

Family XLIX. SEMANTIDA, n. fam.

Definition.—Stephoidea with a single vertical ring (the primary sagittal ring), bearing on its base a horizontal ring (basal or cortinar ring) with two to four or more basal gates (or cortinar pores).

The family Semantida differs from the preceding Stephanida in the development of a small horizontal ring on the base of the primary vertical sagittal ring. By the crossing of these two rings a small latticed basal plate is formed, with one or two pairs of pores; rarely with a greater number of "basal pores." The production of this characteristic "basal plate" is of the greatest morphological importance, as the beginning of the numerous different lattice-formations, which are differentiated in the great majority of NASSELLARIA.

In my Prodrömus (1881, p. 446) I had enumerated the Semantida with three genera (Nos. 298 to 300) as a separate subfamily of the Dyostephida or "Stephoidea biannularia," and characterised these "Dyostephana" by the following definition: "Skeleto annulis duobus composito, qui in duobus planis invicem perpendicularibus jacent; altero annulo (sagittali) verticali, altero (basali) horizontali." As the names there given were already employed with another signification, and as the ZygoStephanida (there united with the Dyostephana) are more closely related to the Coronida, I now change the names, and propose to call the family Semantida, expressing by this term the typical similarity of the skeleton to a signet-ring (*Semantis*, *Semantrum*, *Semantidium*).

At about the same time, some Stephoidea of this family were accurately described by Bütschli (1882, Zeitschr. f. wiss. Zool., vol. xxxvi. p. 495, Taf. xxxii. figs. 6, 7, 8). He called them *Stephanolithis*, a name which Ehrenberg had employed, not for complete shells of Radiolaria, but for isolated parts of such, and for siliceous fragments of different skeletons, needles of Sponges, &c. The three species described by Bütschli represent three different genera of our Semantida, viz., *Semantis spinescens* (with two gates in the basal plate), *Semantrum mülleri* (with four gates), and *Semantidium haeckelii* (with six gates). He pointed out the great morphological value of the fenestrated basal plate and its paired gates, as beginnings of numerous other NASSELLARIA. But his opinion, that in all Sphyroidea and Cytroidea, derived from these, two pairs of basal gates were constant, was erroneous, nor was the formation of the first pair naturally explained; he supposed that the formation of the basal plate begins by development of an odd sagittal apophysis, arising from the base of the primary sagittal ring. But this odd sagittal apophysis ("der unpaare mediane Kieselfortsatz c1", loc. cit., p. 497) is in reality not a primary