

The spiculation is distinguished by its plasticity, the different forms of linear spicules appearing to run into each other, and to have little constancy within the genus; species are, however, separable by the forms and proportions of their spicules. An elongated flexuous form is fairly constant.

*Acanthella pulcherrima*, Ridley and Dendy (Pl. XXXII. fig. 3).

1884. *Acanthella* sp., Ridley, Zool. Coll. H.M.S. "Alert," Brit. Mus., 1884, p. 463.

1886. *Acanthella pulcherrima*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 479.

This species was obtained by the "Alert" and described by Ridley (*loc. cit.*) without a name and with no figures. We have decided to quote the original description and to add a figure of the very characteristic external form (Pl. XXXII. fig. 3).

"Externally resembling *Spongia carduus*, Lamarck (Ann. Mus. Hist. Nat. xx. p. 381). When guided by the description alone, I had referred the present specimen to this species with more confidence than usual; but on mounting sections of the probable type specimen at Paris, I saw that it was a different species. The points in which the description does not quite suit this form are "pédicule cylindracé, très-dur," the stem having apparently been flattish, and, though stiff, not inflexible; and "couleur d'un blanc grisâtre," whereas this (in spirit) is flesh-colour. The ridges run longitudinally up and down the sponge, and are 1 to 3 millims. high, and their free edge is beset with sharp (in spirit flexible) points at intervals of one or two millimetres. Texture tough and flexible, substance compact, surface between inequalities glabrous. It is a true *Acanthella*. The spiculation is as follows:—(1) Smooth acute, slightly curved, tapering gradually to a sharp point, about .4 to .6 millim. by .0095 millim. (2) Smooth undulating cylindrical with rounded ends, length about .7 millim., diameter just .0063 millim.

"The species differs from the Adriatic forms, *A. acuta* and *obtusata*, Schmidt, in the broad explanate form and in the smaller size of the spicules, the cylindrical being much shorter and thinner, the acute much shorter than in those species. The skeleton forms a loose-fibred *Axinella*-like network of spicules, imbedded in a dense, transparent, almost colourless mass of caoutchouc-like consistency, containing nucleoid bodies about .007 to .008 millim. in diameter.

"*Hab.* Prince of Wales Channel, Torres Straits, 7 fms. A single specimen in spirit, 35 millim. (1½ inch) high by 29 millim. across."

As regards spiculation we must further add that an unequal-ended oxete spicule is also common, of about the same size as the stylus. This is a remarkably pretty sponge. The Challenger obtained one specimen (Pl. XXXII. fig. 3), measuring about 56 mm. in height and 46 mm. in breadth; it is based upon an agglomeration of Polyzoa, fragments of barnacles, &c., and is a very much finer example than that obtained by the "Alert."

*Locality.*—Cape York, Torres Strait; depth, 3 to 11 fathoms.

*Habitat.*—Torres Strait ("Alert," Challenger).