

present (Pl. XXVIII. figs. 23, 24). They measure from about 0·0118 to 0·0434 mm. in diameter, and lie in cavities a little larger than themselves, 0·0197 and 0·0474 mm. in diameter. A concentric or spiral arrangement of interrupted lines is to be observed in them; this in some parts of the section is exchanged for a regularly dotted appearance. In very thin sections, especially in such as happen to be accidentally torn, these appearances are found to be produced by minute bacillar bodies, of which the whole structure is built up. It would appear very doubtful whether these structures are part of the sponge; they might with much more probability be regarded as of a Bacterial nature.

The characters of the canal system have been partly described incidentally; the flagellated chambers are small, about 0·0237 mm. in breadth by 0·0197 mm. in length, the apopyle and prosopyle vary greatly in diameter, from about 0·006 to 0·016 mm., the prosodus is always short, often absent, and the aphodus is usually also short compared to the length it attains in many other *Geodine* sponges.

*The Skeleton.*—The oxeate spicules are scattered singly and apparently at random through the choanosome, except near the cortex, towards which they are directed at right angles, seldom entering it.

Orthotriænes are absent, except quite close to the cortex (Pl. XXVIII. figs 17, 18) and in the neighbourhood of the cloacal wall, which appears to be a modified cortex. The cladomes of these triænes lie in the inner fibrous layer of the cortex, frequently centrally situated between three or four surrounding chones, so that the cladi extend between adjacent pairs of these latter, often lying tangential to their walls.

The sterrasters are scattered in various stages of development in the choanosome, and when adult are arranged in the cortex in the manner already described. They may be regarded as modifications of the usual more or less spherical sterraster, resulting from the abbreviation of all the actines lying in an equatorial zone including the hilum, and the extension of those lying along and adjacent to the zone-axis. This would be the natural result of tension acting in the direction of the zone-axis.

The youngest sterraster met with resembles that of *Geodia* in presenting a very small centrum and long trichite-like actines; the difference in the length of the actines had already, however, in the instance observed been well established (Pl. XXVIII. fig. 30). This spicule was seen still embedded in its scleroblast, of which, however, the nucleus was not visible. A nucleus, however, was observed of the usual scleroblastic type in connection with a more advanced example, it was situated over that part of the sterraster which remains as the non-granulated area of the completed form (Pl. XXVIII. fig. 31), thus proving the homology of that area with the hilum of the more common form of sterraster. In the stage immediately preceding that of completion the sterraster is smooth, and frequently subdivided at the ends (Pl. XXVIII. fig. 12); the small spines which granulate the surface commence at the extremities and subsequently extend towards the centre.