out that the dense sieve-plate openings which occur abundantly on the truncated lateral borders of the five-sided prismatic body, and are surrounded by delicate spicules projecting in a cuff-like manner, are the oscular openings of the main anastomosing canal system running longitudinally in the walls of the sponge. The larger hollow spaces occurring in the axis and opening above he designated *pseudogasters*, and their terminal lattice-work closing plates as *pseudo-sieve-plates*. A second system of passages and canals, which lie between these exhalent oscular openings, separated from them by sponge tissue, and covered towards the outside by fine dermal lattice-like networks were referred by Marshall to the *subdermal* spaces of Haeckel, or to the *intermarginal* cavities of Bowerbank. In consequence of these results of his examination, Marshall,[1] in 1876, characterised the genus *Semperella* in the following manner:—"Polyzoic with pseudogasters. Anchor bundles anastomosing with each other throughout the whole body wall. Dermal skeleton of cross spicules separated by the tissue of the body and spread over large subdermal longitudinal spaces into which the internal canals open. Oscula of the individuals in rows, with peristome wreath and sieve-plate. The gastral skeleton formed of large four-rayed spicules, provided with meshes occlusible by means of fir-tree-like spicules, and in direct connection with the dermal skeleton. The cavities of the pseudogastral system are covered internally by six- and five-rayed spicules."

Semperella schultzei, Semper.

Near the Philippine Island, Zebu, the Challenger Expedition obtained a beautiful specimen of *Semperella schultzei*, 38 cm. in length, and 5 to 7 in thickness. This form having been well preserved in spirit, remains almost uninjured. The cylindrical body, which measures 30 cm. in length exclusive of the basal tuft, has inferiorly a cylindrical form, but becomes gradually wider upwards, forming an irregular pentagonal prism with truncated edges. The latter are from 5 to 8 mm. in breadth, and from the middle of the body upwards do not extend in exact longitudinal direction, but extend on the one hand obliquely, and further divide and anastomose, till they finally unite in the superior flat cone, which occupies the terminal region of the upper end. The root-process, which extends perpendicularly downwards from the lower end of the sponge, becomes widened out inferiorly into a loose brush, and penetrates by means of its diverging spicules into the very varied detritus-substratum. There was no trace of commensal *Anthozoa*.

It is noticeable, even with the unaided eye, that a striking difference can be observed in the structure of the external layer of skin on the above mentioned truncated lateral edges, and that on the intervening flat, or even slightly concave, lateral surfaces (10 to 30 mm. in breadth). For while the latter exhibit a very delicate narrow-meshed quadratic

[1] *Zeitschr. f. wiss. Zool.*, Bd. xxvii. p. 131.