"Their thick stems, marked with linear scars and having two rows of large depressed areoles on the sides, suggest no affinities to any known plants. They are usually ranked with *Lepidodendron* and *Ulodendron*, but sometimes, and probably with greater reason, are regarded as allied to tree-ferns. At the Joggins a very fine species (*M. magnificum*) has been found, and at Sydney a smaller species (*M. humile*); but both are rare and not well preserved. If the large scars bore cones and the smaller bore leaves, then, as Brongniart remarks, the plant would much resemble *Lepidophloios*, in which the cone-scars are thus sometimes distichous. But the scars are not round and marked with radiating scales as in *Lepidophloios;* they are reniform or oval, and resemble those of tree-ferns, for which reason they may be regarded as more probably leaf-scars; and in that case the smaller linear scars would indicate ramenta, or small aërial roots. Further, the plant described by Corda as *Zippea disticha* is evidently a *Megaphyton*, and the structure of that species is plainly that of a tree-fern of somewhat peculiar type. On these grounds I incline to the opinion of Geinitz that these curious trees were allied to ferns, and bore two rows of large fronds, the trunks being covered with coarse hairs or small aërial roots. At one time I was disposed to suspect that they may have crept along the ground; but a specimen from Sydney shows the leaf-stalks proceeding from the stem at an angle so acute that the stem must, I think, have been erect. From the appearance of the scars it is probable that only a pair of fronds were borne at one time at the top of the stem; and, if these were broad and spreading, it would be a very graceful plant. To what extent plants of this type contributed to the accumulation of coal I have no means of ascertaining, their tissues in the state of coal not being distinguishable from those of ferns and *Lycopodiaceæ*."

16. For descriptions of the genus *Archæopteris* and other Erian ferns, see Chapter III.