

scribed, under the name of *Eophyton*, certain impressions on old Cambrian rocks in Sweden, and which certainly present very plant-like forms. They want, however, any trace of carbonaceous matter, and seem rather to be grooves or marks cut in clay by the limbs or tails of some aquatic animal, and afterwards filled up and preserved by succeeding deposits. After examining large series of these specimens from Sweden, and from rocks of similar age in Canada, I confess that I have no faith in their vegetable nature.

The oldest plants known to me, and likely to have been of higher grade than Algæ, are specimens kindly presented to me by Dr. Alleyne Nicholson, of Aberdeen, and which he had named *Buthotrephis Harknessii*\* and *B. radiata*. They are from the Skiddaw rocks of Cumberland. On examining these specimens, and others subsequently collected in the same locality by Dr. G. M. Dawson, while convinced by their form and carbonaceous character that they are really plants, I am inclined to refer them not to Algæ, but probably to Rhizocarps. They consist of slender branching stems, with whorls of elongate and pointed leaves, resembling the genus *Annularia* of the coal formation. I am inclined to believe that both of Nicholson's species are parts of one plant, and for this I have proposed the generic name *Protannularia* (Fig. 1). Somewhat higher in the Siluro-Cambrian, in the Cincinnati group of America, Lesquereux has found some minute radiated leaves, referred by him to the genus *Sphenophyllum*,† which is also allied to Rhizocarps. Still more remarkable is the discovery in the same beds of a stem with rhombic areoles or leaf-bases, to which the name *Protostigma* has been given.‡ If a plant, this may

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\* "Geological Magazine," 1869.

† See figure in next chapter.

‡ *Protostigma sigillarioides*, Lesquereux.