

From the anterior extremity of the pleural ganglion issues the cerebro-pleural connective, and from its posterior extremity the pleuro-visceral connective (somewhat elongated in *Pneumonoderma*), which leads to the corresponding ganglion of the fourth pair.

IV. This fourth pair is composed of two ganglia (Pl. IV. fig. 9, *d*) in close apposition and almost spherical. Hitherto we have seen in the nervous system of the *Pneumonodermatidæ* an absolute symmetry in the size of the two ganglia of the same pair (cerebral, pleural, and pedal ganglia), and in the number of nerves which they give off. Now, however, this symmetry ceases.

An attentive examination shows that these two ganglia are slightly unequal, the left being the larger. But the asymmetry becomes more striking when we consider the nerves given off from them. The right ganglion only gives origin to one nerve, while three spring from the left hand one, a lateral nerve and two posterior almost median nerves. This asymmetry is found in all the *Gymnosomata*, and has only been noticed by Souleyet, who, however, did not attach any importance to it. Spengel¹ is wrong in attempting to modify Souleyet's figure so as to render the visceral nerves symmetrical in their origin.

1. The nerve from the right visceral ganglion (1), which is symmetrical with the lateral nerve of the left ganglion, supplies the right half of the visceral sac and the osphradium. This is constituted as in *Clionopsis* (Pl. IV. fig. 10, *a*) by a ganglionic pad occupying the antero-lateral angle of the cloacal depression; a divided branch of the nerve (1) passes to it.
- 2 and 3. The two posterior nerves of the right ganglion (2 and 3) innervate the viscera (genital organs, heart, kidney) and the gills.
4. Finally, the lateral nerve of the left ganglion (4) arises near the connective, and supplies the left half of the visceral sac.

V. The buccal ganglia, seen for the first time by van Beneden, are situated below the œsophagus, between the two hook-sacs, a little behind the point where the salivary glands open. They are in close juxtaposition, and each of them gives origin anteriorly to a filament on which is situated an accessory ganglion; these threads innervate the salivary glands.

The other nerves which arise from the buccal ganglia are five in number, as is shown in the figures of Souleyet and van Beneden—one azygous anterior nerve arising from the point where the two buccal ganglia are in contact, and innervating the radula; and also a lateral and a posterior nerve from each ganglion. The former supplies the walls of the buccal mass, and the latter the hook-sacs.

¹ Die Geruchsorgane und das Nervensystem der Mollusken, *Zeitschr. f. wiss. Zool.*, Bd. xxxv. pl. xvii. fig. 10.