

that summer in Torquay harbour. They were evidently species of the two genera *Oikopleura* and *Fritillaria*.

The only papers of any importance which have appeared since that date are one by Eisen¹ on a new species, described under the name of *Vexillaria speciosa*; one by J. Barrois² on a new species from the English Channel; two by Langerhans,³ including a list of the Appendicularians of Madeira, with a description of two new species of *Oikopleura*; and a short paper by Ray Lankester⁴ on the vertebration of the tail, which he had observed in some species of the group.

The characters of this well-defined group are very important and interesting. The body-form, with the well-developed tail, is the most distinctive feature (see Figs. 12 and 13). The tail is attached, not at the posterior end of the body, but on the ventral surface near the middle, and in a state of rest it generally inclines forwards.

The tail agrees in essential structure with that of the larval Ascidian. It is traversed by a notochord, or urochord, placed between plates of muscular tissue divided into sections or myotomes.⁵ On the left side of the urochord lies a nerve cord, corresponding to the neural canal of the larval Ascidian, and having slight ganglionic enlargements at intervals. From this cord motor nerves are given off to the groups of muscle fibres; the tail thus shows distinct traces of metameric segmentation. The outside of the tail, like the rest of the body, is formed of the ectoderm, which produces on occasions the thickened and curiously-shaped "Haus," the homologue of the test of other Tunicata (see Fig. 12).

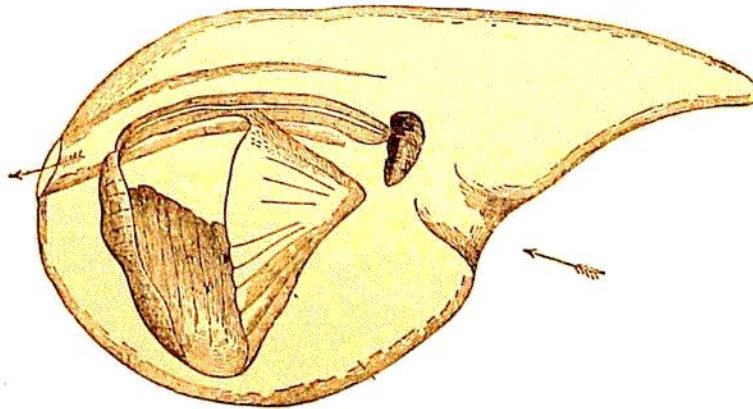


FIG. 12.—*Oikopleura* in "Haus," from the Encyclopædia Britannica, 9th ed. (after Fol).

This structure may be many times the size of the body proper, and has quite a different shape. It is only loosely attached to the ectoderm, and there are passages in

¹ *K. Svensk. Vetensk. Akad. Handl.*, Bd. xii., 1874.

² *Bull. Sci. du depart. du Nord*, tom. viii. p. 113, 1876.

³ *Monatsber. d. k. Akad. Wiss. Berlin*, p. 561, 1877; and *Zeitschr. f. wiss. Zool.*, Bd. xxxiv. p. 144, 1880.

⁴ *Quart. Journ. Micr. Sci.*, N.S., vol. xxii. p. 387, 1882.

⁵ According to Langerhans there are ten of these segments in species of *Oikopleura* and *Fritillaria* he examined at Madeira (*Zeitschr. f. wiss. Zool.*, Bd. xxxiv. p. 144).