

Family XXI. PORODISCIDA, Haeckel (Pls. 41-47).

Porodiscida, Haeckel, 1881, Prodrömus, p. 459.

Trematodiscula et *Discospirida*, Haeckel, 1862, Monogr. d. Radiol., pp. 485, 491, 513.

Calodictya, Ehrenberg, 1847, Monatsber. d. k. preuss. Akad. d. Wiss. Berlin, p. 53 (*partim*).

Definition.—Discoidea without phacoid shell, with flat discoidal shell, in which a simple spherical central chamber is surrounded by concentric chambered rings (each ring divided by radial beams into imperfect chambers). Surface of the disk on the two flat sides covered by a porous sieve-plate.

The family Porodiscida is by far the largest and richest in different and common forms among all Discoidea; already in my Monograph (1862) nine genera and twenty-eight species have been enumerated. Their number is here increased to more than thirty genera and two hundred species. Many of these species appertain to the most common and widely distributed SPUMELLARIA, both living and fossil. But the study of their structure is not easy, and requires (as in the foregoing Coccodiscida) not only careful examination of the facial views of the disk, but also of the marginal view and of slides and sections through different planes.

In my Monograph (1862, pp. 485, 491, 513) I had constituted for these Discoidea two different families, the Trematodiscida and Discospirida; but the comparative study of a far greater number of different types in the Challenger collection has since convinced me that those two families are but little different, and united by transitional forms within one and the same genus, so that they must be united as Porodiscida. Of the group, which Ehrenberg formerly had called "Calodictya," many genera appertain to the Porodiscida, whilst many others are true Spongodiscida.

The Porodiscida represent the first and the most important family of the Cyclodiscaria, or of those Discoidea which are devoid of the peculiar extracapsular lenticular "phacoid shell," characteristic of the three preceding families (united therefore as Phacodiscaria). Probably all Cyclodiscaria can be derived from *Archidiscus*, from a morphological as well as a phylogenetic point of view. *Archidiscus* seems to be the common ancestral form not only of the Porodiscida, but also of the nearly allied Pylodiscida and Spongodiscida. This important *Archidiscus* (Pl. 48, figs. 9-11) is a small lenticular circular disk, in which a simple latticed spherical central chamber is surrounded by one single concentric ring, connected with it by a variable number of radial beams in the equatorial plane. From this typical *Archidiscus*, as from their "architype," all other Cyclodiscaria may be derived; the Porodiscida by regular apposition of new concentric chambered rings on the margin, the Spongodiscida by irregular apposition of a spongy framework, the Pylodiscida by a peculiar interrupted, concentric, triradial growth, three radial arm-chambers alternating with three open gates or holes, so that already the first chambered ring is not complete.