

peculiar pinnate *Lycopodites* of which *L. Vanuxemii* of the American Devonian and *L. pennæformis* of the European Lower Carboniferous are the types, and it shows, what might have been anticipated from other specimens, that they were low, tufted plants, circinate in veneration. The short stem of this plant is simply furrowed, and bears no resemblance to a detached branch of *Lycopodites Milleri* which lies at right angles to it on the same slab. As to the affinities of the singular type of plants to which this specimen belongs, I may quote from my "Report on the Lower Carboniferous Plants of Canada," in which I have described an allied species, *L. plumula* :

"The botanical relations of these plants must remain subject to doubt, until either their internal structure or their fructification can be discovered. In the mean time I follow Goeppert in placing them in what we must regard as the provisional genus *Lycopodites*. On the one hand, they are not unlike the slender twigs of *Taxodium* and similar Conifers, and the highly carbonaceous character of the stems gives some colour to the supposition that they may have been woody plants. On the other hand, they might, so far as form is concerned, be placed with Algæ of the type of Brongniart's *Chondrites obtusus*, or the modern *Caulerpa plumaria*. Again, in a plant of this type from the Devonian of Caithness to which I have referred in a former memoir, the veneration seems to have been circinate, and Schimper has conjectured that these plants may be ferns, which seems also to have been the view of Shumard."

On the whole, these plants are allied to Lycopods rather than to ferns; and as they constitute a small but distinct group, known only, so far as I am aware, in the Lower Carboniferous and Erian or Devonian, they deserve a generic name, and I proposed for them in my "Paper on Scottish Devonian Plants," 1878, that of *Ptilophyton*, a name sufficiently distinct in sound from *Psilophyton*, and expressing very well their peculiar feather-like habit of growth. The genus was defined as follows :

"Branching plants, the branches bearing long, slender leaves in two or more ranks, giving them a feathered appearance; veneration circinate. Fruit unknown, but analogy would indicate that it was borne on the bases of the leaves or on modified branches with shorter leaves."

The Scottish specimen above referred to was named *Pt. Thomsoni*, and was characterised by its densely tufted form and thick branches. The other species known are: *Pt. pennæformis*, Goeppert, L. Carboniferous; *Pt. Vanuxemii*, Dawson, Devonian; *Pt. plumula*, Dawson, L. Carboniferous.