

that the two former organs escaped the notice of MM. Audouin and Milne-Edwards, in their original description of the species from Port Jackson, where it was obtained by Capt. Freycinet in his celebrated voyage round the world. In two instances in the British Museum the specimens occurred amongst barnacles.

#### Family APHRODITIDÆ.

The descriptions of the family given by Kinberg and other authors render it unnecessary to define it on the present occasion. All the genera procured in the Expedition of the Challenger fall under those already described, yet there are some forms which, from their intermediate structure, help to clear up the relationships between *Aphrodita*, *Lætmonice*, and *Hermione*, and especially indicate the steps between the two first mentioned. Something of the same kind, however, is brought to light without traversing the great oceans, viz., in watching the development of the bristles in the ventral branch of *Hermione hystrix*.

Those authors who, like Savigny, Milne-Edwards, De Quatrefages, Grube, and Ehlers place the Aphroditidæ, Polynoidæ, Acœtidæ, and Sigalionidæ in one family have certain grounds for this step. Thus all have biramous segments, all have ventral cirri on every foot; the scales are borne by similar segments; the head has two eyes on each side, a median tentacle, a pair of palpi, and four tentacular cirri. Moreover, there is a certain agreement in regard to the arrangement and relation of the great nerve-cords, which in *Aphrodita* occur in a transversely elongated space between the ventral attachments of the oblique muscles, bounded externally by the hypodermic basement-tissue of the cuticle; in *Polynoë* they occupy a hypodermic area between the ventral longitudinal muscles, the oblique muscles piercing the vertical at the upper and outer angle of the space, and being attached externally and superiorly to the cords. In the Acœtidæ they are situated in the hypodermic region between the ventral longitudinal muscles (which are closer than in the Polynoidæ), a thin layer of the former occurring between them and the cuticle. The great oblique muscles pass down to their upper and outer border. Lastly, in the Sigalionidæ the space between the ventral longitudinal muscles is still more narrowed than in the previous group, and the hypodermic area for the nerves is thus increased in depth. Superiorly the arch is completely covered by the insertions of the vertical and oblique muscles; and the latter do not pierce the former (which occupy the middle line), but are attached to the basement-tissue below them on each side of the nerve-area. It will be observed that there is a gradational narrowing of the ventral longitudinal muscles between the first and last mentioned groups.

On the other hand there are fair reasons why several authors adhere to the arrangement of these groups in separate families. Thus, for instance, the Polynoidæ diverge