the projection is really due to an increase in thickness of the dorsal body-wall itself. At the same time, we seem to have here a more pronounced example than is elsewhere seen of the tendency of the mouth to become removed from its terminal position.

As noted above, Elasipoda are found in which the mouth is placed at the end of a narrow neck-like part, which is bent downwards so as to form an angle with the ventral surface; this is the case in *Peniagone vitrea*, *Elpidia willemoësi*, &c. In a very few forms among the Elasipoda, as, for instance, in the genera *Deima* and *Benthodytes selenkiana*, &c., the mouth and the tentacles are capable of being entirely retracted within the body. All the individuals of the genus *Deima* I have had at my disposal are especially remarkable for the fact that the tentacles are always enclosed within the cavity, which forms the most anterior part of the alimentary canal and communicates with the exterior by an aperture which seems capable of being entirely closed (Pl. XLIII. fig. 3). This aperture lies in the centre of a radially-wrinkled disk, and is surrounded by a single crown of small papillæ (Pl. XLIII. fig. 2), the importance of which will be discussed further on. I do not think it probable that *Deima*, in which any solid oral disk seems absent, should not be able to extend the disk and its tentacles outside the body. It is unnecessary to state that this capacity of retracting the mouth and tentacles within the body is not peculiarly characteristic of a few forms in the order Elasipoda; for numerous species among previously known Holothurioidea, and particularly the Dendrochirotæ, also possess this power.

In the Pedata and the Apoda the tentacles are generally arranged in a single row round the mouth, and it is well known that only in a very few cases, viz., the genus *Phyllophorus*, Grube, and *Synapta bifaria*, Semper, exceptions are found where the tentacles are disposed in two circles, an outer and an inner one. The tentacles, though usually of equal size, are sometimes unequal, as in *Echinocucumis*, Sars, and sometimes, as is the case in a great number of the Dendrochirotæ, a couple of the ventral ones is considerably smaller than the others. It is also well known that the genus *Thyonidium*, Düb. and Kor., is characterised by the possession of five pairs of large alternating with five pairs of smaller tentacles, and that *Orcula*, Troschel, carries from ten to twenty tentacles, of which five are always smaller than the rest. The tentacles vary highly in shape, and are grouped by Semper in the following manner:—tentacula peltata in the Aspidochirotæ; arborescentia in the Dendrochirotæ; peltata and pinnata in the Molpadidæ; digitata, pinnata, and peltato-digitata in the Synaptidæ. In *Haplodactyla*, Grube, belonging to the Molpadidæ, the tentacles present their simplest conformation, and deviate from the common type in being unbranched and without any enlarged terminal part, thus plainly showing that the tentacles in general are to be regarded as simply modified pedicels. The tentacles in the orders Apoda and Pedata varying in number from ten to twenty-five, are in general a multiple of five, but notwithstanding this exceptional forms are not infrequently met with, which possess twelve, thirteen, eighteen, or nineteen tentacles.