

Astrophyton cæcilia, Ltk., Vid. Meddel., p. 18, January 1856; Addit. ad Hist., part 2, p. 157, pl. v. fig. 6.

Astrophyton Krebsii, Örst. & Ltk., Vid. Meddel., p. 18, January 1856; Addit. ad Hist., part 2, p. 158, 1859.

West Indies; 73 to 125 fathoms.

Astrophyton clavatum, Lym., Proc. Bost. Soc. Nat. Hist., vol. viii. p. 85, 1861; Ill. Cat. Mus. Comp. Zool., No. i. p. 191.

Zanzibar.

Gorgonocephalus.

Gorgonocephalus, Leach, Zool. Miscell., vol. ii., 1815.

Disk thick and inclined to be circular, and, together with the arms, covered by a thick skin. Arms narrow at their base, and branching by a series of not numerous forks, having between them long, unequal shafts. Radial shields long and bar-like, composed of overlapping, soldered plates, and extending nearly or quite to centre of disk, thus forming more or less elevated radiating ribs. Margin of disk and inner angle of interbrachial spaces strengthened by irregular horizontal rows of plates. Teeth, tooth papillæ, and mouth papillæ all similar and spiniform. No true arm spines, but the outer branches have spiniform tentacle scales which, with the tentacles, are found quite to the base of the arm. Both the finer twigs and smaller branches are ringed with double lines of grains bearing microscopic hooks. Side arm plates confined to under surface and lower sides of arm. On the small branches the under arm plates are divided in three pieces, which increase in number towards the base of the arm, and there form an irregular pavement.

Upper arm plates represented by numerous thin, irregular plates, forming a mosaic. Two genital openings at the outer corners of the interbrachial spaces.

When I made a first section of a fine *Gorgonocephalus pourtalesii*, brought back by the Challenger, and whose swollen disk indicated a gravid individual, I expected to find a general arrangement of organs quite similar to that already known in such genera as *Ophiomyxa*. My astonishment was considerable when there was brought to light an internal economy which reminded one rather of an orange than of an *Echinoderm*. A horizontal cut, just above the joint of the radial shields, disclosed a quantity of membranous partitions stuffed with a sort of pulp and radiating in a confused manner; while a vertical section showed what might be a digestive cavity, surrounded by and communicating with a number of convolutions or blind sacks. The matter became clear only by giving up the idea that a strict correspondence with known forms was to be looked for.