

only Foraminifer with which it is likely to be confounded is *Globigerina æquilateralis*; but in that species the shell is more compressed and the spire evolute; the walls are thicker, the perforations larger, and the aperture comparatively small and inconspicuous; besides which the surface is rarely spinous, and the spines, when present, are small and not serrated.

To the original description in the "South America" memoir, d'Orbigny appends the following remark:—"Cette espèce est une rare exception parmi les Foraminifères essentiellement côtiers, puisque nous l'avons prise en pleine mer, à une grande distance des côtes du Pérou, dans l'océan Pacifique, par 20° de latitude sud et 89° de longitude ouest de Paris, où elle nous a paru très rare." Even now, with a much wider knowledge of the life-conditions of the Foraminifera, *Hastigerina pelagica* is one of the very small number of species of which it can be said with any approach to certainty that it lives only at the surface of the ocean. A few of the thicker-shelled specimens are found from time to time in bottom-dredgings, but they are by no means common, and are seldom even approximately complete. The spines are invariably broken off, and when the shells are not otherwise fractured the surfaces are worn and the texture rotten. Of these figs. 5-8 are fair examples.

Living specimens of *Hastigerina pelagica* were collected by the Challenger naturalists at five points in the North Atlantic, at two in the South Atlantic, at three in the South Pacific, and at twelve in the North Pacific; and on the cruise of the "Triton" in 1882, the species was obtained in great abundance in the Farøe Channel. Dead shells have been noticed in the dredged material from three Stations in the North Atlantic, from five in the South Atlantic, and from three in the South Pacific, as well as in sands from the Gulf of Suez.

No fossil remains of the species have hitherto been recognised.

#### *Pullenia*, Parker and Jones.

*Nonionina*, pars, d'Orbigny [1826], Reuss, Bornemaun, Costa, Parker and Jones, Karrer, Schlicht.

*Pullenia*, Parker and Jones [1862], Carpenter, Reuss, Karrer, Pourtales, M. Sars, Miller and Vanden Broeck, Hantken, Wright, Norman, Brady, Marsson, Seguenza, &c.

The zoological features of the genus *Pullenia* have been variously estimated by different systematists. By d'Orbigny and other earlier authors the typical species were placed amongst *Nonioninæ*, and it was not until 1862 that their distinct structure and affinities were pointed out by Parker and Jones. In Carpenter's "Introduction" the genus was classed in the Sub-family *Globigerinæ*, between *Globigerina* and *Sphæroidina*, but this mode of treatment has not hitherto met with general acceptance. Reuss, even in his