

general or extended criticism. The Sub-order TESTACEA, which comprises all testaceous Rhizopods, whatever the nature of their investment, is divided into two Tribes—*Imperforata* and *Perforata*. The former of these terms is employed in a much wider sense than in any previous classification, and is made to include (1) all Rhizopods with chitinous tests, whether the pseudopodia are lobose or reticulated; (2) the *Porcellanea*; and (3) a portion of the *Arenacea*. To the *Lituolidæ* no distinct position is assigned, but part of them are placed with the hyaline forms they most nearly resemble in shape (usually inserted as “allied genera”), and the rest are similarly annexed to porcellanous Families such as *Peneroplidina*. Turning to the *Perforata*, there is little to notice in the arrangement of the earlier groups, which is more or less in accordance with Dr. Carpenter’s plan; but the Family *Nummulitinæ* is made more than usually comprehensive, and the genera are associated in the following manner:—(a.) *Involutina*, *Archædiscus*, and *Spirillina*—(b.) *Pullenia*, *Sphæroidina*, ? *Rupertia*, *Endothyra*, *Cribrospira*, *Bradyina*, and *Amphistegina*—(c.) *Nonionina*, *Polystomella*, *Cyclammia*, *Operculina*, and *Nummulites*—(d.) *Fusulina*, *Schwagerina*, and *Hemifusulina*—(e.) *Heterostegina*, *Cycloclypeus*, and *Orbitoides*. There are elements of interest in such a grouping; though, in common with the rest of the scheme, it is based more on the general form of the test than on its minute structure, the existence of intermediate varieties, or other indications of genetic relationship.

The foregoing historical sketch has not been drawn up in order to discredit or in any way to depreciate the labours of which it is a brief and imperfect record, but because at every stage something is evolved that the systematist must take into account. Observers approaching the subject from various points have formed different estimates of the relative importance of the characters available for purposes of classification; and the modifications proposed in each successive scheme have been dictated by acknowledged defects in those previously existing.

The study of the Foraminifera as assemblages of forms grouped round a comparatively small number of central or typical species, as advocated by Carpenter and his colleagues, is, I am convinced, the only means of arriving at a correct understanding of the biological relations of the group; but this mode of treatment, whilst determining the general lines of classification, furnishes no direct basis for the construction of a synopsis suited to the requirements of the systematic zoologist. The scheme which I now venture to propose differs in many respects somewhat widely from that foreshadowed by the authors referred to, but in its essential elements there is little or nothing that is incompatible with the conclusions they have so ably expounded; and I have the satisfaction of knowing that it has their general approval. Every attempt to arrange in single series a class of organisms of which the constituent groups are apt to run in parallel lines, or even sometimes to form, morphologically speaking, independent circlets, is of necessity open to objection at