

The infracesophageal portion of the nervous centres (Pl. I. fig. 8) consists of two portions: an anterior, pedal, and a posterior, visceral. The pedal group (*b*) is composed of two large symmetrical ganglia, pressed one against the other and in juxtaposition with the corresponding cerebral ganglia. On the posterior margin of each is an otocyst (*e*).

The visceral group consists of two ganglia, each of which is also approximated to the cerebral ganglion of its own side; they are, however, asymmetrical, inasmuch as the right ganglion (*c*) is much larger than the left (*d*), and the groove which separates them does not lie in the middle line of the body, but is displaced towards the left. The rule of Lacaze Duthiers,¹ according to which, in sinistrorsal Gastropods, the left half of the visceral commissure is the more developed, does not therefore hold good in the present case.

This asymmetry was unobserved by van Beneden and Souleyet, and has not since been recorded, although it is very striking; van Beneden² figures two symmetrical ganglia, and Souleyet³ a single symmetrical ganglionic mass as in *Cavolinia*.

(1) *Cerebral Ganglia*.—From the anterior portion of these ganglia proceed the nerves which supply the head and tentacles (Pl. I. fig. 7, *i*). They probably also give origin to the auditory nerves which proceed to the otocysts, as is observed in all other Mollusca, and as I have also seen in certain Thecosomatous and Gymnosomatous Pteropods, as I shall show further on; I have not, however, been able to make out this nerve in *Limacina*.

(2) *Pedal Ganglia*.—These give origin at their anterior aspect to large nerves passing to the foot and the fins (Pl. I. fig. 8, *f*); a branch of the nerve to each fin goes to the little lobe which is found on its anterior border in certain *Limacinæ*.

(3) *Visceral Ganglia*.—These ganglia are asymmetrical not only in point of size but also in the nerves which proceed from them; from the large ganglion on the right proceed three nerves, only one from that on the left.

(i.) *Right Ganglion*.—The outer nerve (*1*) passes to the right side of the mantle and to the osphradium, and is probably homologous with the branchial nerve of Gastropods; the two median nerves (*2*, *3*) supply the viscera (heart, kidney, and generative organs).

(ii.) *Left Ganglion*.—The single nerve (*4*) goes to the left side of the mantle.

The preceding description relates to *Limacina helicina*. In the small forms (“*Spirialis*” of Souleyet) the disposition of the nerve centres is the same. Souleyet⁴

¹ Du système nerveux des Gastéropodes pulmonés aquatiques, *Arch. de Zool. Expér.*, sér. 1, t. i. p. 494, No. 13.

² Mémoire sur la *Limacina arctica*, *Mém. Acad. Sci. Bruxelles*, t. xiv. pl. v. figs. 7, 13.

³ Voyage de la Bonite, Zoologie, Mollusques, pl. xi. fig. 21.

⁴ *Ibid.*, t. ii. p. 213.