

Genus 2. *Aulascus*, n. gen.

This genus only contains one species.

*Aulascus johnstoni*, n. sp. (Pl. XXII. figs. 1-3).

The loose and readily pliable tube-like fragments which are figured in Pl. XXII. fig. 1, have a wall from 2 to 4 mm. in thickness, and were dredged in the southern part of the Indian Ocean, about halfway between the Cape of Good Hope and the Kerguelen Islands, at Station 145A (lat. 46° 41' S., long. 38° 10' E.), from a depth of 310 fathoms, and a bottom of volcanic sand. While the inferior portion of both tubes is entirely destroyed, a simple, sharp, smooth margin occurs on the somewhat widened upper portion of one of them. Both the outer and the inner surfaces are covered by a continuous thin skin, through which irregularly scattered cavities of variable widths (up to 2 mm. in diameter) may be seen.

In the parenchyma the principalia consist of moderately large hexacts with rough ends which run out gradually to a point, and of numerous straight or slightly bent diacts, which occur partly in bundles and partly isolated, and are provided with a central thickening and with rough ends running out gradually into points. While the hexacts are usually disposed at right angles to the bounding surfaces, the diacts are for the most part parallel to these or arranged obliquely in different directions.

Between the principalia numerous irregularly scattered rosettes appear. Among these discohexasters predominate, and each of their principal rays is divided into two or three diverging straight terminals. The latter decrease in size towards the exterior, are densely beset with numerous short hooks, and terminate in a small, slightly arched, transverse disc which runs out into four or more prongs. In some cases the outer extremities of the terminal rays are so delicate, and the terminal transverse disc so small, that the latter can only be seen with high magnifying powers, and the whole rosette resembles an oxyhexaster.

The plumicomae (0.05 mm. in diameter), indicated in Pl. XXII. fig. 2, and figured in fig. 6 from another sponge, occur here and there. The extremity of each of the moderately long, round, principal rays bears a tolerably thick, round, transverse disc, on the convex outer side of which the fine terminal rays, which are bent in an S-shaped manner, arise in concentric circles and together form a cup.

The *dermal skeleton* is supported by moderately large pentact hypodermalia with rough ends, which gradually run out to fine points. The abortive distal ray is sometimes indicated by a round tubercle. The dermal membrane itself contains the four cruciate transverse rays of the hexact autodermal pinuli, in which the freely projecting distal ray is beset with scaly prongs, like a fir cone, in its larger outer principal portion, while the base remains naked (Pl. XXII. fig. 3). The pole-like pointed proximal is