

material furnishes almost every variety, from the longest to the widest. The fact however remains, these exceptional cases notwithstanding, that the home of *Peneroplis* is at depths of less than 30 fathoms.

The geological range of the species is limited to the Tertiary epoch. It is to be met with from time to time in shallow-water deposits from the Eocene of the neighbourhood of Paris to the Crag of our eastern counties, or probably to an even later geological period.

Orbiculina, Lamarck.

Nautilus, pars, Fichtel and Moll [1803].

Archaias, *Helenis*, *Ilotus*, Montfort [1808].

Orbiculina, Lamarck [1816], Deslongchamps, Defrance, Blainville, d'Orbigny, Bronn, Williamson, Carpenter, Parker and Jones, Morris and Quekett, Reuss, Carter, Pourtales.

The genus *Orbiculina* is typified by a planospiral, porcellanous shell, the early convolutions of which are more or less equitant or embracing, and the constituent chambers narrow and regularly subdivided into chamberlets.

The typical nautiloid condition is liable to modification in two directions. Sometimes the successive segments do not increase very rapidly in size, and, instead of continuing the original spiral arrangement, are superimposed in a straight or curved linear series, so as to form a crosier-shaped test (Pl. XIV. fig. 4). On the other hand, the successive chambers may increase so rapidly in length and curvature that after a time they completely encircle the shell, which subsequently assumes a discoidal form and an annular mode of growth (figs. 8, 9).

The texture of the shell is homogeneous and imperforate, its general appearance white and polished. The surface of the test, both external and internal, is either quite smooth, or more frequently marked by minute pits or depressions (Pl. XIV. fig. 13), which at first sight may easily be mistaken for perforations. The true nature of these markings was long ago pointed out by Carpenter (Phil. Trans., 1856, p. 551), who dispelled the idea that they arose from anything more than minute superficial punctations, as had been previously supposed.

Orbiculina in all its modifications differs from *Peneroplis* in having subdivided chambers. The discoidal forms are distinguished from *Orbitolites*, which they otherwise resemble, by the convexity of the umbilical region of the shell, resulting from the investing character of the early convolutions.

The varieties of *Orbiculina* are all referrible to a single species, the details of the geographical and geological distribution of which are given in a subsequent paragraph.

The history of the genus has already been written with a completeness that leaves little room for additions, and the reader may be referred to the memoirs published by