

Pullenia obliquiloculata, Parker and Jones (Pl. LXXXIV. figs. 16–20).

Pullenia obliquiloculata, Parker and Jones (1862, Introd. Foram., p. 183);—1865, Phil. Trans., vol. clv. p. 368, 421, pl. xix. fig. 4.

” ” Pourtales, 1867, Bull. Mus. Comp. Zool. Camb. (1867), p. 107.

” ” Brady, 1879, Quart. Journ. Micr. Sci., vol. xix., N. S., p. 294.

This species is only incidentally mentioned by Parker and Jones (*loc. cit.*) as “another form of *Pullenia*,” which “has the chambers set on obliquely”; and though it is one of the most important constituents of the Globigerina ooze of tropical latitudes, it has passed almost unnoticed by subsequent observers.

The test is subglobular, inequilateral, and somewhat compressed; and its mode of growth irregularly nautiloid, the successive whorls not being on the same plane. It is larger than either of its congeners, fully-grown specimens attaining a diameter of about $\frac{1}{30}$ th inch (0.84 mm.). The shell is composed of from two to three convolutions, of which the latest, consisting usually of four or five segments, is alone visible externally. The segments are inflated, and the sutural lines marked by slight depressions. The aperture is a long oval or crescentic opening on the inner margin of the final segment, generally obliquely set. Its superior border is rounded, owing to the turning inwards of the edge of the shell, as shown in the sectional drawing (fig. 20). The surface of the test is smooth and polished. The perforations, although larger than in *Pullenia sphaeroides*, are minute as compared with those of many of the Globigerinidæ. In thin sections of the shell they have the appearance of tubular canals of $\frac{1}{5000}$ th or $\frac{1}{4000}$ th inch (0.005 or 0.0063 mm.) diameter.

Pullenia obliquiloculata is the only variety of the genus which has been found living in the surface-water of the ocean, but that it is exclusively a pelagic species is more than can be affirmed from any evidence at present forthcoming. The surface-specimens, one of which is represented in fig. 18, *a.b.*, are, as a rule, small and thin-shelled. Such examples have been observed amongst the tow-net organisms collected at six points in the Atlantic, and at seven points in the Pacific, but the number of the specimens collected is comparatively small.

The distribution of the species is best estimated from bottom-dredgings, which have revealed its presence at thirteen Stations in the North Atlantic, at six in the South Atlantic, at sixteen in the South Pacific, and at five in the North Pacific, as well as at one or two points in the Indian Ocean. By far the larger proportion of these lie within the tropics. The most northerly locality recorded is lat. 41° 15' N. in the North Atlantic; the southern limit appears to be about the latitude of Sydney, 34° 13' S. in the Pacific. The bottoms range in depth from 7 fathoms to 2675 fathoms.

Pullenia obliquiloculata has not hitherto been observed in the fossil condition.