

Their basal part is strongly thickened and forms a conical tentacle bulb, which fills the interspace between each two rhopalar pedalia, and is inserted with a broader base at the distal side of the tentacular pedalium. This basal part is also hollow and contains the cæcal end of the thin tentacular canal, whilst the distal part of the tentacles is solid (as in *Nauphanta*). A strong longitudinal muscle runs both on the upper and the lower surface of the tentacle. The upper or external, abaxial tentacle muscle (fig. 4, *mt'*) is the shorter and weaker, only occupies the proximal third of the tentacle, and passes to the outer margin of the upper surface of the tentacular pedalium. The lower or internal axial tentacle muscle (fig. 4, *mt''*) is longer and stronger, runs along the whole length of the tentacle, and passes with two very strong, fusiform radial muscles (*mk*, fig. 3, above, to the right) to the umbral surface of the tentacular coronal pouch (as in *Periphylla*, Pl. XXII.).

The sense clubs ("rhopalia," *or*) in *Atolla* are quite rudimentary and more slightly developed than in any other Discomedusæ hitherto examined, in fact this might be easily overlooked, as their obscure rudiments lie hidden at the distal margin of the rhopalar pedalia, between the basis of the two marginal lobes of a pair. It was only with considerable trouble that I succeeded in determining their existence; they alternate regularly with the tentacles, so that their number also amounts from nineteen to twenty-two. Their anatomic nature could unfortunately not be found out on account of their small size and the bad preservation of the umbrella margin in all five specimens; but as the sense clubs are indubitably in the same position and better developed in the closely allied *Collapsis* (System, pl. xxviii. figs. 3, 4), there can be no doubt as to the significance of the small rudiments in *Atolla*. We have probably to do here, as in many other deep-sea animals, with a phylogenetic retrograde formation of this organ of sense.

The subumbrella (figs. 2, 3, 4) is divided in the same way as the exumbrella, by the deeply incised coronal furrow, into two separate principal areæ, which are only connected by the thin gelatinous ring (*ec*) at the bottom of the coronal furrow. The central area of the subumbrella is therefore the same size as the central disk of the umbrella; it is formed by the gastrogenital membrane, which reaches as far as the distal margin of the coronal sinus, and contains the stomach in its central part and the corona of eight genitalia (*s*) and their alternating deltoid muscles (*md*) in the peripheric part. The deltoid muscles are narrow and slightly developed, especially the four perradial (*md'*) whilst the four interradian appear to be considerably broader (*md''*). All the eight deltoid muscles in *Atolla* are triangular only in the distal half, and rectangular in the proximal half (between the genitalia); the interradian muscles are inserted on the base line of the cathammal areæ (*kt*), the perradial at the distal margin of the gastral openings (*go*).

The coronal area of the subumbrella begins at the distal margin of the genitalia, and is separated from central area by the very thin ring of the gelatinous disk, which