present on one of the specimens examined by Carter, is conditioned by the somewhat looser nature of the substratum.

On the middle of the upper end there is a sharp cornered, round, oscular aperture, leading directly into the equally wide, deep, gastral cavity, which has a cylindrical form, and is rounded off in the blind lower portion. The cavity occupies about a third of the entire diameter of the body (Pl. LV. fig. 1). The whole external surface of the body is beset with numerous regularly distributed, but somewhat undefined, papilla-like elevations, which attain a height of 2 to 4 mm., and occur, according to the size of the sponge, at variable distances of 2 to 10 mm. or more. From each of these papillæ a tuft of radially directed pleuralia projects. Of these spicules some run out to a point, while others, at a distance of 3 to 8 mm., give off transversely disposed tangentials, which go to form a veil over the surface of the sponge. Near the oscular opening the papillæ become less conspicuous and more crowded, but cease altogether close to the oscular margin. Instead of them, a large number of isolated pointed radial spicules occur, which form a sort of marginal fringe, not round the sharp edge of the osculum, however, but at a slight distance further out. Nor do they form a sharply-defined, cuff-like fringe. I observed similar prostalia round the oscular margin of the original specimens described by Carter, but besides these some more transversely directed needles, forming a sort of flat collar, which I did not find developed on the Challenger specimens. In the uniformly even, but fine velvet-like sieve-network of the gastral membrane, numerous round apertures could be seen. These measure about 2 mm. in diameter, and occur in uniform distribution at intervals of 2 to 3 mm. over the whole gastral surface of the sponge. They represent the main efferent canals, which alternate with the afferent passages, and are uniformly disposed at right angles to the lateral wall. In cross sections the parenchyma is seen as a deeply folded layer (Pl. LV. figs. 1, 7).

The principal supporting spicules of the loose parenchyma consist of longer or short, straight or gently curved diacts, which vary in strength, and are either isolated, or are irregularly disposed in strands throughout the body. A strongly-developed beam is usually ensheathed by a layer of thin comitalia. Most of these diacts are smooth except at the extremities, which are rough or tubercled, and either end in conical points or are somewhat rounded off and occasionally club-shaped. The central portion usually exhibits an annular thickening, or four cruciately disposed tubercles. Even when the middle is quite smooth and without projection, a trace of the axial cross is often apparent. Between the strands of diacts, there is here and there a tolerably abundant occurrence of rough or even spinose regular hexacts of less than medium size. Numerous minute, rough, regular hexacts also occur. There is a very abundant occurrence of small rough oxyhexasters with a varying number of rays divided into terminals. Frequently only one ray is thus split, but usually three or four, and rarely all the six. The forking of the principal ray always takes place at a slight distance from the frequently thickened node of inter-