

peculiar mode of development, whilst the accessory septa, which are paired from the beginning, are still wanting.

The constitution of the septa in *Halcampa clavus* shows further peculiarities worthy of notice, which seem to me to indicate its relation to the *Edwardsiæ*. As I was preparing a series of sections through the one half of the physa of the larger specimen, it struck me that three septa (including the pair of directive septa) were not so strong as the other septa, inasmuch as their longitudinal muscular cords became sooner indistinct (Pl. XIII. fig. 7). In the second smaller *Halcampa*, in which I was able to make sections through the entire body, four septa were somewhat smaller than the eight others; and, finally, Strethill Wright has described a parasitic *Halcampa* living on *Medusæ* (*Halcampa fultoni*), in which we can distinguish four stronger and eight weaker septa (Ann. and Mag. Nat. Hist., ser. iii. vol. viii. p. 133, 1861). All this shows that an unequal development of the septa, and, consequently, a difference in their morphological value, is not unusual in *Halcampa*. If we assume that the eight stronger septa are homologous with the septa of *Edwardsia*, whilst the four other septa are new formations, then the genus *Halcampa* would present us with transition forms between the *Edwardsiæ* and the *Hexactiniæ*.

I shall not discuss the point in question further, but I wish to draw particular attention to the importance of a detailed investigation of the *Ilyanthidæ* for a phylogenetic study of the Actiniaria. I am of opinion that an investigation of the position of septa, extended not only over the mature animals, but also over the larvæ, would furnish us with very interesting explanations as to the manner in which the paired arrangement of the septa has been developed among the Actiniaria. Of course a mere enumeration of the septa would not suffice, but it would be necessary to lay down definite characters for the determination of the septa newly formed in the *Ilyanthidæ*, with special reference to the distribution of the muscles and the relations of position depending upon it.

Reproductive organs were present in all the septa; ovaries in the larger of the two specimens examined, testes in the smaller; they lay below the œsophagus, inwards from the longitudinal muscles. The ovaries were admirably preserved, so that I availed myself of the opportunity to make a more detailed examination of the origin of the ovicells and the structure of the filamental apparatus. The youngest ova are again portions of the epithelium (Pl. XII. fig. 11), and become surrounded very gradually by the supporting lamella; if the latter be strongly coloured, we see from ova of considerable size, such as that given in fig. 11, that they are not yet entirely surrounded by the supporting lamella, but that the interior of the follicle of the ovum still communicates with the epithelium by means of a wide, roundish opening. A fine hatching is visible on that portion of the ovum which closes the opening as though fine filaments were present on the surface; these are either processes of the ovum itself, which serve to connect it with the epithelium, or they are the bases of the epithelial cells. This point