

*Planorbulina* (s. str.), d'Orbigny.

*Planorbulina*, d'Orbigny, [1826], Bronn, Münster, Roemer, Hagenow, Reuss, Costa, Williamson, Parker and Jones, Carpenter, Karrer, Brady, M. Sars, Fischer, Schulze, Terquem, &c.

The test of *Planorbulina*, using the term in its limited sense, has the form of a complanate or somewhat plano-convex disk, which under ordinary circumstances grows attached to algæ, fragments of shell, or other foreign bodies. It consists typically of a single layer of chambers, the whole of which are seen on both faces of the test. In the early stage the segments are arranged in a depressed spire, each segment having an orifice at its inner peripheral margin; subsequently the mode of growth becomes more or less distinctly cyclical, the segments of the successive annuli alternating with each other. In this later stage the individual segments have two small lipped orifices, one at each extremity, close to the line of union with the previous whorl; and the adjacent orifices of each two chambers open into the intermediate segment of the next annulus; whilst those of the outermost row appear externally and form collectively the general aperture of the test. Morphologically the attached side of the shell is its superior face.

A departure from the typical plan of growth is exhibited by certain acervuline varieties, in which a number of small chambers, crowded together without order or regularity, cover the free or inferior face of the shell.

*Planorbulina* most affects the shallow-water margins of the seas of temperate and tropical latitudes. At depths greater than 100 fathoms the genus becomes rare, but it has been taken as low as 600 fathoms, and in one locality down to 1125 fathoms. Its earliest appearance as a fossil is at about the middle of the Tertiary epoch, and it is not uncommon in later Tertiary formations.

*Planorbulina mediterranensis*, d'Orbigny (Pl. XCII. figs. 1-3).

"Corpuscula *plano-papillosa*," Soldani, 1795, Testaceographia, vol. i. pt. 3, p. 238, pl. clxi. figs. *E.F.G.*—pl. clxii. fig. *H.*

*Planorbulina mediterranensis*, d'Orbigny, 1826, Ann. Sci. Nat., vol. vii. p. 280, pl. xiv. figs. 4-6;—Modèle, No. 79.

„ *vulgaris*, Id. 1839, Foram. Cuba, p. 85, pl. vi. figs. 11-15.

„ „ Id. 1839, Foram. Canaries, p. 134, pl. ii. fig. 30.

„ „ Williamson, 1858, Rec. For. Gt. Br., p. 57, pl. v. figs. 119, 120.

„ *farcta*, var. *mediterranensis*, Parker and Jones, 1865, Phil. Trans., vol. clv. p. 383, pl. xvi. fig. 21.

„ *mediterranensis*, Parker, Jones, and Brady, 1871, Ann. and Mag. Nat. Hist., ser. 4, vol. viii. p. 178, pl. xii. fig. 133.

The common typical species of *Planorbulina* has a thin, outspread shell, the superior or attached surface of which is flat, or nearly so, and the inferior uneven and lobulated,