

successively larger as the test approaches completion, but no general rule can be laid down in this respect. Sometimes the increase in size is confined to the earlier chambers, and those subsequently formed become gradually smaller, so that the shell is widest near the middle; occasionally the segments preserve a uniform diameter from first to last; and not unfrequently the initial segment is larger than those immediately succeeding it. The primordial end of the test is often mucronate.

The segments are attached end to end, in single series, and the general contour of the test depends to a great degree on the extent to which the adjoining chambers are in contact with each other. The shape of the individual segments may be cylindrical, inflated, pyriform, fusiform, elliptical, or globular; and they may either be combined like a row of beads with thin connecting stolons; or more closely, with external depressions of greater or less depth marking the septal planes; or so as to form a compact cylinder with the sutures indicated only by fine lines; or lastly, the segments may be inequilateral and the sutures oblique.

The aperture is terminal, and is usually situated in a nipple-shaped projection, or in a more or less produced neck; but sometimes it is flush with the surface of the final segment, and in rare cases it is inverted as in the entosolenian *Lagenæ*. It takes the form either of a simple rounded orifice, with or without an everted lip, or of a number of radiating fissures; and when simple is frequently surrounded by a radiate corona of superficial grooves or raised lines.

The exterior of the test is either smooth or ornamented by the exogenous thickening of the wall in various ways. Longitudinal striæ, continuous or interrupted costæ, tubercles, or spines, are the more common varieties of surface-ornament. In addition to these, the septal lines are sometimes limbate or embossed, and the tubular neck of certain species is often decorated with raised annulated or spiral bands of shelly deposit.

The genus *Nodosaria* was divided by d'Orbigny into five sub-genera:—I. *Glandulina*; II. *Nodosaria*, proper; III. *Dentalina*; IV. *Orthocerina*; V. *Mucronina*.¹ Of these *Mucronina* contained only a single species, differing in no important particular from *Lingulina*, and was subsequently abandoned by the author. The name *Orthocerina* was employed for a mixed group, the Nodosarine members of which are now included in Reuss's genus *Rhabdogonium*, for reasons which will appear on a later page. Of the rest, the most that can be said is that the term *Dentalina* has been used to distinguish the curved varieties, and *Glandulina* the short varieties of the genus. Employed in this way the terms are sometimes convenient, but in any stricter or more definite sense they have no zoological value.

The immediate allies of *Nodosaria* are found in the genera *Frondicularia*, *Lingulina*, and *Vaginulina*, which represent respectively the compressed forms of the short, normal, and obliquely-septate varieties of the type.

¹ *Ann. Sci. Nat.*, 1826, vol. vii. pp. 252-256.