

jecting into the cavity of the chamber, and suggests that this constitutes the general aperture of the test. The existence of this entosolenian orifice had been overlooked by previous writers, but I am able to confirm the observations of Moebius in every particular, having seldom failed to trace it except in occasional very small specimens. It often cannot be detected externally, but sometimes it is situated in a little dimple or depression, as shown in the woodcut (fig. 20, c); and it may nearly always be distinguished in balsam-mounted specimens when examined by transmitted light. The test attains a diameter of $\frac{1}{45}$ th inch (0.56 mm.), or occasionally more.

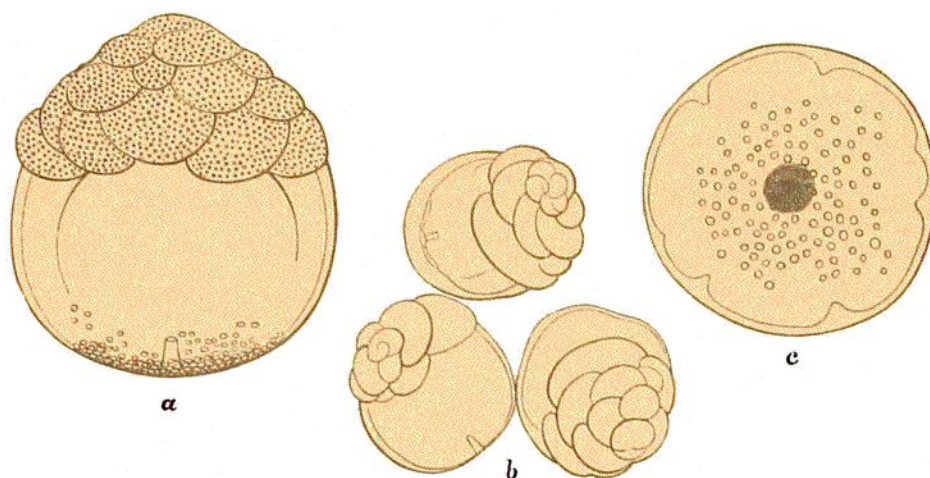


FIG. 20.—*Cymbalopora (Tretomphalus) bulloides*.

a. Large surface-specimen; b, small (young?) specimens from the same gathering; c, distal face of the balloon-like chamber, showing the entosolenian orifice, seated in a slight depression. All magnified 60 diameters.

Cymbalopora bulloides has long been known as a bottom Foraminifer, found in company with *Cymbalopora poeyi*, though less common than the latter species; but on the Challenger cruise it was frequently taken in the tow-nets at the surface of the sea, always in shallow areas and in the immediate neighbourhood of coral-reefs. It is somewhat remarkable in connection with the surface-specimens, that the same gathering invariably furnished shells of two distinct sizes, some of them being of the normal adult dimensions (woodcut, fig. 20, a), whilst a large number were comparatively minute, their individual diameter being scarcely half that of their associates (fig. b). The large shells appeared to be empty, and of intermediate specimens there were few or none. The repeated observation of these facts has led Mr. Murray to question whether *Cymbalopora bulloides* is under all circumstances a pelagic Foraminifer, or whether it is not more probable that it may only be the breeding stage of a bottom-form.¹

It is clear that the growth of the shell must cease with the formation of the large chamber enveloping the base; so that if the small specimens are the young of the larger ones, as from their structure and mode of occurrence there is reason to believe, they

¹ In every specimen taken from the surface which I examined, the shell was filled with minute monadiform bodies.—J. M.