slightly above the umbrella margin, their lobe pouches (*bl*) never reach an independent development. The development is consequently proportionably greater of the four radial pouches, whose length is nearly two-thirds that of the whole length of the umbrella, and only partially occupied by the conspicuous genitalia, lying in their subumbral wall (comp. figs. 2–7, *bp*).

The genitalia (Pl. XVI. figs. 2–7, *s*, figs. 10, 11; Pl. XVII. figs. 17–19, 21). The specimen examined was a mature female, and showed most distinctly that the ova in the Lucernaridæ (as in all Stauromedusæ) are developed from the endoderm of and in the subumbral wall of the radial pouches, then fall into their cavity, reach the central stomach through the gastral openings, and are finally expelled through the mouth; all parts of the gastrovascular system of the uninjured Medusa contained when opened numerous, loose, ripe ova. The ovaries (figs. 2, 3, *sf*) form eight broad plates occupying the greater part of the subumbral wall of the four perradial gastral pouches, and are distributed in pairs in such a manner that the two genitalia separated by an interradial septum, form a connected pair. The two ovaries lying in one and the same radial points, therefore form two different pairs (comp. my System der Medusen, 1879, p. 386). The interradial interval between each two reproductive leaves is considerably smaller than the perradial interval; their distance from the distal margin of the four radial pouches is also much less than from the proximal margin (comp. figs. 2, 3, *sf*). Their outline is semi-oval or almost lanceolate, and broadened in the distal third.

The structure of the ovaries in *Lucernaria bathyphila* is very peculiar, and more complicated than in all other Stauromedusæ hitherto known. Even with the naked eye the upper surface of the eight reproductive glands appears granular as if paved, and a slight magnifying power (fig. 21, *sk*) shows that each genitalium is composed of a large number (nearly 200–250) of entirely separate sacs. These have an irregular roundish or polygonal outline, averaging 1 mm. in diameter (the smallest rather under ½ mm., the largest rather above 1½ mm.). Whilst in all other Lucernaridæ hitherto known these reproductive sacs ("sacculi genitalis," *sk*) represent simple glands with a single hollow space and excretory passage, in our deep-sea species they are lobed glands composed of several separate lobes or follicles, each having its own cavity and its own excretory passage. Each separate sac (fig. 10, seen from the surface, fig. 18, in perpendicular longitudinal section) is therefore usually composed of from thirty to fifty follicles (*sb*). Each separate follicle (fig. 11 from the surface, fig. 19 in longitudinal section) contains a "sinulus" (*sc*) or secondary cavity, which opens by a "ductulus" or secondary excretory passage (*sl*) into the "sinus genitalis," or principal cavity of the sac (fig. 18, *sc*); the last opening by its ductus or principal excretory passage (*sl*) into the radial pouch (*sa*). The ova (fig. 19, *so*), which are developed from the endodermal epithelium of the follicle, pass first from its sinulus (*sc*) into its ductulus (*sl*), thence into the sinus of the sacculus (fig. 18, *sc*), and from the sacculus by the ductus (*sl*) into the radial pouch. The ovary of