

distinctive characters are leaflets narrowed at the base, often lobed, and with nervures dividing in a pinnate manner from the base.

7. *Phyllopteris*, Brongniart.—These are pinnate, with long lanceolate pinnules, having a strong and well-defined midrib, and nerves proceeding from it very obliquely, and dividing as they proceed toward the margin. The ferns of this genus are for the most part found in formations more recent than the Carboniferous; but I have referred to it, with some doubt, one of our species.

8. *Alethopteris*, Brongniart.—This genus includes many of the most common coal-formation ferns, especially the ubiquitous *A. lonchitica*, which seems to have been the common brake of the coal-formation, corresponding to *Pteris aquilina* in modern Europe and America. These are brake-like ferns, pinnate, with leaflets often long and narrow, decurrent on the petiole, adherent by their whole base, and united at base to each other. The midrib is continuous to the point, and the nervures run off from it nearly at right angles. In some of these ferns the fructification is known to have been marginal, as in *Pteris*.

9. *Pecopteris*, Brongniart.—This genus is intermediate between the last and *Neuropteris*. The leaflets are attached by the whole base, but not usually attached to each other; the midrib, though slender, attains to the summit; the nervures are given off less obliquely than in *Neuropteris*. This genus includes a large number of our most common fossil ferns.

10. *Beinertia*, Goeppert.—A genus established by Goeppert for a curious Pecopteris-like fern, with flexuous branching oblique nervures becoming parallel to the edge of the frond.

11. *Hymenophyllites*, Goeppert.—These are ferns similar to *Sphenopteris*, but divided at the margin into *one-nerved* lobes, in the manner of the modern genus *Hymenophyllum*.

12. *Palaeopteris*, Geinitz.—This is a genus formed to include certain trunks of tree-ferns with oval transverse scars of leaves.

13. *Caulopteris*, Lindley and Hutton.—Is another genus of fossil trunks of tree-ferns, but with elongate scars of leaves.

14. *Psaronius*, Cotta.—Includes other trunks of tree-ferns with alternate scars or thick scales, and ordinarily with many aerial roots grouped round them, as in some modern tree-ferns.

15. *Megaphyton*, Artis.—Includes trunks of tree-ferns which bore their fronds, which were of great size, in two rows, one on each side of the stem. These were very peculiar trees, less like modern ferns than any of the others. My reasons for regarding them as ferns are stated in the following extract from a recent paper: