

*Leuconia multiformis*, var. *capillata*.

Outer surface fur-like; osculum usually fringed with fine linear acerate spicules; gastric skeleton consisting mainly of the quadriradiate form.

*Leuconia multiformis*, var. *amorpha*.

Gastric skeleton, besides triradiate and quadriradiate, consisting also of minute acerate, spicules, sometimes lying isolated, sometimes filling all the interstices between the triradiate and quadriradiate spicules just mentioned. Outer surface more or less bristly. The minute acerate spicules are occasionally to be found in the parenchyma and on the outer surface too.

One of the specimens belonging to the variety *goliath* attains a length of 233 mm., and is the largest calcareous sponge hitherto known. The external form of the varieties *goliath* and *capillata* is that of an elongated tube; the specimens of the variety *amorpha* in the collection are of irregular outline, rather sac-like. The varieties *amorpha* and *goliath* are from Bermudas, the variety *capillata* from Zebu.

*Skeleton*.—The skeleton consists of gastric quadriradiate and triradiate, of subgastric triradiate, of quadriradiate and triradiate spicules belonging to the parenchyma, of dermal triradiate, of large acerate, of minute acerate, and of fine linear acerate spicules of the peristome.

*Gastric quadriradiate and triradiate spicules*.—Basal ray straight, tapering from the base to a sharp point, usually half as long as lateral rays, with a diameter of 0.02 mm.; lateral rays slightly curved inwards, of rather cylindrical form, yet sharply pointed, each forming with basal ray an angle of 100° to 105°, average size 0.45 by 0.015 mm.; apical ray of the same thickness (0.015 mm.), curved, sharply pointed, length varying from 0 to 0.15 mm.

*Subgastric triradiate spicules*.—Sagittal; all rays of the same average diameter (0.035 mm.), smooth, tapering from the base to an approximately sharp point; basal ray straight, its length not exceeding 0.75 mm.; lateral rays undulating, forming with each other an angle varying from 180° to 150°, rarely exceeding 0.45 mm. in length.

*Quadriradiate spicules of the parenchyma*.—To be found only in the walls of the exhalent canals, too rare to be of any systematic significance; usually of the form and size of gastric quadriradiate spicules, sometimes twice as long and thick, with lateral rays curved outwards; this latter form is connected with the common gastric quadriradiate by intermediate stages.

*Triradiate spicules of the parenchyma*.—All rays of the same average diameter (0.065 mm.), either lying in the same plane throughout their whole length or bent in such a manner that the plane of the junction of the rays is different from that of their ends; sharp-pointed, rarely longer than 0.7 mm., the comparative length of basal ray being slightly inconstant; some quite regular, the greater part sagittal, the angle formed by basal and each of lateral rays varying from 120° to 110°. There are also in the paren-