

tier. The adult shell seldom measures more than  $\frac{1}{8}$ th inch (5 mm.) in diameter, with a thickness of about  $\frac{1}{170}$ th inch (0.15 mm.), and frequently does not attain more than half these dimensions.

The centre of the test is occupied by a "nucleus," consisting of a rounded primordial cell opening into a second or circumambient chamber, and this is followed by a number of arched segments arranged spirally in one plane. The spiral segments increase progressively in length and in degree of curvature, until by the meeting of the two ends the normal cyclical plan of growth is established, after which the remainder of the test is constructed of concentric zones. Except just at the commencement, the whole of the segments are subdivided into chamberlets by radial partitions. The septal walls and secondary septa are much thicker than those of *Orbitolites tenuissima*, and the chamberlets, as seen on the surfaces of the test, are nearly round in outline.

The connection between the chamberlets of the same chamber is maintained by lateral stoloniferous tubes or galleries just within the peripheral wall. The communication between the successive annuli is established by means of radial passages proceeding from the lateral galleries, and not from the chamberlets themselves, except when additional chamberlets are interposed to provide for the increasing length of the segments. The more or less regular alternation of the chamberlets of the successive zones is due to this arrangement. The radial passages of the final chamber form the aperture of the test, and appear externally as a line of equidistant pores on the peripheral face.

The simple structure of the test, its spiral commencement, and the rounded form of the chamberlets, are sufficient, taken collectively, to distinguish *Orbitolites marginalis* from any of its allies; and the species is more likely to be confounded with the complanate varieties of *Orbiculina* (Pl. XIV. fig. 9) than with the forms generically related to it. In *Orbiculina*, however, the early chambers are not only spiral but nautiloid or embracing, and the test in consequence exhibits a well-marked thickening of the umbilical region, which is never observed in *Orbitolites*.

In its geographical distribution, *Orbitolites marginalis* is closely associated with the complex type *Orbitolites complanata*, the home of both being the shallow-water sands of tropical and sub-tropical seas; but it is not so abundant as the latter species, nor quite so widely diffused. It has been noticed at thirteen Challenger Stations, of which eleven are in the neighbourhood of the islands of the Pacific, the depths ranging from six fathoms to 620 fathoms; the remaining two are,—off Culebra Island, West Indies, 390 fathoms, and off Bermuda, 435 fathoms. It has been found also in shallow dredgings from the Mediterranean and from the Red Sea, and in shore-sands from Madagascar.

There is no satisfactory record of its occurrence in the fossil condition.