

Class. RHIZOPODA.

Order I. PROTOPLASTA; II. HELIOZOA; III. RADIOLARIA;
IV. FORAMINIFERA; V. MONERA.

The distinguished French naturalist Dujardin, who first recognized the nature of the Rhizopoda, and applied to them this name, included in the class the Foraminifera and the group of Protoplasta, excepting only the genus *Amœba*, although he fully understood the relationship of this with the former. The Heliozoa he viewed as another division of the Protozoa, and in his day the Radiolaria were not sufficiently known to hold a recognized position in zoological systems.

Prof. Haeckel, one of the latest and highest authorities on all that concerns the lowest forms of life, includes in the class the Foraminifera, the Heliozoa, and the Radiolaria. The Protoplasta and the Monera, which names originated with him, he regards as two distinct and additional classes in his proposed kingdom of Protista (*protiston*, primordial).

Prof. Carpenter includes all the ordinal groups above indicated as Rhizopoda, but associates the Heliozoa in the order of Radiolaria.

Dr. Wallich* divides the class into three orders: the Herpynemata, the Protodermata, and the Proteina. In the first are included the Gromida, Foraminifera, and Polycystina; in the second, the Thalassicollidæ and Acanthometrina; and in the third, or highest order, the Actinophryna, Lagynidæ, and Amœbina.

Prof. Huxley drops the name of Rhizopoda altogether, and distributes the groups into two divisions of the Protozoa: the Monera and the Endoplastica. To the former he refers the Monera of Haeckel and the Foraminifera; to the latter he refers the Radiolaria, including the Heliozoa, the Protoplasta, the Gregarinidæ, the Catallacta, and the Infusoria. The essential character of the Monera, according to Haeckel, the founder of the order, is the absence of a nucleus, but this has recently been shown by Hertwig and Schulze to exist in the Foraminifera. Carter, Greeff, and others, speak of the Heliozoa as fresh-water Radiolaria. Hertwig and Lesser, who gave the name of Heliozoa to the ordinal group, regard them as of a distinct class from the Radiolaria, and, excluding these, they associate the former together

* Annals and Magazine of Natural History, 1863, xi, p. 438.