

Atlantic, 1025 to 2350 fathoms; one in the Southern Ocean, 1570 fathoms; seven in the South Pacific, 610 to 1940 fathoms; and four in the North Pacific, 500 to 2900 fathoms. These are scattered over an area stretching from lat. 60° N. in the North Atlantic, to lat. 46° S. in the Southern Ocean.

*Pulvinulina crassa*, d'Orbigny, sp. (Pl. CIII. figs. 11, 12).

*Rotulina crassa*, d'Orbigny, 1840, Mém. Soc. géol. France, vol. iv. p. 32, pl. iii. figs. 7, 8.

*Pulvinulina crassa*, Owen, 1867, Journ. Linn. Soc. Lond., vol. ix., Zool., p. 148, pl. v. figs. 8 (?), 9.

„ „ Brady, 1879, Quart. Journ. Micr. Sci., vol. xix., N. S., p. 80.

The morphological features of *Pulvinulina crassa* are intermediate between those of *Pulvinulina canariensis* and *Pulvinulina micheliniana*. The superior face of the test is nearly flat, the inferior highly convex and slightly excavated at the umbilicus; the segments are somewhat inflated, and the contour altogether less angular than in the latter species; the surface of the shell is often rugose on the inferior side. In the peripheral outline and segmentation of the superior face it resembles *Pulvinulina canariensis*, whilst the convexity of the inferior side approaches that of *Pulvinulina micheliniana*. It may be regarded as the isomorph of *Truncatulina lobatula*.

Surface-specimens of *Pulvinulina crassa* have been identified at one Challenger Station in the South Atlantic, and at eight in the South Pacific.

Its area of distribution, as determined from bottom-specimens, is scarcely so wide as that of either of its immediate allies, nevertheless it has been collected at ten Challenger and "Porcupine" Stations in the North Atlantic, depths 725 to 2740 fathoms, the most northerly being at lat. 54° 53' N.; at seven in the South Atlantic, 420 to 2350 fathoms; at one in the North Pacific, 2250 fathoms; at fifteen in the South Pacific, 150 to 2335 fathoms; and at two in the Southern Ocean, 1375 and 1950 fathoms respectively, the most southerly being at lat. 53° 55' S.

The fossil remains of the species are not uncommon in the Chalk of the neighbourhood of Paris and of some parts of Kent, but I find no mention of their occurrence in later formations.

*Pulvinulina micheliniana*, d'Orbigny, sp. (Pl. CIV. figs. 1, 2).

*Rotulina truncatulinoïdes*, d'Orbigny, 1839, Foram. Canaries, p. 132, pl. ii. figs. 25-27.

„ *micheliniana*, Id. 1840, Mém. Soc. géol. France, vol. iv. p. 31, pl. iii. figs. 1-3.

*Discorbina micheliniana*, Reuss, 1865, Sitzungsber. d. k. Ak. Wiss. Wien, vol. lii. p. 455, No. 1.

*Pulvinulina repanda*, var. *menardii*, subvar. *micheliniana*, Parker and Jones, 1865, Phil. Trans., vol. clv. p. 396, pl. xiv. fig. 16; pl. xvi. figs. 41-43.

„ *micheliniana*, Owen, 1867, Journ. Linn. Soc. Lond., vol. ix., Zool., p. 148, pl. v. fig. 17.

„ „ Brady, 1879, Quart. Journ. Micr. Sci., vol. xix., N. S., p. 80.