

*Leucilla uter*, n. sp. (Pl. VI. figs. 2a-2f).

From *Leucilla connexiva*, the form I am about to describe can be distinguished by its subdermal quadriradiate spicules, and by the absence of special cortical spicules, the function of these latter being performed by the facial rays of the quadriradiate spicules just mentioned. The main character differentiating *Leucilla uter* from *Leucilla amphora*, H., and *Leucilla capsula*, H., consists in the presence of the subgastric triradiate spicules, the corresponding ones being in these latter forms quadriradiate (Kalkschwämme, Bd. ii. p. 132, and p. 134).

The external form of this Sponge is variable; the specimen from the Bermudas is of irregular outline, presenting a sack 10 mm. wide at the bottom, and 8 mm. broad at the free end, the length of the longitudinal axis being 12 mm. Both the specimens from the Philippine Islands are of tubular elongated form, growing narrower towards both ends, the smaller specimen (the size of the larger could not be measured, its lower end having been broken off) reaching a length of 60 mm. with a maximum diameter of 7 mm., that of the larger specimen being 13 mm. The walls of this latter are 2 mm. thick, those of the smaller specimen 1 mm., those of the specimen from the Bermudas 1.5 mm. In all these specimens the outer surface is roughened by the cortical spicules, the inner surface bristly, owing to the apical rays of the gastric quadriradiate spicules, curved as usual towards the free end of the Sponge.

The specimen from the Bermudas was found to contain spermospores, and more or less developed larvæ (Amphiblastulæ).

*Skeleton*.—The skeleton consists of gastric quadriradiate, of subgastric triradiate, of parenchymal quadriradiate, of dermal quadriradiate spicules (not differing with regard to their form and size from those of the parenchyma), and of fine dermal acerate spicules.

*Gastric quadriradiate spicules*.—Sagittal; all rays of the same diameter (0.02 mm. on an average), more or less sharply pointed; basal ray straight, length inconstant, varying from 0.25 to 0.35 mm., forming with each of the lateral rays an angle of about 110°; lateral rays curved outwards, reaching a length of 0.4 mm.; apical ray curved, half as long as lateral rays. Towards the osculum these quadriradiate spicules grow smaller (lateral rays 0.3 mm. long, with a diameter of 0.0125 mm.), the concave lateral rays becoming straight and convex.

*Subgastric triradiate spicules*.—Sagittal, of the form of the corresponding spicules in *Leucilla connexiva*, but marked out by a great variability in the absolute and relative length of their rays; all rays sharp-pointed and of the same diameter, the proportion between their length and thickness varying from 12:1 to 20:1; length, as above mentioned, inconstant, not exceeding, however, 0.6 mm. in basal, and 0.42 mm. in lateral rays; some are provided with a rudimentary fourth apical ray.

*Quadriradiate spicules of the parenchyma and dermis*.—All rays of the same diameter, rarely exceeding 0.05 mm.; facial rays usually of the same length, varying from