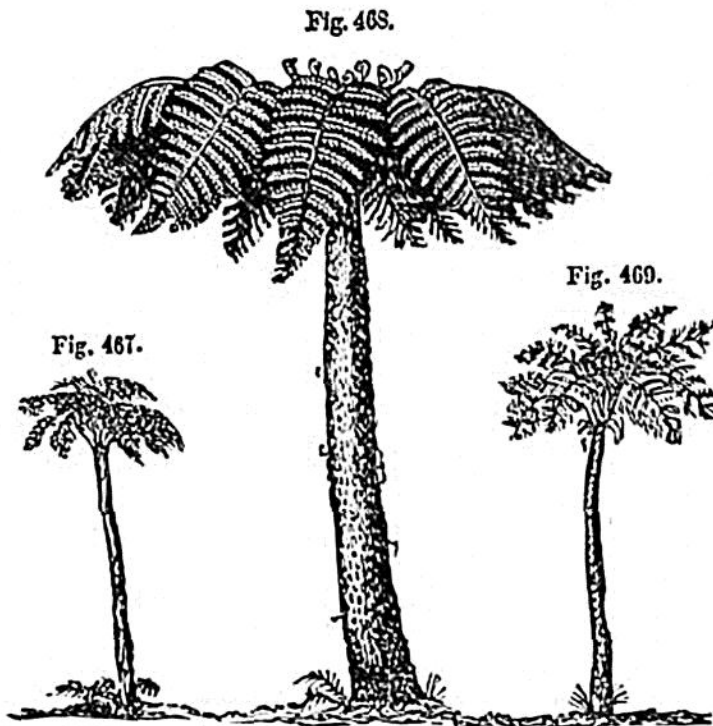


called *Caulopteris*, by Lindley, and the *Psaronius* of the upper or newest coal measures, before alluded to (p. 357).

All the recent tree-ferns belong to one tribe (*Polypodiaceæ*), and to a small number only of genera in that tribe, in which the surface of the trunk is marked with scars, or cicatrices, left after the fall of the fronds. These scars resemble those of *Caulopteris* (see fig. 466). No less than 250 ferns have already been obtained from the coal-strata; and, even if we make some reduction on the ground of varieties which have been mistaken, in the absence of their fructification, for species, still the result is singular, because the whole of Europe affords at present no more than 60 indigenous species.



Living tree-ferns of different genera. (Ad. Brong.)

Fig. 467. Tree-fern from Isle of Bourbon.

Fig. 468. *Cyathea glauca*, Mauritius.

Fig. 469. Tree-fern from Brazil.

*Lepidodendron*.—About 40 species of fossil plants of the Coal have been referred to this genus. They consist of cylindrical stems or trunks, covered with leaf-scars. In their mode of branching, they are always dichotomous (see fig. 471). They are considered by Brongniart and Hooker to belong to the *Lycopodiaceæ*, plants of this family bearing cones, with similar sporangia and spores (fig. 474). Most of them grew to the size of large trees. The figures 470–472 represent a fossil *Lepidodendron*, 49 feet long, found in Jarrow Colliery, near Newcastle, lying in shale parallel to the planes of stratification. Fragments of others, found in the same shale, indicate, by the size of the rhomboidal scars which cover them, a still greater magnitude. The living club-mosses, of which there are about 200 species, are abundant in tropical climates, where one species is sometimes met with attaining a height of 3 feet. They usually creep on the ground, but some stand erect, as the *L. densum*, from New Zealand (fig. 473).