

usually without any, or with only a very slight terminal swelling, and indeed, as a rule, ends in a usually conical, roughened point. The length of the distal and proximal radial rays varies greatly. The tangentials measure, on an average, 0.2 to 0.3 mm. in length, and the distals are not unfrequently of the same size, but the latter may in some situations, *e.g.*, near the lower end of the body, attain more than double the length of the former. The proximal ray exhibits a similar variability, measuring sometimes only 0.1 mm. in length, and in other cases 0.4 to 0.5 or more, while in thickness it always falls considerably below that of the distal.

Here and there, on the external surface, I found simple cruciform tetracts, with smooth knobbed rays, pointed at the extremity (Pl. LXX. fig. 10). The fact that, for the most part, only a few dermalia were to be found on the external surface, is probably to be traced to the injuries which the sponge seems to have suffered by attrition. I found these dermal hexacts most abundantly and in best preservation at the pointed basal extremity of the body, just above the origin of the stalk. They were also abundant, though somewhat displaced, in the deep folds of the already mentioned plicated side of the body, which, if flattened out, would form part of the external surface.

The stalk is chiefly composed of very long needles of various thickness, closely arranged, parallel to the longitudinal axis, and, especially in the inferior portion, frequently bound together by transverse synapticula (Pl. LXX. fig. 9). On the external surface, between the longitudinally disposed diacts, I found forms the same as those above described as parenchymalia, as well as similar hexacts with club-shaped distal rays, and simple cruciform tetracts, somewhat bent towards the surface.

I am not in a position to report so definitely as to the gastral skeletal elements, since I was not able to study them in their natural disposition. In the interior of the body, in the numerous septa, hexacts and pentacts occur in abundance, with somewhat long, smooth rays, which end in slightly club-shaped thickenings; and it seems to me probable that these function as gastralia, though I was unfortunately unable definitely to determine their disposition.

It is clear that this curious form, obtained from the depths of the South Pacific, at a great distance from land, must occupy a peculiar position in the system of the Sponges. On the one hand, the character of the hexact dermalia with their diverging distal rays would suggest an alliance with the family of the Euplectellidæ, in which, further, such remarkable twisted oxydiacts alone occur (in *Rhabdoplectella tintinnus*, Pl. XII. fig. 11); while, on the other hand, all the microscopic characters of the body, and the sharply defined, long, narrow stalk indicate a closer resemblance to such forms as *Crateromorpha*, *Aulochone*, and especially *Caulocalyx* (Pl. LXIX.), to which we shall have again to refer in detail.