanon, to the hyssop that springeth out of the wall,"—from the great tree to the minute herb; and Cowley rose, in his metrical treatise, as has been shown, from descriptions of herbs and flowers to descriptions of fruit and forest trees. And as in every age in which there existed a terrestrial vegetation there seem to have been "trees" as certainly as "herbs," the palæontological botanist finds that he has in consequence to range his classes, not in one series, but in two,—the Gymnogens, or cone-bearing trees, in a line nearly parallel with the Acrogens, or flowerless, spore-bearing herbs. But the arrangement is in no degree the less striking from the circumstance that it is ranged, not in one, but in two lines. It is, however, an untoward arrangement for the purposes of the Lamarckian, whose peculiar hypothesis would imperatively demand, not a double, but a single column, in which the ferns and club-mosses would stand far in advance, in point of time, of the Coniferæ. In the Coal Measures, so remarkable for the great luxuriance of their flora, both the Gymnogens and Acrogens are largely developed, with a very puzzling intermediate class, that, while they attained to the size of trees, like the former, retained in a remarkable degree, as in the *Lepidodendra* and the *Calamites*, the peculiar features of the latter. And with these there appear, though more sparingly, the Endogens,—monocotyledonous plants, represented by a few palm-like trees (*Palmacites*), a few date-like fruits (*Trigonocarpum*), and a few grass-like herbs (*Poa-cites*). In the great Secondary division, the true dicotyledonous plants first appear, but, so far as is yet known, no dicotyledonous wood. In the earlier formations of the division a degree of doubt attaches to even the few leaves of this class hitherto detected; but in the Lower Cretaceous strata