attachment to the stalk, are soon obliterated. In the arborescent ferns, on the contrary, the petioles become detached from their bases, and fall entire, producing scars or cicatrices on the stem; and the impressions are so regularly and symmetrically disposed, as to afford an unerring character by which these trunks may be distinguished from those of other trees. Thus the stems of the tree-ferns may be recognised in a fossil state by their cylindrical forms without ramification, and by the regular disposition and peculiar character of the scars left by the separation of the petioles. The leaves may be identified by the form of their segments, which are disposed with remarkable regularity, and have a peculiar mode of subdivision; and above all, by the delicacy, evenness, and distribution of the veins. There are upwards of two thousand species of living ferns, and in the fossil kingdom the number is considerable; more than one hundred and fifty have been collected from the carboniferous strata. The large tree-ferns are confined almost exclusively to the equinoctial regions; humidity and heat being the conditions most favourable to their development. (*Vég. Foss.* p. 141. *Bd.* p. 461. *Wond.* p. 651.)

The following genera have been established by M. Ad. Brongniart, from the form of the leaves and their venation; that is, the distribution of their vessels or veins. In the descriptions many botanical terms occur, and the student should refer to the introductory works of Professor Henslow or