

*Lingulina*, d'Orbigny.

"Orthoceratium," pars, Soldani [1791].

*Lingulina*, d'Orbigny [1826], Reuss, Bornemann, Costa, Neugeboren, Williamson, Parker and Jones, Karrer, Carpenter, Schwager, Stache, Pourtales, Gümbel, &c.

*Nodosaria (Mucronina)*, d'Orbigny [1826].

The generic term *Lingulina* is reserved for the compressed modifications of the straight *Nodosariæ*. Such species may have either the elongate slender proportions of the typical *Nodosarians* or the shortened contour of the Glanduline members of the genus. The aperture is normally a narrow fissure corresponding in shape to the transverse section of the final segment, but frequently takes the form of a round or oval orifice, either somewhat produced as in *Nodosaria*, or situated at the middle of an elongate depression.

These characters are too variable to be of much zoological value, and the forms to which they apply represent rather the transition stages between *Nodosaria* proper and *Frondicularia*, than a definite generic group.

Except in the tropical and sub-tropical portions of the Atlantic, at depths of from 300 to 600 fathoms, recent *Lingulinæ* are nowhere abundant; nevertheless the genus is met with to a greater or less extent in both the North and South Pacific, the Mediterranean and the Adriatic. Its geological range extends from the Liassic period to the present time. In the Miocene age the costate varieties appear to have been widely diffused, but otherwise the type is of limited distribution.

*Lingulina carinata*, d'Orbigny (Pl. LXV. figs. 16, 17).

"Testæ Ouales, oliviformes, pyriformes, fusiformes," &c., Soldani, 1798, Testaceographia, vol. ii. p. 37, pl. xii. fig. P., &c.

*Lingulina carinata*, d'Orbigny, 1826, Ann. Sci. Nat. vol. vii. p. 257, No. 1;—Modèle, No. 26.

" " Id. 1839, Foram. Canaries, p. 124, pl. i. figs. 5, 6.

" " Williamson, 1858, Rec. For. Gt. Br., p. 14, pl. ii. figs. 33-35.

Neither of the drawings on Pl. LXV. illustrates satisfactorily the typical characters of this species. Figure 16 represents an intermediate form, the later segments of which are only slightly compressed, altogether but little removed from the true *Nodosariæ*; and fig. 17 is a short specimen, with an unusually large primordial chamber, the oral end of which is armed with a pair of small marginal spines—the latter an anomalous feature. Excellent figures of the species, from recent specimens, are given by d'Orbigny and by Williamson in the works above referred to.

The Challenger material has yielded very few examples of *Lingulina carinata*, as distinct from the subcostate modification (var. *seminuda*), and only from the following Stations:—off Ki Islands 580 fathoms; off Honolulu coral-reefs, 40 fathoms; and off Nightingale Island, Tristan d'Acunha, 100 to 150 fathoms. It has, however, been found in shore-sand from Teneriffe, and from the West Indies (d'Orbigny); in soundings