

the calcareous ring, to which it is closely united, and opens by a minute orifice into a very narrow duct, which lies close to the inwardly-directed side of the calcareous ring, and turning round the anterior portion of this latter, passes into the radial ambulacral vessel (Pl. XLIII. fig. 7, *y*). That part of the narrow duct which is situated at the inwardly-directed side of the calcareous ring, and which presents a small expansion, gives off two pairs of branches (Pl. XLIII. fig. 7, *c*) the posterior being longer than the anterior one; these branches are the true tentacular canals.

In *Oneirophanta* and *Deima*, &c., the tentacular cavities reach a considerable size, and are supported posteriorly by the calcareous ring (Pl. XLIII. fig. 1, *k*); anteriorly they pass into the branches or processes of the terminal part of the tentacles, but if there be no such, as in *Plyodæmon maculatus*, *Lætmogone*, &c. (Pl. XXXIX. fig. 4, and Pl. XLIV. figs. 11 and 14), the water-vascular system gives off a number of branched or unbranched cæcal prolongations within the thick sole-like terminal part. The tentacles of the *Elasipoda* never possess ampullæ. The five radial ambulacral vessels, which run backwards along the longitudinal muscular bands, on the inner side of the ambulacral nerves, and which sometimes, as in *Lætmogone wyville-thomsoni*, reach a considerable width (Pl. XLII. fig. 1, *e*), commonly give off very short lateral branches which enter pedicels and processes; in some cases there are no such lateral branches present, but the pedicels and processes communicate directly by a minute aperture with the ambulacral system. A transverse section of an ambulacrum shows very distinctly that the radial ambulacral vessels are separated from the neural canal by a firm, apparently homogeneous elastic layer of connective tissue (Pl. XLII. fig. 9, *e*). It is rare to meet with *Elasipods*, in which exist true ampullæ, freely depending into the peritoneal cavity, notwithstanding which two kinds of such ampullæ may be observed—the simple and the branched. The simple ampullæ have been found only in *Plyodæmon maculatus* (Pl. XLII. fig. 3), where they attain a considerable size, from 10 mm. to 15 mm., thus exceeding the Polian vesicle in size, and where they are only present in communication with the dorsal ambulacra. The branched ampullæ, which are met with in *Orphnurgus asper* (Pl. XLI. fig. 3, *b*), and *Pannychia moseleyi*, really belong to the processes and consist of small vesicles, which send out a number of very short, but comparatively wide cæcal prolongations. The pedicels appear regularly to lack such ampullæ, at least I did not find them, excepting, as in *Orphnurgus asper*, in communication with the large ambulacral cavities or rooms (Pl. XLI. fig. 3, *c*), which will be described further on.

Often no ampullæ nor anything corresponding to them can be discerned, and this seems to be especially the case in the *Psychropotidæ*, where, however, canals very commonly occur remarkable for their length and width, which lie within the perisoma and are in direct communication with the pedicels and processes. In this family the broad, flat, characteristic brim which surrounds the body is penetrated by a