

species appears to have a distinct affinity with *Trichostemma*; its small size, general form, and projecting spicules seem to indicate this; for the same reason it stands well apart from other species in its own genus.

Locality.—Station 246, July 2, 1875; lat. 36° 10' N., long. 178° 0' E.; North Pacific Ocean; depth, 2050 fathoms; bottom, Globigerina ooze; bottom temperature, 35°·1. One specimen.

Genus *Polymastia*, Bowerbank (Pls. XLI., XLII., XLIV.).

1864. *Polymastia*, Bowerbank, Mon. Brit. Spong., vol. i. p. 177.

1870. (?) *Rinalda*, Schmidt, Spong. Atlant. Gebiet., p. 51.

1885. *Weberella*, Vosmaer, Sponges of "Willem Barents" Expedition, 1880–81, p. 16.

Suberitidæ of massive, sessile form, with more or less numerous mammiform processes on the upper surface, some of which may bear oscula at their summits, but usually without visible openings. Skeleton radiately arranged; stout main fibres run vertically to the surface, and there is a cortical layer of smaller spicules arranged vertically to the surface, extending both over the body and the mammiform processes. Megasclera tylostyli or styli. Sponge usually attached and without any supporting fringe of spicules.

Vosmaer (*loc. cit.*) gives the following diagnosis of his genus *Weberella*:—"Massive, globular, very compact. The surface covered with stout, short papillæ. On sections a rind is nearly always distinguished from the mark. Main canals surrounded by compact connective tissue. Canal system of the fourth type. Spicules acute or pin-shaped." The chief difference from *Polymastia* appears to lie in the shortness of the mammiform processes, but here, as also in *Polymastia*, they are not merely slightly elevated oscula but sometimes closed at the extremities, hence we can see no reason for separating the two genera.

We have some reasons for believing that the genus *Trichostemma* will also ultimately have to be united with *Polymastia*, but further investigation than the time at our disposal will allow of is necessary before taking this step.¹

The genus *Polymastia* is chiefly confined to deep water, but curiously few representatives of it were obtained by the Challenger.

Polymastia robusta, Bowerbank (Pl. XLI. fig. 8).

1861. *Euplectella robusta*, Bowerbank, List of British Marine Invertebrate Fauna, Rep. of Brit. Assoc. for 1860, p. 236.

1866. *Polymastia robusta*, Bowerbank, Mon. Brit. Spong., vol. ii. p. 62; see also *op. cit.*, vol. iii., pl. x., p. 23, and vol. iv. p. 31.

This species is represented in the collection by a single fine specimen (Pl. XLI. fig. 8) dredged off the south of Nova Scotia; in external appearance the specimen has a

¹ Cf. footnote, p. 218.