find the primary division of the Foraminifera into the *Imperforata* and *Perforata* still retained. His Sub-order *Imperforata* comprises all the chitinous and porcellanous genera, whilst the Sub-order *Perforata* is subdivided into the three Families of Carpenter's classification. The distinctive feature of Zittel's scheme is that the arenaceous forms have no independent position, but are distributed amongst the *Porcellanea*—part of them being assigned to the Family *Cornuspiridæ*, the remainder to the *Miliolidæ*. Such an arrangement does not commend itself, in view of the perforate tests of many of the sandy types; and the appearance side by side, in the same Family, of genera as widely different as *Botellina* and *Orbitolites*, or as *Nubecularia* and *Trochammina* suggests some of the anomalies which it entails.

The method of classification proposed by Dr. Schwager would leave little to be desired were the sole aim of the systematist the easy determination of the genera of doubtful specimens. An artificial system, indeed, has advantages over any other in this respect, and it would not be easy to construct a more orderly or more complete synopsis than the one furnished in Dr. Schwager's modest paper. B ut, as has been before observed, the precision of definition suited to the comparatively stable characters of more highly organised animals can seldom be employed in the treatment of forms as variable as the Rhizopoda; and in addition to their extreme variability, a further difficulty presents itself in the tendency to isomorphism amongst very distinct types. Thus it happens that in any artificial arrangement of the Foraminifera, closely allied genera are often widely separated, whilst others with no immediate affinity are thrown into juxtaposition. One or two examples from Schwager's synopsis will serve to illustrate this point. We need not go beyond the first section, comprising "calcareous, perforate Foraminifera, with segments disposed in one line and in one plane," in which we find *Nodosaria*, *Dentalina* and *Vaginulina*, in three distinct Families, whilst *Polymorphina* and *Uvigerina* are removed to quite another division of the table. Now, in point of fact, the connection between *Nodosaria* and *Dentalina* is so close, that it is not too much to say that many species are sometimes Nodosarian and sometimes Dentaline; and the difference between some varieties of *Vaginulina* and *Dentalina* amounts to little more than a slight lateral compression of the shell. Of the position of *Polymorphina* and *Uvigerina* in the same series I shall have to speak on a future page. So much for the separation of allied types. On the other hand, we find genera as diverse as *Dentalina*, *Pullenia*, *Polystomella* and *Nummulites* all placed in the same Family;—or to state the point somewhat differently, *Dentalina* is in nearer relationship with *Polystomella* than with *Nodosaria;* and genera like *Fusulina*, *Amphistegina* and *Heterostegina*, come between *Dentalina* and *Vaginulina*. Similar anomalies, though perhaps few so striking as these, are to be met with in other sections of the table. In such cases natural affinity is sacrificed to the exigencies of a system—a heavy price to pay for its comparatively trifling advantages.

Professor Bütschli's synopsis of the Rhizopoda covers too large an area to invite