

on Pl. XCVIII. fig. 3. Moreover, the results of microscopic examination of the beams of the framework are in complete accordance with the description by Marshall and Murie. All the beams of the network, the meshes of which are not always quite regular, though generally square, are more or less richly beset with prongs which are either low and pointed, or larger, broader, and more acute, as shown in Pl. XCVIII. fig. 11. The whole framework is traversed by round canals, from 2 to 3 mm. in width, which open out laterally.

In the comparatively well-preserved large specimen studied by Murie, whose original figure I have copied on Pl. XCVIII. figs. 1, 2, and 4, ring-like or spiral wreaths were found to originate laterally on the branches of the stock, while between these bands of approximately uniform breadth occur. It is only in these wreaths that the extremities of the laterally bent longitudinal fibres of the dictyonal framework project freely (Pl. XCVIII. figs. 2, 4). Although, moreover, in the case of the specimen examined by Murie, only the deepened furrows were covered with a dermal lattice-like network of delicate hexacts, forming square meshes, he still regarded it as possible that the entire surface of the whole sponge was covered with such a dermal network.

Since I was able, in the British Museum, to examine some microscopic preparations, which were probably made from Murie's original specimen, and to compare the loose spicules preserved in great abundance, and partly in their natural position, with those which could be discovered here and there in the fragments from the Challenger Expedition, I was able to demonstrate the most complete agreement between the two forms. The identity of the species is therefore indubitable.

The slender hexacts of the dermal skeleton are covered with small pointed tubercles, especially on the extremities of the straight rays which run out to simple points. The distal ray is shorter, the proximal longer than the four equal intersecting tangentials. The outer extremity of every distal ray seems to be associated with a regular floricomelike hexaster. In the best preserved portions I found these on almost all hexacts of the dermal network (Pl. XCVIII. fig. 5).

Each of the six strong round and moderately short basal rays bears six terminals, which have the form of a liliaceous perianth, being slightly curved. They become gradually thicker towards the outer extremities, and finally terminate in a spherical knob. It seems to me noteworthy that these freely projecting spicules differ in the formation of the outer extremities of their terminal rays from the true floricoles of the Euplectellidæ, &c., though they agree in position and general form (Pl. XCVIII. fig. 6).

In addition to the dermal hexacts with radial axial ray, strong dermal scopulæ occur with rough shaft and four strong almost parallel teeth, which are likewise rough, and pass into a small terminal thickening (Pl. XCVIII. fig. 9).

Between the beams of the lattice-like dictyonal framework, strong uncinates occur