

terminal neck, with annular or spiral raised ornament and phialine or cleft lip. Length,  $\frac{1}{5}$ th inch (1.7 mm.).

In the general form of the test and the disposition of the chambers there is little to distinguish this species from some of its congeners, but the minute structure of the shell-wall of the later segments displays certain remarkable features.

The normal Nodosarian shell consists of a homogeneous and finely tubulated calcareous lamina; but the present species exhibits, in addition to this primary investment, a supplementary, external, cellulated layer. The structure is perhaps best explained by supposing it to have originated in a costate Nodosarian shell, in which the furrows between the ribs had been covered over, and the passages so formed subdivided by cross partitions. The actual condition of the shell-wall is readily understood from the transverse and longitudinal sections figured in the accompanying woodcuts. The transverse section (fig. *a*) shows little beyond the primary investment with its minute tubulation, and the exogenous costæ; for, owing to the extreme tenuity of the external covering, it has been almost entirely lost in the process of grinding. But in the longitudinal section (fig. *b*), which is much more highly magnified, the supplementary

structures are better preserved; and not only are the outer film, and the partition-walls dividing the intercostal furrow into cells, shown *in situ*, but the pores by which the cells communicate with the exterior are also clearly defined. Owing to its soft spongy texture, the external layer is easily broken away, without injuring the more solidly constructed investment underneath; and it was the occurrence of specimens in the abraded condition represented in Pl. LXV. fig. 4, that first directed attention to the anomalous character of the shell.

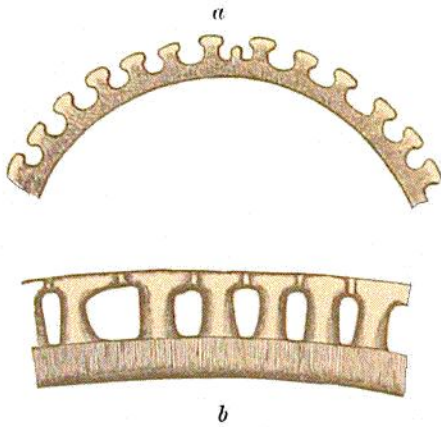


FIG. 15.—*Nodosaria intercellularis*.

- a.* Transverse section of the shell, magnified 200 diameters.  
*b.* Longitudinal section, magnified 400 diameters.

There is an obvious similarity in structure between the test of *Nodosaria intercellularis* and that of *Lagena hertwigiana* described on a former page, the chief difference being the greater thickness and the well-marked tubulation of the primary wall of the former. Dr. Schwager has figured (Novara-Exped., geol. Theil, vol. ii., pl. v. fig. 26) what appears to be a single chamber of the present species, under the impression that it might belong to the genus *Ovulites*. The structural resemblance of these forms to some of the *Dactyloporidæ* is in many ways remarkable, the more so as recent researches tend to show that it is purely accidental.

*Nodosaria intercellularis* has only been found at one locality, namely,—Station 33 off Bermuda, depth 435 fathoms.