

Subfamily 3. CAULOPHACINÆ.

Fungiform, with a long cylindrical tubular stalk.

Genus 1. *Caulophacus*, n. gen.

Fungiform, with a long tube-like stalk. The gastral surface of the body has become convexly arched by eversion. The dermal surface has either remained convex or has become concave by a turning over of the marginal portion.

Caulophacus latus, n. sp. (Pl. XXIV.).

About halfway between the Cape of Good Hope and the Kerguelen Islands (Station 147, lat. 46° 16' S., long. 48° 27' E.), from a depth of 1600 fathoms and Diatom ooze ground, a Hexactinellid was trawled, which exhibited in its external form a marked resemblance to a flat mushroom. The body is a circular disc, 15·5 cm. in breadth, with a thickened median portion continued downwards by means of a conical neck into the rounded hollow stalk. The latter is 5 mm. in thickness, and is bent obliquely to the side in its upper portion, which is alone preserved. While a shallow depression occurs in the middle of the upper surface, the gradually narrowed marginal portion, which finally terminates in a narrow smooth border, is bent slightly downwards (Pl. XXIV. fig. 1). On making a section at right angles to the surface (Pl. XXIV. fig. 1), the afferent and efferent canals are clearly recognisable, and they may even be detected through the uninjured dermal and gastral membranes. These canals are disposed at right angles to the bounding surface. The cavity of the tubular stalk, which is 2 mm. in width, is continued upwards into the efferent system of lacunæ in the median part of the disc (Pl. XXIV. fig. 1).

Since the upper usually slightly convex surface of the body, which exhibits only in the middle a shallow depression, corresponds to the gastral surface, it is only natural that all the chambers of the richly folded chamber layer should have their wide excurrent openings turned towards this convex surface, and their blind sack-like extremities on the other hand directed towards the concave dermal region. Here, too, as in all other cases, the water enters through the dermal membrane, and passes through the sieve-like network of the chamber walls in flowing from the outside inwards.

The principal parenchymalia are moderately strong, simple, regular hexacts, with smooth rays, each of which runs out to a sharp point, and smooth diacts varying in breadth and length, and provided on both sides with a rough rounded terminal portion. Between these there is an abundant though scattered occurrence of small prickly hexacts (0·25 mm. in diameter) with arched and marginally pronged transverse terminal discs