

Perisiphonia pectinata is the result not only of the small number of peripheral tubes which enter into their composition, but of the fact that both peripheral and axial tubes are themselves more slender in this species than in the other. While the number of peripheral tubes in the pinnæ of *Perisiphonia filicula* is as many as ten or possibly more, I have always found the number of these tubes in the peripheral fascicle of *Perisiphonia pectinata* to be limited to six.

The superficial sarcothecal system is particularly well developed in *Perisiphonia pectinata*, in which the sarcothecæ are considerably longer than in *Perisiphonia filicula*. They spring from the peripheral tubes by a slightly dilated base.

Family GRAMMARIDÆ.

Character of the Family. Trophosome.—Hydrocaulus consisting of an axial tube which carries the hydrothecæ, and is entirely surrounded by a definite number of peripheral tubes which are destitute of hydrothecæ. Axial and peripheral tubes inseparably coalesced. All the hydrothecæ adnate by their sides to the axial tube. Hydranths with conical hypostome.

Gonosome not known.

Grammaria, Stimpson.

Grammaria, Stimpson, Marine Invertebrata of Grand Manau.

*Generic Character.*¹ *Trophosome.*—Colony, a ramified hydrocaulus composed of a fascicle of longitudinal tubes definite in number and inseparably adnate to one another, of which one is axial and the others peripheral, the axial tube entirely covered by the peripheral, and sending off, from distance to distance along its length, tubular, non-pedunculated hydrothecæ, which are at first adnate to it by their sides, and then, passing between the peripheral tubes, reach the surface of the fascicle, where they form definite longitudinal series directed on all sides round its circumference.

Gonosome not known.

The tubes which are combined into the fascicle which forms the stem and branches of the colony in *Grammaria* are very definite in number and arrangement, though their close adhesion to one another renders it difficult to determine their exact relation to the hydrothecæ. One of these tubes always occupies the axis of the fascicle and gives off from distance to distance the hydrothecæ, which are at first inseparably adnate to the tube from which they spring, and then, becoming free, bend outwards between the peripheral tubes so as to reach the surface of the fascicle, and thence project into the surrounding water.

¹ The facts brought to light by a study of the specimens of *Grammaria* obtained by the Challenger have rendered necessary a fundamental revision of the characters hitherto regarded as diagnostic of this genus.