

species which I have had an opportunity to examine, *Salvinia natans* of Europe perhaps presents the closest resemblance. In this plant groups of round cellular sporocarps appear at the bases of the floating fronds. They are about a line in diameter when mature, and are of two kinds, one containing macrospores, the other microspores or antheridia. The first, when mature, hold a number of closely packed globular or oval sporangia of loose cellular tissue, attached to a central placenta. Each of these sporangia contains a single macrospore, perfectly globular and smooth, with a dense outer membrane (exhibiting traces of lamination, and showing within an irregularly vacuolated or cellular structure, probably a prothallus). I cannot detect in it the peculiar pores which appear in the fossil specimens. Each macrospore is about one-seventieth of an inch in diameter when mature. The sporocarps of the microspores contain a vastly greater number of minute sporangia, about one two-hundredths of an inch in diameter. These contain disc-like antheridia, or microspores of very minute size.

The discs from Kettle Point and from the Ohio black shale, and from the shale boulders of the Chicago clays, are similar to the macrospores of *Salvinia*, except that they have a thicker wall and are a little less in diameter, being about one-eightieth of an inch. The Brazilian sporocarps are considerably larger than those of the modern *Salvinia*, and the macrospores approach in size to those of the modern species, being one seventy-fifth of an inch in diameter. They also seem, like the modern species, to have thinner walls than those from Canada, Ohio, and Chicago. No distinct indication has been observed in the fossil species of the inner Sporangium of *Salvinia*. Possibly it was altogether absent, but more probably it is not preserved as a distinct structure.

With reference to the microspores of *Salvinia*, it is to be observed that the sporocarps, and the contained spores