

Shumard's *Filicites gracilis*, from the Devonian of Ohio, and Stur's *Pinites antecedens*, from the Lower Carboniferous of Silesia, may possibly belong to the same genus. The Scottish specimen referred to is apparently the first appearance of this form in the Devonian of Europe.

I have at a still later date had opportunities of studying considerable series of these plants collected by Prof. Williams, of Cornell University, and prepared a note in reference to them for the American Association, of which, however, only an abstract has been published. I have also been favoured by Prof. Lesquereux and Mr. Lacoë, of Pittston, with the opportunity of studying the specimens referred to *Trochophyllum*.

Prof. Williams's specimens occur in a dark shale associated with remains of land-plants of the genera *Psilophyton*, *Rhódea*, &c., and also marine shells, of which a small species of *Rhynchonella* is often attached to the stems of the *Ptilophyton*. Thus these organisms have evidently been deposited in marine beds, but in association with land-plants.

The study of the specimens collected by Prof. Williams develops the following facts: (1) The plants are not continuous fronds, but slender stems or petioles, with narrow, linear leaflets attached in a pinnate manner. (2) The pinnules are so articulated that they break off, leaving delicate transverse scars, and the lower parts of the stems are often thus denuded of pinnæ for the length of one or more inches. (3) The stems curve in such a manner as to indicate a circinate vernation. (4) In a few instances the fronds were observed to divide dichotomously toward the top; but this is rare. (5) There are no indications of cells in the pinnules; but, on the other hand, there is no appearance of fructification unless the minute granules which roughen some of the stems are of this nature. (6) The stems seem to have been lax and flexuous, and in some instances they seem to have grown on the petioles of ferns preserved with them in the same beds. (7) The frequency of the attachment of small brachiopods to the specimens of *Ptilophyton* would seem to indicate that the plant stood erect in the water. (8) Some of the specimens show so much carbonaceous matter as to indicate that the pinnules were of considerable consistency. All these characters are those rather of an aquatic plant than of an animal organism or of a land-plant.

The specimens communicated by Prof. Lesquereux and Mr. Lacoë are from the Lower Carboniferous, and evidently represent a different species with similar slender pitted stems, often partially denuded of pinnules below; but the pinnules are much broader and