mation of the Carboniferous strata of the Transition Series.

In strata of the Secondary Series, the absolute and relative numbers of species of Ferns considerably diminishes, forming scarcely one third of the known Flora of these midway periods of geological history. (See Pl. 1. Figs. 37. 38. 39.)

In the Tertiary Strata, Ferns appear to bear to other vegetables nearly the same proportion as in the temperate regions of the present Earth.

or leaf stalks have fallen off. In Palms and other arborescent Monocotyledons, the leaves, or Petioles, embrace the stem and leave broad transverse scars, or rings, whose longer diameter is *horizontal*. In the case of Ferns alone, with the single exception of Angiopteris, the scars are either elliptic or rhomboidal, and have their longer diameter *vertical*.

M. Ad. Brongniart (Hist. des Veg. Foss. p. 261, Pl. 79. 80.) has described and figured the leaf and stem of an arborescent fern (Anomopteris, Mougeottii) from the variegated sand-stone of Heilegenberg in the Vosges. Beautiful leaves of this species, with their capsules of fructification sometimes adhering to the pinnules, abound in the New red sand-stone formation of this district.

M. Cotta has published an interesting Work on fossil Remains of arborescent ferns, which occur abundantly in the New red sand-stone of Saxony near Chemnitz. (*Dendrolithen. Dresden and Leipsig*, 1832.) These consist chiefly of sections of the Trunks of many extinct species, sufficiently allied in structure to that of existing arborescent Ferns, to leave little doubt that they are the remains of extinct species of arborescent Plants of this family, that grew in Europe at this Period of the Secondary formation.