

18 inches in length, and $3\frac{1}{2}$ inches in average breadth. The exposed side shows about twenty-two large leaf-scars arranged spirally. Each leaf, where broken off, has left a rough fracture; and above this is a semicircular impression of the petiole against the stem, which, as well as the surface of the bases of the petioles, is longitudinally striated or tuberculated. The structures are not preserved, but merely the outer epidermis, as a coaly film. The stem altogether much resembles *Caulopteris Peachii*, but is of larger size. It differs from *C. Lockwoodi* in the more elongated leaf-bases, and in the leaves being more remotely placed; but it is evidently of the same general character with that species.

3. CAULOPTERIS (PROTOPTERIS) PEREGRINA, Newberry.

(Plate XII. fig. 5 and 6.)

This is a much more interesting species than the last, as belonging to a generic or subgeneric form not hitherto recognized below the Carboniferous, and having its minute structure in part preserved.

The specimens are, like the last, on slabs of marine limestone of the Corniferous formation, and flattened. One represents an upper portion of the stem with leaf-scars and remains of petioles; another a lower portion, with aerial roots. The upper part is 3 inches in diameter, and about a foot in length, and shows thirty leaf-scars, which are about $\frac{3}{4}$ of an inch wide, and rather less in depth (fig. 5, a). The upper part presents a distinct rounded and sometimes double marginal line, sometimes with a slight depression in the middle. The lower part is irregular, and when most perfect shows seven slender vascular bundles, passing obliquely downward into the stem. The more perfect leaf-bases have the structure preserved, and show a delicate, thin-walled, oval parenchyma, while the vascular bundles show scalariform vessels with short bars in several rows, in the manner of many modern ferns. Some of the scars show traces of the hippocrepian mark characteristic of *Protopteris*; and the arrangement of the vascular bundles at the base of the scars is the same as in that genus, as are also the general form and arrangement of the scars. On careful examination, the species is indeed very near to the typical *P. Sternbergii*, as figured by Corda and Schimper*.

The genus *Protopteris* of Sternberg, though the original species (*P. punctata*) appears as a *Lepidodendron* in his earlier plate (pl. 4), and as a *Sigillaria* (*S. punctata*) in Brongniart's great work, is a true tree fern; and the structure of one species (*P. Cottai*) has been beautifully figured by Corda. The species hitherto described are from the Carboniferous and Permian.

The second specimen of this species represents a lower part of the stem (fig. 6). It is 13 inches long and about 4 inches in diameter, and is covered with a mass of flattened aerial roots lying parallel to each other, in the manner of the Psaronites of the Coal-formation and of *P. erianus* of the Upper Erian or Devonian.

* Corda, Beiträge, pl. 48, copied by Schimper, pl. 52.