

example of a remarkable and numerous family of plants, distinguished by the peculiar distribution of the seed-vessels. The arborescent ferns rise into trees from thirty to forty feet in height, their stems being marked with scars from the decay of the leaf-stalks, and their summits covered with an elegant canopy of foliage; their general appearance is shown in this sketch (Tab. 129, fig. 5). The leaves of the smaller species are very elegant, and present immense variety in their forms, and in the modes of distribution of the veins of the leaf; from the character of the latter, M. Adolphe Brongniart has established the generic distinctions of the fossil plants of this family. The beautiful state in which these remains occur in the coal strata, is shown in the numerous specimens before us (see Tabs. 123, 124.) The fructification on the back of the leaf is sometimes distinctly visible (Tab. 74).

The stems, with their elliptical cicatrices, or scars, bear some resemblance to those of the palms; but are readily distinguished, from their longest diameter being vertical, while in the palms it is transverse: sections of the stems of these two tribes have also distinctive characters.* The large tree-ferns are confined almost exclusively within the tropics; humidity and heat being the conditions most favourable to their development. In the coal, there are not less than 130 known species of ferns, nearly all of which belong to the tribe of polypodiaceæ; the

* *Végétaux Fossiles*, tom. i. pl. 37.