

Frondicularia alata, d'Orbigny (Pl. LXV. figs. 20-23; Flabelline variety, Pl. LXVI. figs. 3-5).

"*Nautili caudiformes*," Soldani, 1798, Testaceographia, vol. ii. p. 13, pl. i. fig. C.

Frondicularia alata, d'Orbigny, 1826, Ann. Sci. Nat., vol. vii. p. 256, No. 2.

" " Parker, Jones, and Brady, 1871, Ann. and Mag. Nat. Hist., ser. 4, vol. viii. p. 161, pl. x. fig. 66.

" *alata*, var. *sagittula*, Vanden Broeck, 1876, Ann. Soc. Belg. Micr., vol. ii. p. 113, pl. ii. figs. 12, 14.

" " var. *lancoolata*, Id. Ibid. p. 117, pl. ii. fig. 13.

" *complanata*, var. *concinna*, Id. Ibid. p. 109, pl. iii. fig. 2.

The figure in the Testaceographia, selected by d'Orbigny to bear the name *Frondicularia alata*, is that of a short complanate shell, which is very broad near the initial end, owing to the arms of the V-shaped segments reaching back nearly into a line with the primordial chamber. The free ends of the segments are irregular, and most of them projecting and pointed. The drawing is somewhat rough, but represents in their extreme development characters easily recognised in more typical specimens.

Referring to the illustrations, the two larger figures (figs. 20, 21) represent good examples of the species in the adult condition, the free ends of the chambers forming a nearly straight line, and one here and there extended into a projecting point. Such shells attain large dimensions, the length sometimes exceeding $\frac{1}{3}$ th inch (5 mm.). Vanden Broeck (*loc. cit.*) gives an excellent series of drawings, representing individual modifications of the species rather than distinct varieties.

In the immature or arrested stage the outline is less angular, and the test assumes the more or less ovate contour displayed in figures 22 and 23, resembling in this respect the typical *Frondicularia complanata* of DeFrance, as depicted by Blainville (Malacologie, pl. vi. figs. 4, 4a).

Amongst the West Indian specimens there are a considerable proportion of dimorphous shells (Pl. LXVI. figs. 3-5), which, had they been found alone or in different company, must have been classed as *Flabellinæ*. Excepting the inequilateral growth of a few of their earlier segments, a feature in which no two of them are alike, they agree in every respect with the more typical specimens; indeed it is perfectly evident, when a number are examined together, that they are mere anomalous individuals of the same species.

The distribution of *Frondicularia alata* as a recent Foraminifer, so far as at present known, is limited to a few localities. The Challenger collections furnish specimens from off Culebra Island, 390 fathoms, and off Bermuda, 435 fathoms; and those recorded by Vanden Broeck were from near Barbados, 84 fathoms (100 brasses). The habitat given by d'Orbigny, both for *Frondicularia alata* and *Frondicularia rhomboidalis* (Modèle, No. 3), is the Adriatic; and some years ago Dr. Tiberi of Portici sent to me for identification some fine recent examples of both of these species, found in shore-sand from near Magnisi, on the east coast of Sicily.

Soldani states that fossil specimens occur in the Subapennine Tertiaries near Sienna.