

Order 6. *Enallostègues*.—Shell composed of chambers arranged alternately on two or three distinct axes, but not on a spiral plan.

Order 7. *Agathistègues*.—Shell composed of chambers wound round a common axis, each forming half the circumference; texture smooth and imperforate.

Whilst there are certain advantages to be derived from a purely artificial arrangement—as, for example, the Linnean classification of plants—it is seldom that such a method can be adopted without violence in one way or other to manifest natural affinities, and the lowest divisions of the animal and vegetable kingdoms are perhaps least of all suited for its introduction. The chief difficulties that beset the student of systematic zoology, when engaged upon these low types of animal life, arise from the wide range of morphological variation he is obliged to admit within the limits assigned to species; and although there is a great difference in different genera as to the degree of persistence in the distinctive characters of their subordinate forms, it may be fairly doubted whether “species,” in the sense in which the word is rightly applied to beings of more complex organisation, can be said to exist amongst the lower Protozoa. It is only as we learn to recognise the fact that amongst the Rhizopoda the so-called “species” represent no more than terms of a series of which very frequently every intermediate link can be supplied, that we arrive at any just idea of their relationship. This being so, it is easy to see where the artificial method must inevitably break down; and though the d’Orbignian plan presents a fair attempt to deal with a great mass of facts, collected by its author with infinite labour, it has now ceased to be of service, and has fallen into desuetude. Its defects are too obvious to need comment. Being practically founded on a single set of characters—the arrangement of the segments—it has none of that elasticity which gives to a system of classification the element of permanence, and which can only exist in proportion to the degree in which the grouping is based upon natural affinity as indicated by the structural features collectively.

In the year 1854, Professor Max Schultze published his classical memoir, *Ueber den Organismus der Polythalamien (Foraminiferen)*, and with it an exposition of his views on the classification of the group. His conclusions, summarised in a convenient table near the end of the volume, are briefly as follows. The Rhizopoda are divided primarily into two sections, *NUDA* and *TESTACEA*; the former with the genus *Amæba* for its type, including all naked forms, the latter embracing all the species having an external shell or other investment. The *TESTACEA* are divided into two Sub-orders—*Monothalamia* and *Polythalamia*—the one subdivided into three Families, the other into seven; and the principal genera, perhaps all that were then known, are distributed amongst them. Schultze’s scheme is characterised by a somewhat wider grasp of the subject than its predecessor; but with our present knowledge there is little to be said in favour of an arrangement that places *Orbulina* and *Lagena* in one of its two primary divisions, and *Globigerina* and *Nodosaria* in the other; or wherein *Nodosaria* and *Cristellaria* are