

shallow grooves, follow the directions of the stem and branches with parallel course, each ridge preserving its integrity for a long distance, except on the pore-bearing face of the flabellum, where the ridges are interrupted by the prominent cyclo-systems. The branches are somewhat swollen at the points where cyclo-systems are attached to them. The whole cœnosteum is, as in other Stylasteridæ, permeated by networks of canals. The axes of the branches are traversed by bundles of large main canals, which place the cyclo-systems in relation with one another.

The cyclo-systems are all, with one exception, which is evidently abnormal in the present specimen, placed on one face of the flabellum, with their axes at right angles to its plane. The systems appear as globose bodies, with flattened tops, which are much wider in diameter than the branches on which they rest, and stand out prominent and entirely free from one another, at regular intervals along the course of the branches. The globose appearance of the systems is due to their being each encircled by a broad prominent zone of confluent ampullæ, which zone has a rounded surface rendered somewhat irregular by the occasional prominence of individual ampullæ. Immediately above this zone, the edge of the summit of each system appears as a delicate lamina, which slightly overhangs the outer wall of the system all around (Pl. II. fig. 8). The summits of the systems are circular in outline, with a series of indentions in the marginal lamina, as in *Allopora profunda*, corresponding with the centres of the outer ends of the pseudosepta. A diagrammatic view of a cyclo-system, as viewed from above the mouths of the pores, is given on Plate II. fig. 15.

The arrangement of the pores in the systems is closely similar to that in *Stylaster densicaulis* and *Allopora profunda*. There is a centrally-placed gastropore in each, which is surrounded by a ring of dactylopores with slit-like mouths. The gastropore in the present genus, however, appears in the form of two chambers, an upper and a lower, which communicate with one another by a constricted aperture. The upper chamber (Pl. II. fig. 8, G P) communicates with the exterior superiorly by a short tubular passage, bounded by the inner ends of the pseudosepta. The walls of the chamber are curved, so that, taken in conjunction with its upper prolongation, it is flask-shaped. At the base of the chamber its walls are curved inwards, so as to bound a horse-shoe shaped aperture, which leads to the lower gastropore chamber beneath. The aperture is rendered horse-shoe shaped by the projection from its margin on one side of a tongue-like process of calcareous matter, which is directed horizontally, with a slight upward curve across the aperture, reaching as far as its centre (Pl. II. fig. 8, B; fig. 15, A).

The tongue-like process is a solid calcareous structure of a bent conical form, with a rounded extremity. It is grooved on its under surface in the direction of its length, and springs from the margin of the wall of the upper chamber of the gastropore, which is thickened in this region by its stout roots. The process always points in