

usually black mud, which indeed is almost universally devoid of life of any kind.

Rhizopods also occur in the flocculent materials and slimy matter adherent to most submerged objects, such as rocks, the dead boughs of trees, and the stems and leaves of aquatic plants. A frequent position is the under side of floating leaves, such as those of the Pond-lily, *Nymphaea odorata*; the Spatter-dock, *Nuphar advena*; and the Nelumbo, *Nelumbium luteum*. Certain kinds of Rhizopods, especially the Heliozoa, or Sun-animalcules, are most frequent among floating plants, such as Duck-meal, *Lemna*; Hornwort, *Ceratophyllum*; Bladderwort, *Utricularia*; and the various Confervas, as *Zygnema*, *Spirogyra*, *Oscillatoria*, and the Water-purse, *Hydrodictyon*.

In no other position have I found Rhizopods of the kind under consideration in such profusion, number, and beauty of form as in sphagnum bogs, living in the moist or wet Bog-moss, or *Sphagnum*. Sometimes I have found this particular moss actually to swarm with multitudes of these creatures of the most extraordinary kinds and in the most highly developed condition. A drop of water squeezed from a little pinch of Bog-moss has often yielded scores of half a dozen genera and a greater number of species. Frequently, however, the *Sphagnum* of many localities contains comparatively few Rhizopods, though I have rarely found them entirely absent from this moss. Other mosses and liverworts I have not observed to be specially favorite habitations of the Rhizopods, not even such aquatic kinds as the *Fontinalis*.

Notwithstanding the experience of four years' exploration and observation, I have not been able to determine the exact conditions under which particular Rhizopods are to be obtained with certainty and in any considerable numbers. In general, they are to be found in greatest number and variety under the peculiar conditions favorable to them, in old established ponds, bogs, etc., which are not liable to become completely drier up in the summer season. At times, however, I have found a profusion of one or two forms in some localities, in which, in another season, I could find but few or none. Sometimes I have found many individuals of a particular kind in a shallow pond of recent origin, which, after drying up in the summer and being renewed the following spring, yielded no more of the same. Sometimes the most unpromising places have produced an unex-