On an Undescribed Species of Sponge of the Genus Polymastia, from Honduras.

By B. W. Priest.

(*Read June* 24, 1881.)

PLATE XXIII.

Some months back Mr. Curties placed in my hands a Sponge for description, sent by Mr. B. Wills Richardson, found in shallow water, 14 to 17 fathoms, near Belize, British Honduras, at a part of the coast not previously dredged. On examination it proved to belong to the genus *Polymastia* of Bowerbank, but to the best of my knowledge it is an undescribed species.

The generic name is derived from the Greek, πολὺς, many, and μάστις, a whip, scourge, or flail, from the presence of fistulæ, simulating those instruments more or less, projecting from the surface of the Sponge.

The specific name I propose is *bi-clavata*, for reasons which will be shown further on.

According to Dr. Bowerbank we have eight recognised British species, but none of them showing the three special characteristics of the one under consideration. In this, we have a Sponge which may be called massive and bulbous, measuring rather more than a quarter of an inch, not including the fistulæ, from the summit to the base, and rather larger in diameter, say, just under half an inch. The outer crust, along with the inner walls and supports of the sponge, as also the fistulæ—in fact, the whole skeleton—being composed of a beautiful network, abundantly supplied with bi-clavate fusiform spicules of various sizes, averaging from the $\frac{1}{50}$ to $\frac{1}{80}$ of an inch, the difference in size being probably due to states of development. The sarcode which fills the cavities of the Sponge, as also the interstitial membrane, when present in this specimen, are supplied with spicules of the same type as the skeleton, but fewer in number, and also abundantly with equi-tridentate anchorate spicules of two sizes, the larger measuring $\frac{1}{1500}$ of an inch, the

smaller the $\frac{1}{2000}$ of an inch. There are also a great many bihamate spicules, measuring the $\frac{1}{500}$ of an inch. Scattered throughout the interior of the Sponge are a number of fasciculi of fine hair-like spicules, each spicule measuring about the $\frac{1}{100}$ of an inch, and having just the same appearance as the raphides in plants.

A vertical section of the Sponge shows the position of the walls to the outer crust, and, as you will observe in Fig. 4, which was drawn from the section itself, it has the appearance of arches where the cavities are filled with the sarcode. Fig. 1 shows the Sponge much enlarged, before being mutilated for examination, having five of the fistulæ on the side exposed to view, and about three more on the other, the tip of one being observed showing over the top of the Sponge. In Fig. 2 we have an enlarged view of one of the fistulæ, with a portion of the network (Fig. 3) still further magnified, showing the relative positions of the spicules.

It reminds one rather of *Euplectella* on a small scale. Dr. Bowerbank noticed the same resemblance, and was led to consider that the genus must be closely allied to *Alcyoncellum* from that cause, though it is certainly not like it, to my mind, when thoroughly examined, as the spicules of *Polymastia* do not anastomatose as they do in *Euplectella*, besides wanting the flesh spicules of that group.*

Some of the species of *Polymastia* have only one fistula, as in *P. bulbosa* ; in others they are very numerous, as in *P. robusta*, but our present species seems to be moderate in its number. The various species that I have come across have the skeleton spicules either acerate, fusiform-acerate, spinulate, or fusiform-spinulate, and in one case bi-spinulate, but none have bi-clavate fusiform spicules, or equi-tridentate anchorate or other anchorate, or bi-hamate spicules, both of which, as we have seen, are present in the Sponge I am describing. I propose, therefore, to name it

Polymastia biclavata (*B. W. Priest*).

Sponge massive, bulbous ; fistulæ moderate in number ; oscula at distal extremity ; pores inconspicuous ; dermal membrane pellucid, thin, with minute bi-clavate spicules dispersed over its surface ; skeleton spicules bi-clavate fusiform, with abnormal forms of the same occurring occasionally through the Sponge ; interstitial

* Since writing the above I find that Dr. Bowerbank mentions the same fact in one of his later volumes.

