

Medusen, 1879, p. 389). The four strong *tæniola* contain a well-developed, longitudinal muscle (figs. 13, *m*; 14, *m*); this is enclosed in a voluminous gelatinous sheath (*ft*), which is considerably thicker on the axial side than on the abaxial side, and which internally forms numerous dendritically branched folds. The muscular plate of the peduncle (*m*) is extended on these folds of the gelatinous supporting plate; it encloses a central axial cord of exoderm cells (*q*) lying in the axis of the *tæniolum*; there are the "epithelial muscular cells" of the exumbrella which have immigrated centripetally from its outer surface into the gelatinous selvage. The delicate figure shown by each *tæniolum* in its oval transverse section (fig. 14) consists, from its axis towards its periphery, of the following layers:—(1) The central cell-cord of the ectodermal epithelial muscular cells (*q*); (2) the folded muscular plate arising from it (*m*); (3) the fulcral lamella (*z*) with its dendritic supporting folds, and the thick gelatinous sheath surrounding it (*ft*); (4) the endodermal covering of the gastral epithelium (*d*).

The cup ("calyx"), or the peculiar "umbrella" of our *Lucernaria* (after removing the stalk) is almost oval, broadest in the middle, gradually passing into the conical peduncle above, and slightly contracted below towards the umbrella margin and the eight arms (figs. 1–3). As in all *Stauromedusæ*, the umbrella consists of two thin walls, an external convex umbrella and an inner concave subumbrella. The two walls enclose the hollow space of the gastrovascular system, pass into each other at the umbrella margin, and are otherwise only connected with each other by the four interradial septa ("lines of fusion, or cathammal selvages," *ks*). The two walls consist in section chiefly of a thin but firm gelatinous plate (fulcral lamella, *z*); its inner side is covered by gastral endoderm (*d*), its outer side by dermal exoderm (*q*). The external convex surface of the umbrella or the true exumbrella (*e*) is smooth, without special characteristics, and only traversed by four slight interradial longitudinal furrows (the distal processes of the peduncle furrow). The gelatinous substance under the exumbrella is not thick but very firm, and traversed by numerous elastic fibres which run from the outer to the inner surface of the gelatinous plate (fig. 13, *uf*); they are also equally numerous in the thin gelatinous plate of the subumbrella (fig. 18, *uf*). The ectodermal epithelium of both the exumbrella and the subumbrella is armed with scattered urticating organs (comp. my *System der Medusen*, 1879, p. 382).

The antrum or umbrella cavity ("necto-calyx") (*h*), which is lined by the ectoderm of the subumbrella (*qw*), is divided in our species, as in all *Lucernaridæ*, into two parts, the lower (distal), simple, coronal umbrella cavity, and the upper (proximal), quadrilocular, funnel umbrella cavity. The coronal umbrella cavity (fig. 5, *hc*, "antrum coronarium") is perfectly simple, cylindrical, or almost cubic, and occupies the entire lower half of the body; the eight deltoid muscles, and the distal halves of the genitalia lie in its sub-umbrellar wall. The funnel umbrella cavity ("antrum infundibulare," *i*) is divided from the coronal umbrella cavity by the oral boundary-line *E F* (figs. 2, 3), and is composed of