the right side, a little further forward than in the Pneumonodermatidæ, are certain very delicate organs (which I was not able completely to isolate in the badly preserved specimens examined) which I regard as the heart and kidney.

The Generative Organs.—These resemble those of all the other Gymnosomata, the genital gland and duct being disposed in the same fashion. The hard body situated on the right of the visceral mass, whose relations Souleyet was not able to make out, is nothing else than the muciparous-gland, which, as in some other Mollusca, becomes strongly hardened by alcohol. The receptaculum seminis is like that of other genera.

The genital aperture, as may be demonstrated by transverse sections, is situated in the usual position, behind the base of the right fin, and not as represented by Souleyet,[1] who probably mistook the opening of the penis for it. This latter opens at the base of the right lateral lobe of the foot, and for the rest does not differ from that of other Gymnosomata.

The Nervous System of *Halopsyche* is very difficult to study by dissection. The ganglia are so exceedingly small (the length of the whole animal being scarcely more than 4 mm.), that they are crushed by the points of the finest needles, and can only be properly distinguished by the aid of compound lenses of short focus.

Further, of the three zoologists who have treated of the organisation of *Halopsyche*,[2] two have not mentioned the nervous system. Souleyet is the only one who has described and figured it, and even he does so inaccurately, his representation being defective—

1. In the number of commissures (he shows only the pedal commissure);

2. In the number of ganglia (he records eight, whilst in reality there are only seven).

The arrangement of this nervous system, like the rest of the organisation, supports the view that the genus *Halopsyche* belongs to the Gymnosomata, for it is constructed on a plan very different from that of the Thecosomata, whilst it agrees in its general disposition with that of the Gymnosomata.

The cerebral ganglia, instead of being placed at the sides of the œsophagus and connected by a long supraœsophageal commissure, as in the Thecosomata (Pl. I. fig. 7; Pl. II. fig. 10; Pl. III. fig. 11), are approximated to each other and situated above the œsophagus (Pl. V. figs. 9, 10, 11, *a*).

Each of them gives origin to two principal nerves :—

1. A lateral nerve (Pl. V. fig. 10, *f*), soon swelling into an elongated ganglion, which occupies the nuchal tentacle. The optic and olfactory nerves of the preceding Gymnosomata are not then to be distinguished in the present instance, a fact which is due to the atrophy of the eye.

[1] Voyage de la Bonite, Zoologie, Mollusques, pl. xv. fig. 3, *o'*.

[2] Huxley (On the Morphology of the Cephalous Mollusca, *Phil. Trans.*, 1853, p. 40); Macdonald (On the Anatomy of Eurybia gaudichaudi, *Trans. Linn. Soc. Lond.*, vol. xxii. p. 245); Souleyet (Voyage de la Bonite, Zoologie, t. ii, p. 250). Von Jhering (Vergleichende Anatomie des Nervensystemes und Phylogenie der Mollusken, p. 242) only republishes, in a few lines, the data of Souleyet, including the inaccuracies.