remains of Ferns decrease continually in number, as we ascend from the most ancient to the most recent strata, he founds upon this fact an important conjecture, with respect to the successive diminutions of temperature, and changes of climate, which the earth has undergone. Thus in the great Coal formation there are about 120 known species of Ferns, forming almost one half of the entire known Flora of this formation; these species represent but a small number of the forms which occur among living Ferns, and nearly all belong to the Tribe of Polypodiaceæ, in which Tribe we find the greater number of existing arborescent species.* Fragments of the stems of arborescent Ferns occur occasionally in the same formation. M. Brongniart considers these circumstances as indicating a vegetation, analogous to that of the Islands in the equinoctial regions of the present Earth; and infers that the same conditions of Heat and Humidity which favour the existing vegetation of these islands, prevailed in still greater degree during the for-

* In plate 1, figs. 7, and 37, represent two of the graceful forms of arborescent Ferns which adorn our modern tropics, where they attain the height of forty and fifty feet.

An arborescent Fern forty-five feet high (Alsophila brunoniana), from Silhet in Bengal, may be seen in the staircase of the British Museum. The stems of these Ferns are distinguished from those of all arborescent Monocotyledonous plants, by the peculiar form and disposition of the scars, from which the Petioles