

In the Stellettidæ the triænes, as in all triænose sponges, always both in the adult and young sponge, give evidence of an early oxytylote stage (*vide* p. 144, Pl. XIII. figs. 16, 20).

The morphological argument appears scarcely less strong than the ontological; thus the form of the rhabdome of the triæne is in many cases, especially within the Tetillidæ, suggestive of a rhabdal origin. It is frequently fusiform, and so closely resembles the associated oxeas, that with the cladome removed it cannot be distinguished from them. The resemblance is enhanced by the anisoactinate character of the oxeas, the centrifugal actine of which is usually far shorter and therefore apparently stouter than the centripetal. The fusiform anisoactinate oxea has every appearance of homology with the anisoactinate fusiform rhabdome of the triæne; the morphological centre of the oxea lies between the two actines, and if the rhabdome of the triæne is homologous with it, its morphological centre likewise lies somewhere in the middle of its thickest part and not at the cladal origin.

Another point in favour of the rhabdal origin of the triæne may possibly be found in the extension of the rhabdome beyond the cladal origin (*vide* p. 13, Pl. V. figs. 8, 9). The existence of the centrotriæne and the amphitriæne also suggest a secondary rather than a primary origin for the cladome.

Finally, the position of the nucleus of the scleroblast is a strong point in favour of homologising the rhabdome of the triæne with a rhabdus; thus it is situated in the case of the Tetillid triæne upon the rhabdome at or about the point where its diameter is greatest, and it occupies a similar position in the associated oxeas, so that if we assume that the nucleus corresponds in position with the actinal centre, the homology of the rhabdome with the rhabdus would be proved. In the triænes of other Tetractinellida, not Tetillidæ, the scleroblastic nucleus never occurs in the region of the cladal origin but always from about one-third to one-fifth the length of the rhabdome distant from it. The only fact which I have come across at all opposed to the view here advocated is furnished by the very young dichotriænes of *Thenea* and *Stelletta*, these sometimes present a rhabdome which is shorter than the cladi, and since in the adult sponge the rhabdome is several times longer than the cladi, it follows that the scleroblastic nucleus may be shifted away from the cladal origin with the growth of the rhabdome, and thus that its position in the adult spicule is a secondarily acquired one. I have never seen the scleroblast of these young dichotriænes, and so can say nothing as to the position of its nucleus, but in the Tetillidæ it is situated in the young triænes as far from the cladal origin as in the adult.

Again certain general considerations may be adduced in favour of the rhabdal origin of the triæne; thus if we trust to the ontogenetic evidence furnished by the Tetillidæ and the Stellettidæ, we shall be led to suppose that the rhabdus first became modified into an oxytylote and subsequently spines originated from the tylus, and if instead of these families we consider the Theneidæ, we shall have to assume an oxystrongyle as the