attached to them, while *Rhodea* is merely a provisional genus formed to include certain ferns of the Hymonophyllid group, but otherwise of uncertain affinities. In the same note M. Crepin intimates that Mr. Carruthers has abandoned his *Psilophyton Dechenianum*, published in the Journal of Botany for 1843, and in which he had included Salter's *Lepidodendron nothum* and *Lycopodites Milleri* and "rootlets," as well as Goeppert's *Haliserites Dechenianus* and a peculiar plant given to him by Sir P. Egerton! * Such a change of opinion I must admit to be judicious. The fact that these plants could, even conjecturally, be identified by a skilful botanist, shows however how imperfectly they are known, and warrants some investigation of the causes of this obscurity, and of the true nature of the plants.

The characters given by Mr. Carruthers in his paper of 1873 for the species *P. Dechenianum*, are very few and general:— "Lower branches short and frequently branching, giving the plant an oblong circumscription." Yet even these characters do not apply, so far as known, to Miller's fucoids or Salter's rootlets or Goeppert's *Haliserites*. They merely express the peculiar mode of branching already referred to in Salter's *Lepidodendron nothum*. The identification of the former plants with the *Lepidodendron* and *Lycopodites* indeed rests only on mere juxtaposition of fragments, and on the slight resemblance of the decorticated ends of the branches of the latter plants to *Psilophyton*. It is contradicted by the obtuse ends of the branches of the *Lepidodendron* and *Lycopodites*, and by the apparently strobilaceous termination of some of them.

Salter's description of his *Lepidodendron* is quite definite, and accords with specimens placed in my hands by Mr. Peach:— "Stems half an inch broad, tapering little, branches short; set on at an acute angle, blunt at their terminations. Leaves in seven to ten rows, very short, not a line long and rather spreading than closely imbricate." These characters however, in so

* Mr. Carruthers has elsewhere identified *Lepidodendron nothum* and *L. Gaspianum* with *Leptophleum rhombicum*, and this with an Australian species collected by Mr. Daintree in Queensland, but which I subsequently found to be a species allied to the well known *Lepidodendron tetragonum* of the Lower Carboniferous, and which had been previously discovered by Mr. Selwyn in the Carboniferous of Victoria. See Carruthers' paper in the Journal of the Geological Society, vol. 28, and my criticism in vol. 29, which last was however only printed in abstract, and with some comments under the head of "Discussion," to which if present I could have very easily replied.