

not clearly make out;¹ hence he mistook the smallest of the ganglia connected with the cerebral for the homologue of the pleural ganglion of other Gymnosomata, and figured it as connected with the pedal ganglion; in the same way he indicates two large ganglia between these two small ganglia, and at their left side he makes three nerves proceed from them as in *Pneumonoderma* and *Clione*. Nothing of the kind, however, exists in *Halopsyche*.

My drawings were made after the examination of a large number of specimens, and in order to control my dissections I made a series of transverse sections of the central nervous system. The sections, which pass through the visceral ganglia (Pl. V. fig. 11), show beyond all doubt that these are three in number (*b*, *c*, *d*).

SUMMARY ON THE GYMNOSOMATA.

The Gymnosomata possess two pairs of cephalic tentacles—the anterior or labial and the posterior or nuchal, to which the optic and olfactory nerves are distributed.

The fins, or lateral margins of the foot, are separated from its middle portion (ambulatory sole), and do not enclose the cephalic region.

The mantle is entirely wanting, and consequently the shell and pallial cavity.

The anterior part of the digestive tract is evaginable (except in *Halopsyche*) in such a way as to produce a proboscis of the acrembolic type. The outer part (in evagination) is tegumentary in origin; it extends as far as the jaws, radula, and hook-sacs, which mark the commencement of the digestive tract. At the anterior part of this proboscis (except in *Clionopsis*) there are buccal appendages, which are innervated by the cerebral ganglia, and carry suckers or sensory and secretory organs. On the wall of the proboscis two longer or shorter evaginable sacs are developed, the surface of which bears horny hooks. These organs were taken for jaws by Eschricht, and by Lankester for an appendage of the "fore foot." Krohn showed by a study of their development that they are evaginations of the cesophageal wall.²

The jaws (except in *Clione*, where they are wanting) are united ventrally in the middle line.

The salivary glands are long, with no distinction between the duct and the gland.

The stomach is an entirely unarmed digestive sac, and is entirely surrounded by the acini of the liver, which open into it by numerous apertures.

The intestine is short, as in all carnivorous animals, and has a straight course from the stomach to the anus; it opens to the right and dorsally with respect to the foot.

The penis is situated anteriorly, and issues at the right side of the foot.

¹ Voyage de la Bonite, Zoologie, t. ii. p. 251.

² Beiträge zur Entwicklungsgeschichte der Pteropoden und Heteropoden, p. 7.