

many palæo-botanists have referred to the *Marsiliacæ*, though, like other Palæozoic Acrogens, it presents complexities not seen in its modern representatives. *S. primævum* of Lesquereux is found in the Hudson River group, and my *S. antiquum* in the Middle Erian. Besides these, there are in the Silurian and Erian beds plants with verticillate leaves which have been placed with the *Annulariæ*, but which may have differed from them in fructification. *Annularia laxa*, of the Erian, and *Protannularia Harknessii*, of the Siluro-Cambrian, may be given as examples, and must have been aquatic plants, probably allied to Rhizocarps. It is deserving of notice, also, that the two best-known species of *Psilophyton* (*P. princeps* and *P. robustius*), while allied to Lycopods by the structure of the stem and such rudimentary foliage as they possess, are also allied, by the form of their fructification, to the Rhizocarps, and not to ferns, as some palæo-botanists have incorrectly supposed. A similar remark applies to *Arthrosthigma*; and the beautiful pinnately leaved *Ptilophyton* may be taken to represent that type of foliage as seen in modern Rhizocarps, while the allied forms of the Carboniferous which Lesquereux has named *Trochophyllum*, seem to have had sporocarps attached to the stem in the manner of *Azolla*.

The whole of this evidence, I think, goes to show that in the Erian period there were vast quantities of aquatic plants, allied to the modern Rhizocarps, and that the so-called *Sporangites* referred to in this paper were probably the drifted sporocarps and macrospores of some of these plants, or of plants allied to them in structure and habit, of which the vegetative organs have perished. I have shown that in the Erian period there were vast swampy flats covered with *Psilophyton*, and in similar submerged tracts near to the sea the *Protosalvinia* may have filled the waters and have given off the vast multitudes of macrospores which, drifted by currents, have settled in the