

terminal orifices of the branches were crowded with loose sponge-spicules, which fell out on washing in a gentle stream of water.

The distribution of *Polytrema miniaceum*, var. *alba*, is probably coextensive with that of the typical red form, but numerically the specimens are comparatively scarce.

Family X. NUMMULINIDÆ.

The Family NUMMULINIDÆ presents, as a whole, the highest phase of foraminiferal structure. It comprises a number of groups, characterised for the most part by possessing symmetrically-formed shells, usually of discoidal, lenticular, ovate, or fusiform contour, the chambers of which are arranged on a spiral plan, or occasionally in concentric zones. The shell-wall is in all cases finely tubulated, the pore-canals being as a rule of smaller diameter and more closely set than those observed in any other family of Foraminifera. In the more highly organised members of three Sub-families (or four if the Eozoöninæ be included) the test has a supplemental skeleton, variously developed, furnished with a canal system of greater or less complexity.

The Sub-family FUSULININÆ has no living representatives, but derives its chief interest and importance from its extraordinary abundance in Palæozoic times. It embraces a series of perforate Foraminifera having precisely the same morphological range as the porcellanous type *Alveolina*, exhibiting every gradation of contour from subglobular or even lenticular to ovate and fusiform, the latter, as in *Alveolina*, being by far the most common and characteristic. The test has no supplemental skeleton and no canal system, and its minute structure appears to be about on the same level as *Nonionina* or *Amphistegina*, its bilateral symmetry and the form and position of the aperture suggesting an affinity to the former rather than the latter genus.

The genus *Nonionina* displays the simplest structural features of the POLYSTOMEL-LINÆ,—a nautiloid shell with arched slit-shaped orifice. There is no supplemental skeleton, and almost the only salient peculiarity is the thickening of the shell-wall externally over the umbilical ends of the septal lines, so as to produce a sort of stellate sutural limbation; and this is not by any means an invariable character. The varieties of *Nonionina* lead by insensible degrees to the genus *Polystomella*, the test of which becomes variously modified by the development to a greater or less extent of a supplemental skeleton. In some of the *Polystomellæ* the sutures are marked externally by minute orifices, which are the ends of the interseptal canals; whilst in others the septal furrows are bridged over at intervals, and the canals open into the fossettes between the bridges. The aperture, which in the feebler varieties resembles that of *Nonionina*, becomes divided in more typical examples, and appears as an arched or V-shaped row of pores.