

one point or other; and the aim of the systematist is well attained if the anomalies and inconsistencies are slight, and are confined to matters of small zoological importance.

The subjoined synopsis needs but little explanation. It is not entirely new, for a brief outline indicating its general features was given in one of the preliminary notices of some of the Challenger Foraminifera¹; but its scope has been enlarged, and many amendments have been introduced in matters of detail.

The nature of the investment of the animal, that is to say the minute structure of the test, has been abandoned as an exclusive basis for the primary division of the Order. Under all circumstances it furnishes important characters, and in some Families is really distinctive; but it is nevertheless a fact that whilst there are certain groups which are invariably arenaceous, and some which are always calcareous and perforate, there are yet others in which no uniform rule obtains. In the absence of any simple and easily recognised characters to serve the same end, the entire Order has been divided directly into Families, without the interposition of Sub-orders.

The *Gromidæ*, a Family composed chiefly of fresh-water organisms, have been a source of considerable trouble, on account of the want of accuracy and detail in the published descriptions of a number of types, more or less closely allied to the group; and only such genera have been included as are known to have long reticulated pseudopodia. In this portion of the subject I have had the advantage of the advice of my friend Mr. W. Archer, F.R.S., of Dublin.

The Sub-family *Dactyloporinæ*, which in the original draft was placed, with some reservation, amongst the *Miliolidæ*, pending the fuller publication of the results of M. Munier-Chalmas' researches, is now entirely omitted. The examination of specimens brought under my notice by Dr. E. Perceval Wright of Dublin and M. Schlumberger of Paris has removed any doubt left on my mind as to the propriety of the transfer of the entire group to the Calcareous Algæ (*Siphonées verticillées* and *Siphonées dichotomes*).

The singular genus *Bathysiphon* of M. Sars, which was also placed provisionally amongst the *Miliolidæ*, has been removed to the *Astrorhizidæ*, inasmuch as further investigation of the structure of the test has revealed its close affinity to Carpenter's genus *Pilulina*. The position and treatment of *Parkeria* and its allies have likewise been somewhat modified, and many other minor alterations have been made, which it is hardly needful to enumerate.

The table has been devised so as to be of service as far as possible in the identification of specimens, and the salient characters of genera are very briefly stated; but from what has been already said, it will be easily understood that in certain cases the terms employed are *descriptive* rather than in any strict sense *distinctive*. No verbal description, nothing indeed but experience and the familiarity derived from a patient study of the variations

¹ *Quart. Journ. Micr. Sci.*, 1881, vol. xxi., new series, p. 43.