

Sometimes, again, and this is a fact of some importance, a cladus of either a protriæne or anatriæne gives off a secondary cladus at the point of enforced bending, and thus becomes dichocladosc. I have previously suggested that bending leads to the budding of fresh cladi at the point of flexion, and this seems to be a case in point; for dichotriænes are unknown amongst the Tetillidæ as regular constituents of the skeleton, and we have not the least fragment of evidence to show that they have descended from ancestral sponges which once possessed them, but many general considerations to the contrary. Hence, when bifurcation arises, as in this case, we must regard it as a variation appearing *de novo*, and may attempt to account for it by the conditions of the case, which appear in this instance to be the action of secondary pressures or tensions different to those under which the regular triæne form was produced.

The oxea also exhibits interesting departures from the normal type. The distal end is not unfrequently rounded off, and this may occur close to where the point would otherwise have been, or a millimeter or more away from it. Not only so, but secondary cladi may be developed from it, thus producing in a rudimentary and unsymmetrical form a kind of prodiæne spicule (Pl. V. fig. 13).

The young anatriænes (Pl. V. fig. 7) differ from the adult in that they terminate distally in a swollen bulb-like end, through which the axial rod or fibre passes, and after enlarging somewhat in the middle of the cladome, continues right up to the end of the spicule. From the sides of the bulb the cladi project, making a larger angle with the rhabdome than they do in the adult spicule. In the adult spicule the axial fibre is not continued past the origin of the axial fibre of the cladi. In the young forms one sometimes meets with a projection of the rhabdome for some considerable distance beyond the cladome; it then terminates in a rounded end (Pl. V. figs. 8, 9). This seems to me a point of some significance in connection with the question of the origin of the triæne.

The differentiation of the anatriænes into those of the cortex and those of the roots, seems to stand in connection with the additional tension to which those of the roots are exposed.

The young protriænes (Pl. V. figs. 10, 11) differ from the adult in somewhat the same fashion as in the case of the anatriænes.

*Tetilla grandis*, var. *alba*, nov. (Pl. V. fig. 3).

*Sponge* similar to *Tetilla grandis*, but distinguished by the absence of an anchoring basal mass. In addition, the flagellated chambers are larger, attaining a diameter of from 0.0513 to 0.0671 mm.

The spicules, which are quite similar to those of *Tetilla grandis*, gave the following measurements:—*Oxea* 5.7 by 0.063 mm.; *protriæne* 11.78 by 0.0316 mm.; *trichodal protriæne* 1.0 mm. long; *anatriæne* 19.6 mm. long, 0.0118 mm. broad in the middle