

the main cavity of the body, while, in a more advanced state, the interambulacral tubes communicate only indirectly with the digestive cavity, through the sexual pouches. And among the Cryptocarpæ this affinity is towards the *Æginidæ*, rather than towards any other family, if we take into consideration that in the ephyræ the radiating chymiferous channels are at first rather broad and flat, like the radiating pouches of *Ægina* and *Cunina*, and become more tubular only at a later period. Presently we shall have to consider more fully these affinities. The second point of resemblance, between the ephyræ and the Cryptocarpæ, lies in the simpler structure and greater prominence of their eyes, which at first resemble a speck upon a short tentacle, more than at any later period; and it is a fact, that, in most Cryptocarpæ provided with eyes, these stand out from the base of the tentacles. The comparatively large size of the veil is another striking feature common to the ephyræ and the Cryptocarpæ; and so prominent is this membrane in the latter, that Gegenbaur has insisted upon its presence, as a distinctive character of the Craspedota, to which all the Cryptocarpæ of Eschscholtz belong, from the *Acraspeda*, to which he refers *Aurelia*, overlooking the existence of a veil in this genus. The simplicity of the mouth in the ephyræ is also a structural feature characteristic of the adult Cryptocarpæ, when compared to the extraordinary development of the oral appendages in the adult *Planerocarpæ*. It is, therefore, evident that the young *Aurelia* has greater affinities with the naked-eyed *Medusæ*, in proportion as it is nearer its earlier ephyra condition, and we shall soon see that it loses, gradually, these affinities, as it assumes, gradually, more and more, the structural peculiarities of its adult state.

The difference already noticed between the *Æginidæ* and the other Cryptocarpæ in the structure of their radiating chymiferous cavities, is of great importance with reference to the natural affinities of this family. Gegenbaur, who first called attention to their peculiarities, and separated them as a distinct family from the other Craspedota, justly remarks that they have but a remote affinity to them. He calls special attention to the pouch-like, radiating prolongations of the main cavity and the mode of insertion of their tentacles above the margin of the disk, and the sheath-like protection afforded their base by this peculiar relation. Now these characters are entirely foreign to the type of the Cryptocarpæ proper, in which the tentacles are always marginal and in direct connection with the marginal chymiferous tube, while the radiating channels are always simple tubes. On the contrary, we find that in the *Discophoræ* proper, and especially in their lower representatives, such as *Pelagia* and *Nausithöe*, the radiating channels are pouch-like prolongations of the main cavity of the body, and the tentacles arise between deep indentations of the margin of the disk, exactly as in the *Æginidæ*. And even in *Aurelia*, in which the tentacles seem to be marginal, a careful examination