

of the ventral surface. I counted eighteen to twenty attached to the anterior half of the nerve-stems, to which they seem to be connected either directly or by means of a short branch.

In *Peniagone vitrea* and *Peniagone affinis* a greater number of vesicles are to be observed along both of the ambulacral nerves just mentioned.

There is no doubt that the majority of the Elpidiidæ are characterised by possessing auditory vesicles, and that these are generally disposed in the same manner as in *Elpidia glacialis* and *Kolga hyalina*. Their number as well as that of the otoliths seems to vary very considerably, the latter being sometimes, though in a very few cases, altogether wanting. The otoliths in all the species I have seen are distinguished by the same characteristic ovate shape, with one end rounded and the other tapering and truncated.

#### THE ALIMENTARY CANAL.

With the exception of a few Synaptidæ, in which it takes a straight antero-posterior course, the digestive tract of the Pedata and Apoda, as well as of the Elasipoda, is of a considerable length and arranged in convolutions. It descends from the mouth to the opposite extremity of the body, where, turning upon itself, it mounts up towards its anterior portion, whence, turning back again, it once more passes backwards directly to the anus (Pl. XL. fig. 2). Thus one can distinguish the following portions of the digestive tract, one descending, another ascending, and a third again descending. As previously pointed out the mouth as well as the anus change their positions in the Elasipoda; the former always has a more or less ventral inclination and is often directed straight downwards, and has a perfectly ventral aspect in the whole of the Psychropotidæ, while the latter is alternately ventral, terminal, and dorsal. The oral aperture, which is closed by a sphincter formed of numerous circular muscular fibres, is situated in the centre of the oral disk, which, surrounded by the tentacles, is only to be regarded as a part of the body-wall itself. The space between the tentacles and the mouth is termed the atrium. As is already known, in the Dendrochirotæ the oral end of the body bears a certain resemblance to a proboscis which is capable of retraction, a capability depending upon the thinness of the integument of the proboscis itself. In the Elasipoda the oral disk is in general thick and almost inflexible because of the more or less crowded calcareous bodies in it, consequently it is not retractile (Pl. XLIII. fig. 1). But exceptions have been found, and particularly in the genus *Deima*, where the oral disk seems to be more or less allied to that of the Dendrochirotæ, and deserves therefore to be described more in detail.

In all the representatives of the genus *Deima* which have been at my disposal, no tentacles have been apparent externally. One finds in the centre of a disk-like portion of the body-wall an aperture, which is closed by large circular muscular fibres (Pl. XLIII. figs. 2, 3.) The disk in question is supplied with a number of radiate wrinkles,