

varieties of the genus cannot be separated by any sharp lines from some of the allied *Nonioninae*, but the more typical forms present certain additional characters which are regarded as distinctively *Polystomelline*. The genus has been so frequently and so carefully described by previous writers, and its structure and affinities so fully treated, that it is only needful here to draw attention to the more important external features which are of service to the systematist.

The test of *Polystomella* is, as a rule, of lenticular or discoidal form. In the weaker modifications (e.g., *Polystomella striatopunctata*) the segments are more or less inflated, and the external furrows by which they are separated are bridged over at intervals by extensions of the inner margins of the segments, leaving rows of depressions or "fossettes" to mark the septal lines. These marginal extensions of the segments are called "retral processes," or in connection with their external shelly investment "septal bridges," and throughout a considerable section of the genus their presence to a greater or less extent is the only advance in structure upon that of the *Nonioninae*.

In the more typical *Polystomellæ* the septa themselves, instead of being depressed, are limbate externally; and the retral processes are numerous and sufficiently developed to form regular series of elevated transverse ridges, almost or completely connecting the septa of the consecutive chambers. Usually in these cases the septal bands are much thicker and more elevated than the transverse ridges (*Polystomella crispa*), but sometimes they are equally developed, and form a surface-reticulation of uniform height (*Polystomella verriculata*).

The aperture of the feebler varieties consists of an arched cleft at the inner margin of the final segment, scarcely differing from that of *Nonionina*; but in other forms the superior edge or lip is denticulated, so as to subdivide the opening to a greater or less degree by cross bars, and in *Polystomella crispa* it consists of a V-shaped row of rounded orifices, which may be regarded as the typical condition.

As already stated, the test of *Polystomella* in its normal aspect is equilateral and biconvex, though individual specimens exhibiting a certain amount of bilateral asymmetry are by no means uncommon. There exists, however, a small group of forms, named by d'Orbigny *Faujasina*, in which the shell is plano-convex and the arrangement of the spire like that of *Truncatulina lobatula*, the whole of the convolutions being visible on the flat side of the test, the final convolution only on the convex face.

The more highly organised species of *Polystomella* have a supplemental skeleton, provided with a somewhat complex system of canals. The precise form and arrangement of the canals differ materially in the different species, though (broadly speaking) referrible to one general plan. Two "spiral canals," one on each face of the test, follow the umbilical edges of the spiral lamina; these are connected by "meridional" canals lying in the septal depressions between the chambers; and the latter communicate with the exterior by short tubes, single or forked, which open upon the septal lines. In the