home in the comparatively shallow waters of tropical and sub-tropical latitudes, notably amongst the coral-reefs of the North and South Pacific, and the Indian Ocean, whilst its near allies *Orbitolites duplex* and *Orbitolites marginalis* are found as far north as the Red Sea and the Mediterranean. The same varieties occur, though not in the same abundance, in similar localities in the North and South Atlantic; but in the western hemisphere, and especially in the West Indies, the genus appears to be more or less replaced by the allied type *Orbiculina*. *Orbitolites tenuissima*, on the other hand, is essentially a deep-sea Foraminifer, the field of which enlarges the geographical boundaries of the genus so as to include a considerable portion of the North Atlantic between the latitude of the entrance to the Mediterranean and Baffin's Bay.

The geological range of *Orbitolites* extends back as far as the Lias formation of the Eastern Alps; but it is not until the latter part of the Cretaceous period that it becomes an important or prevailing type. It is abundant in certain deposits of Eocene age, and its occurrence has been noted at almost every succeeding stage of the Tertiary epoch.

Orbitolites tenuissima, Carpenter [*italica*, Costa, sp.?], (Pl. XV. figs. 6, *a–d*, 7).

Pavonina italica, Costa, 1856, Atti dell' Accad. Pont., vol. vii. p. 178, pl. xvi. figs. 26–28.
Orbitolites tenuissimus, Carpenter, 1869, Proc. Roy. Soc., vol. xviii. p. 421;—1870, Ibid., vol. xix. p. 155.
" " Wyville Thomson, 1873, Depths of the Sea, p. 91, woodcut, fig. 10.
" " Norman, 1876, Proc. Roy. Soc., vol. xxv. p. 211.
" *tenuissima*, Carpenter, 1883, Report on the Genus Orbitolites, p. 16, pls. i. ii.

Orbitolites tenuissima stands apart from the rest of the genus, not only in the structural characters of the test, but in the local conditions of latitude and depth of water under which it is found.

The shell is distinguished by its extreme tenuity and by the comparative simplicity of the arrangement of the parts. Its form is that of a circular or nearly circular disk, the surfaces of which are flat or slightly concave. When fully grown, it measures $\frac{6}{10}$ths inch (15 mm.), or more, in diameter, whilst the thickness seldom exceeds $\frac{1}{300}$th inch (0·084 mm.), and is frequently much less. Externally the sutural lines are marked by slight grooves or depressions, and the walls are so thin that not only the septa but the radial partitions by which the chambers are subdivided can be seen either by reflected or transmitted light. In point of structure the test is trimorphous, forming at the commencement a non-segmented convoluted tube, to which is added a series of chambers arranged on a spiral plan; and these in their turn are succeeded by a similar series, of which each chamber forms a complete annulus. This repeated change in the mode of growth constitutes one of the distinctive characters of the species, and as the steps by