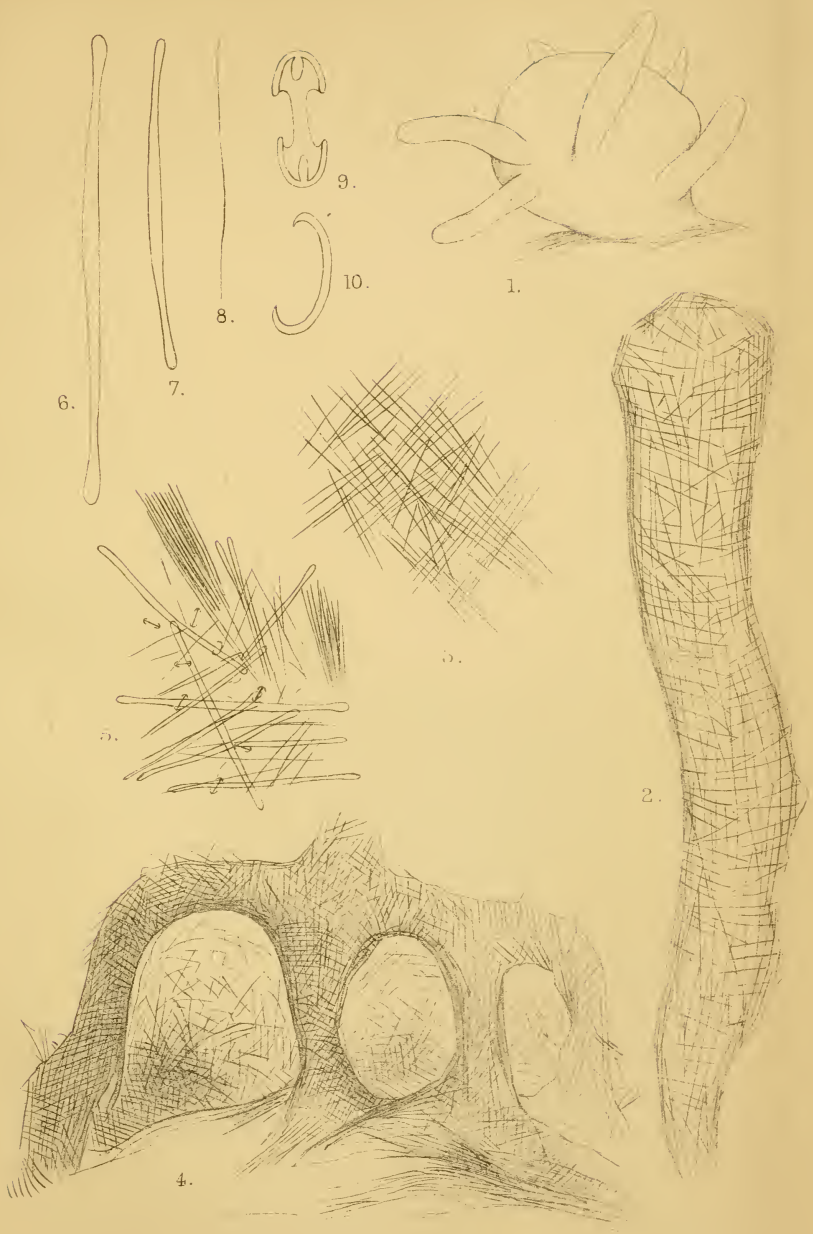
skeleton with the same spicules, along with equi-tridentate anchorate and bi-hamate spicules, as also fasciculi of fine acerate hair-like spicules dispersed through the Sponge. Examined after being in spirit, and then of a light fawn colour.

We have here the spicules of this Sponge in Figs. 6-10, the bi-clavate fusiform, the acerate fusiform spicule of the fasciculi, the anchorate, and the bi-hamate.

In conclusion, I have to apologise to Mr. Curties and Mr. Richardson for having been so long in bringing this description before the Club, and to tender my sincere thanks to my friend Mr. Waller for the assistance he has given me in the determination of the Sponge.

DESCRIPTION OF PLATE XXIII.

Fig. 1.—*Polymastia biclavata*, with fistulæ *in situ*.
Fig. 2.—Enlarged fistula of same, × 18 diam.
Fig. 3.—Portion showing arrangement of spicules in fistula.
Fig. 4.—Vertical section through centre of Sponge, showing cavities filled with sarcode, × 12 diam.
Fig. 5.—Portion of sarcode showing fasciculi of spicules.
Figs. 6 and 7.—Bi-clavate spicules of skeleton.
Fig. 8.—Acerate spicule of fasciculi.
Fig. 9.—Equi-tridentate anchorate spicule of sarcode.
Fig. 10.—Bi-hamate spicule of sarcode.



J. G. Waller. del.

Mintern Bros. imp.

Polymastia biclavata.