

The test of *Pulvinulina pauperata* is planospiral; in its adult condition it is thin and complanate, and characterised primarily by its broad lamelliform peripheral wing. The segments are numerous, and form from one to two convolutions of an evolute spire, the entire series being visible on both faces of the shell, though more convex on the superior side. The primordial chamber is often conspicuously large, but subsequently the segments increase progressively in size; individually they are somewhat inflated. The aperture is situated on the inferior side of the final segment, close to the carina. The diameter of the test often exceeds $\frac{1}{10}$ th inch (2.5 mm.). The drawings on Pl. CIV. sufficiently illustrate the salient features of the organism at its various stages of growth.

Pulvinulina pauperata is essentially a deep-water Foraminifer, and there is no reason to suppose that it is, under any circumstances, a pelagic species. It has been obtained altogether at about twelve localities in the North Atlantic, at depths of 390 to 2176 fathoms, its northern limit being apparently about lat. 56° N.; at four Stations in the South Atlantic, 675 to 2350 fathoms; at one in the North Pacific, 1850 fathoms; at ten in the South Pacific, 129 to 1825 fathoms; and at two in the Southern Ocean, 1300 and 1375 fathoms respectively; it occurs also in the Indian Ocean. Its southern limit is the Antarctic Ice-barrier. Some of the specimens from far south are of very fine dimensions.

The species is not known in the fossil condition.

Pulvinulina schreibersii, d'Orbigny, sp. (Pl. CXV. fig. 1, *a.b.c.*).

Rotalina schreibersii, d'Orbigny, 1846, For. Foss. Vien., p. 154, pl. viii. figs. 4-6.

„ *badensis*, Czjzek, 1847, Haidinger's Naturw. Abhandl., vol. ii. p. 144, pl. xiii. figs. 1-3.

Pulvinulina schreibersii, Parker and Jones, 1865, Phil. Trans., vol. clv. p. 393.

Truncatulina schreibersii, Seguenza, 1879, Atti. R. Accad. dei Lincei, ser. 3, vol. vi. p. 164, 149, &c.

This species has been selected as the type of that section of the genus which is characterised by the stellate sutural limbation of the inferior umbilicus.

Pulvinulina schreibersii has been observed at seven Challenger Stations, six of which are amongst the islands of the South Pacific, namely:—off New Hebrides, 125 fathoms; off Ki Islands, 129 fathoms; south-west of Papua, 28 fathoms; off Raine Island, 155 fathoms; off Cape York, Torres Strait, 3 to 11 fathoms; Humboldt Bay, Papua, 37 fathoms; and off Admiralty Islands, 17 fathoms; the remaining locality being off Bermuda, 435 fathoms. Parker and Jones record its occurrence in the Red Sea, 40 fathoms, and in the Mediterranean, 90 fathoms.

Its geological history reaches back to about the middle of the Tertiary epoch. It occurs in the Miocene of various parts of Austria (d'Orbigny, Karrer) and of Southern Italy (Seguenza), and in the later Tertiaries of Italy and the south-east of Spain (Parker and Jones, Seguenza).