

Each fold is formed by an elevation of the supporting lamella (*z*), which again forms secondary folds, and therefore appears dendritically branched in transverse section. The circular fibres of the muscular plate (*m*) cover this system of folds connectedly; and are covered in their turn by the ectodermal epithelial cells of the subumbrella (*qw*) from which they are secreted. The eight longitudinal deltoid muscles (figs. 2, 3, 4, 12, *md*) work antagonistically to the eight circular marginal muscles. In the deltoid muscles of our species the four perradial (*md'*) are very weak but very broad, whilst on the other hand the four interradian (*md''*) are much narrower, but proportionately more strongly developed. These appear to be the direct processes of the strong *tæniola* muscles, they run along the entire length of the septa of the pouches (fig. 12, *tr.s*), and split up below at the distal end of the latter, into two strong limbs (fig. 12, *md'''*) each of which bears a bunch of tentacles.

The umbrella margin has eight shallow concave depressions or "marginal sinuses," between which, as in all *Lucernaridæ* and *Pericolpidæ*, lie eight adradial marginal lobes. These eight adradial hollow marginal appendages, which have hitherto been generally termed "arms" in the *Lucernaridæ* and erroneously considered a special peculiarity of this family, are, in fact, from their situation, structure, and signification, merely the eight adradial marginal lobes of the closely allied *Pericolpidæ* and as such homologous to the eight sense lobes (or "eye lobes") of the *Periphyllidæ*. The essential difference from the *Pericolpidæ*, which is strikingly displayed by the *Lucernaridæ*, is that each of the marginal lobes or "arms" bears a brush-shaped bunch of numerous small, hollow knobbed tentacles at their points. Morphologically considered, these tentacles belong to the category of accessory or secondary tentacles, and are merely long-stalked urticating knobs. On the other hand the four principal tentacles of *Tessera* (four primary perradial and four secondary interradian) have disappeared in the genera *Lucernaria* and *Craterolophus*, whilst in *Halicllystus* and *Halicyathus* they are transformed into adhesive "marginal anchors." In our species the eight arms are very small, and less developed than in most other *Lucernaridæ*; they project only slightly from the umbrella margin as broad triangular points and are placed together in pairs, so that the four perradial sinuses of the umbrella margin are three times as large as the four interradian (figs. 1-4). Each short arm or marginal lobe bears a bunch of from 80-120 tentacles.

All the tentacles (Pl. XXII. figs. 15, 16) are completely fused together at their basal halves, so that only their distal halves are free and movable (fig. 15). They are cylindrical, 2-3 mm. long, when contracted (probably twice as long when extended), and nearly $\frac{1}{2}$ mm. thick. As in all true *Lucernaridæ*, they are hollow, thick-walled little tubes, whose *cæcal* and somewhat thinner distal end bears a thicker urticating knob. This stalked urticating knob in our species is developed into a strong sucking-cup, with a depressed sucking-pit in the middle (fig. 16, *x*). The hollow cylindrical epithelium of the ectoderm (*q*) is four to six times as high in the sucking-cup as on the tentacle stalk, and