

*Acerate spicules.*—Of three kinds. *Large acerate spicules of the parenchyma.*—Straight, probably exceeding 2.5 mm. in length, with a diameter of 0.06 mm., projecting from outer surface. They are extremely rare, and having always found them with the free end broken off, I can give no more precise statements as to their length. *Small acerate spicules of the parenchyma.*—Also rare, sparsely scattered here and there in the parenchyma near the outer surface, either in small heaps or isolated, usually situated perpendicularly to the surface, often showing no order in their disposition; average size: 0.3 mm. by 0.0025 mm. *Linear acerate spicules of the peristome.*—Fine, smooth, either straight or slightly curved, sharp-pointed, reaching 3 mm. in length and 0.005 mm. in diameter, often still thinner.

*Colour.*—Pale yellowish.

*Habitat.*—Station 36, April 23, 1873; off Bermudas; depth, 32 fathoms; mud.

*Leuconia levis*, n. sp. (Pl. VII. figs. 4a–4d).

The two specimens of the Challenger collection for which I establish this new species present elongated thin-walled tubes almost of the same diameter throughout their whole length, and only growing narrower close to the lower end like a wedge. The larger specimen is 50 mm. long, 7 mm. thick; the thickness of the walls is about 0.75 mm. The outer surface is smooth, the inner slightly roughened by the apical rays of the gastric quadriradiate spicules. The chief character of the species consists in the slenderness of its spicules. This is also common to *Leuconia fistulosa*, Bk., and *Leuconia pumila*, Bk., yet the size of the spicules, their form and their disposition, distinguish *Leuconia levis* from *Leuconia pumila*; on the other hand, the absence of the acerate spicules and the comparative shortness of the apical ray of the gastric quadriradiate spicules do not allow us to unite this form with *Leuconia fistulosa*, the rays of whose spicules are still more slender.

*Skeleton.*—The skeleton consists of gastric quadriradiate, of subgastric quadriradiate, of parenchymal triradiate, and of dermal triradiate spicules.

*Gastric quadriradiate spicules.*—All rays of the same average diameter of 0.015 mm.; facial rays cylindrical, either sharply or bluntly pointed, apical ray tapering from the base to a sharp point; basal ray straight, forming with each lateral ray an angle of 118°, usually twice as long as lateral rays, often still longer, not exceeding, however, 0.45 mm.; occasionally rather shorter; lateral rays either straight or slightly curved, often rather undulating, their average size 0.175 mm.; apical ray curved, rarely longer than 0.09 mm.

*Subgastric quadriradiate spicules* (lateral and apical rays in the plane of the gastric surface, basal ray directed centrifugally).—All rays smooth, tapering from the base to sharp points; facial rays of the same average diameter (0.0125 mm.); apical ray rather thinner; basal ray straight, usually 0.3 mm. long, forming with each of lateral rays an angle varying