

*Protozoa*.—The fossil remains of Protozoa are naturally confined to those classes or orders which are shell-producing during life. The most widely distributed fossil representatives of the Protozoa are the Foraminifera or Polythalamia (Reticularia, Carpenter), which enter largely into the composition of many marine limestones, and whose occurrence has been known for several centuries to natural historians. The earlier memoirs of Breyn (1732), Soldani (1780), Fichtel and Møll (1803), Lamarck (1804-7), Denys de Montfort (1808-10), wherein a considerable number of these small forms are described and figured, were followed by the more comprehensive investigations of Alcide d'Orbigny (1824). These for the first time made the attempt to introduce a systematic order and classification into this group of testaceous organisms, which were still almost universally regarded as mollusca, belonging to the group of cephalopods.

D'Orbigny distinguished two main groups among the Polythalamia, one of which (Siphonifera) contains the chambered shells of the true cephalopods, while the other (Foraminifera) embraces the shells characterised by the perforations in the dividing walls of the chambers. The Foraminifera are then sub-divided by D'Orbigny chiefly according to the external features of the shell, and the number and arrangement of the chambers.

A number of the species enumerated in the *Tableau Méthodique* have been made known far and wide by enlarged models, which were distributed to various academies in 1825 and 1826. D'Orbigny also contributed a monograph on the fossil Foraminifera in the Tertiary deposits of the Vienna basin.

The advance effected by Ehrenberg's microscopic examination of thin slices of Foraminifera has already been mentioned (p. 326). But although so accurate an observer, Ehrenberg formed fallacious views respecting the organisation of the group, and thought the Foraminifera might belong to the Bryozoa. Dujardin in 1835 contested many of Ehrenberg's conclusions, and demonstrated that the Foraminifera belonged to the Rhizopoda. Williamson, Reuss, and especially W. B. Carpenter, objected to the previous schemes of classification which had been formulated merely upon external features of the skeleton and habits of growth. The investigations of Williamson on the fine details of structure, and the famous work by Carpenter on the *Microscopic Structure and Classifica-*