

my systematic Report on the Gymnosomata, I have stated<sup>1</sup> how in *Halopsyche* the absence of a cephalic hood, shaped like that of *Clione*, is due to the great development of the buccal appendages; and how, in consequence of this, the buccal opening of *Halopsyche* corresponds with the false lips of the latter genus and the anterior tentacles are situated upon a common base with the buccal appendages. As regards the posterior tentacles, I may refer to the same work.

I have also, in that part of my Report, described the form of the foot, which exhibits the same parts as the corresponding organ in other Gymnosomata. Its two anterolateral symmetrical lobes, situated ventrally to the mouth, were regarded by Souleyet,<sup>2</sup> Owen,<sup>3</sup> and others as tentacles. But since they are innervated by the pedal ganglia, they clearly belong to the foot, as Huxley<sup>4</sup> was the first to point out.

The envelop of the body presents a thickening which has neither the same structure nor the same morphological value as that which is known as the "cartilaginous shell" in the Cymbuliidæ, since it is situated in the visceral sac and not in the mantle, which is entirely wanting in *Halopsyche* as in all the Gymnosomata. From this point of view, therefore, as from any other, there is nothing to justify an approximation of Halopsychidæ to the Cymbuliidæ.

*The Digestive Tract.*—The absence of the proboscis is explained by the great development of the buccal appendages in the same way as the contrary fact is explained in *Clionopsis*. The mouth opening leads then directly into the buccal mass, which is constructed on the same plan as in other Gymnosomata, except as regards the hook-sacs, whose absence is due to the lack of the proboscis.

The salivary glands, somewhat elongated, appear in transverse sections of the head. The stomach resembles in form that of all the Gymnosomata, and has no masticatory organs whatever, a fact which shows clearly that *Halopsyche* has no relation with the Thecosomata. The intestine is a little longer than in the preceding genera, but ends on the right side<sup>5</sup> in the same position as in them.

*The Respiratory and Circulatory Organs.*—Souleyet regarded the buccal appendages as two gills, but as a matter of fact, branchiæ are entirely wanting in *Halopsyche* as in *Clione*. I suppose that respiration must be brought as in *Clione* according to Wagner, for the structure of the body wall, as seen in transverse sections, is the same as he represents in the case of *Clione*.<sup>6</sup>

The heart, according to Souleyet,<sup>7</sup> is situated in the middle line, at the base of the cephalic appendages, which he regarded as gills. Nothing of the kind is the case. On

<sup>1</sup> Zool. Chall. Exp., part lxx. p. 53.

<sup>2</sup> Voyage de la Bonite, Zoologie, t. ii. p. 243, pl. xv. fig. 3, L

<sup>3</sup> Mollusca, Encyclopædia Britannica, 8th ed., vol. xv. p. 361, fig. 40, d.

<sup>4</sup> On the Morphology of the Cephalous Mollusca, *Phil. Trans.*, 1853, p. 41, pl. iv. fig. 3, ms.

<sup>5</sup> Not on the left side, as said by Huxley, *loc. cit.*, p. 41.

<sup>6</sup> Die Wirbellosen des weissen Meeres, Bd. i. pl. x. fig. 3.

<sup>7</sup> Voyage de la Bonite, Zoologie, t. ii. p. 247.