

opposite each other. The epithelium which coats the internal cavity of the sheath is seen to be continued uninterruptedly in these lateral spaces, whereas the musculature is deficient, and these cæca may thus with propriety be called membranous. There is a decidedly thicker epithelial coating in the lateral sacs of fig. 4 (*Drepanophorus lankesteri*) than in those of fig. 5 (*Drepanophorus serraticollis*). On the other hand, the musculature of the proboscidian sheath of the latter is much more massively developed than that of the former.

One remarkable detail concerning the lateral appendages in *Drepanophorus lankesteri*, is the fact that I found a few of the anterior ones connected by a short longitudinal communicating tube at their distal extremity, this connection being thus parallel to the proboscidian sheath itself. Similar connections were not noted further backwards, nor in any other species of *Drepanophorus*.

While the proboscidian sheath of *Amphiporus marioni* (Pl. X. fig. 1) is built on the same plan as that of *Drepanophorus*, that of *Pelagonemertes* is seen to be much simpler (Pl. VIII. fig. 7). Both are quite freely suspended in the gelatinous tissue, and only connected with the body musculature in the head (Pl. X. fig. 3).

### DIGESTIVE APPARATUS.

The digestive canal of the Nemertea cannot be said, from a morphological point of view, to be very complicated.

Communicating with the exterior by a ventral mouth close behind the tip of the head and by a terminal anus, it stretches along the whole length of the body, and only two rather sharply defined regions may be distinguished in it: the œsophagus and the hind gut or intestine proper. Still, even the mouth is not always an independent structure, as it is known to become confluent with the opening through which the proboscis protrudes, *i.e.*, the terminal opening of the rhynchodæum,<sup>1</sup> in at least two genera (*Amphiporus* and *Malacobdella*<sup>2</sup>). In that case this common opening is either terminal or nearly so (Pl. IX. fig. 9), and generally larger than the separate openings in other Hoplonemertea. This feature is clearly not primitive but derived from that condition in which the mouth lies behind the brain-lobes on the ventral surface, as it does in the most primitive

<sup>1</sup> Rhynchodæum (see p. 8) is the name that may conveniently be given to the passage stretching from the point of insertion of the proboscis in the head to the level of the exterior opening on the surface of the body through which the proboscis is seen to be thrust forth. Its walls are marked *APe* in fig. 5 of Pl. III.; *Rh.* and *Sp. Pr.* in fig. 3, Pl. X.

<sup>2</sup> Salensky has lately (*Biologisches Centralblatt*, 1883, p. 740, and *Archives de Biologie*, vol. v.), in publishing embryological researches on a certain species of Nemertea, imagined that the feature here alluded to was then and there discovered by him for the first time, and necessitated the creation of a new genus (*Monopora*). Although his attention was drawn to the superfluity of this proceeding (XIV. p. 41), he still retains the name in a later publication (*Zeitschr. f. wiss. Zool.*, Bd. xliii. p. 481). Still, I am afraid this will not extend its longevity, as all the other anatomical characters most decidedly conform to *Amphiporus*.