We find in *Natica* that the disposition of the anterior subœsophageal ganglia resembles that seen in the Cephalopoda. In front of each pedal ganglion, in the position occupied by the brachial ganglion of the Cephalopoda, there is another corresponding subœsophageal ganglion, and this propedal ganglion innervates the voluminous mass which covers the head. I may here remark that the figures of the nervous system of *Natica* given by Souleyet,[1] which are the only original figures known to me, are inverted, that is to say that the upper (dorsal) surface is indicated as the lower (ventral) surface, and *vice versa*. It follows from this that the peculiarity of the nervous system of *Natica* in possessing propedal ganglia has not hitherto been observed.

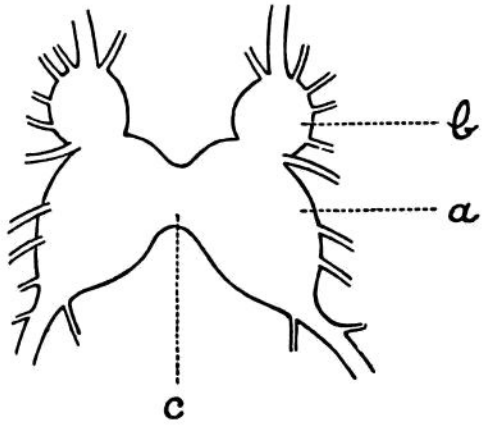

FIG. 2.—The pedal ganglia of *Natica*. *a*, pedal ganglia; *b*, propedal ganglia; *c*, pedal commissure.

The formation of these propedal ganglia and their separation from the pedal ganglia are evidently due to the great development of the anterior part of the foot, which has become transformed into a cephalic shield. Something of the same kind must have taken place in the Cephalopoda, where the formation of the brachial ganglia has been brought about by the great development of that part of the foot which has entirely surrounded the head and produced the arms.

It must not be concluded from what has just been said that I regard the shield of *Natica* and the arms of Cephalopods as exactly homologous; I only wish to draw from these facts the following conclusions:—In *Natica* we observe the formation of a pair of propedal ganglia in consequence of great development of the anterior part of the foot; in Cephalopoda we observe the same propedal ganglia; we may conclude, therefore, that the organs which they innervate are a portion of the foot situated anteriorly, which has taken on considerable development.

In *Natica* this anterior part of the foot covers the head by its anterior border, hence the coalescence with the head could not proceed further, because the mouth could not have remained open. In the Cephalopoda, on the other hand, it is the lateral margins of the foot which have invaded the head, leaving the buccal opening free; the two halves have met on the dorsal aspect of the head, concrescence has taken place, and the head has thus become entirely surrounded by a pedal mass.

Where, then, is the head? asks von Jhering.[2] The postero-lateral portions of it are to be seen in *Nautilus*, with the eye, the olfactory groove, and the two tentacles; and between the pedal appendages is seen the buccal mass. If the head be to a large extent concealed, it is not therefore non-existent.

V. We have already seen how those naturalists who defend the views which regard

[1] Voyage de la Bonite, Zoologie, Mollusques, pl. xxxvi. figs. 13, 14.
[2] Vergleichende Anatomie des Nervensystemes und Phylogenie der Mollusken, p. 268.