great many of these canals, very wide, lying side by side (Pl. XL. fig. 8, *b*); and these taper towards the margin of the brim and enter the often minute tuberculate pedicels or processes, which are situated in the margin. Special attention should be paid to the width of these canals, of which *Euphronides depressa* (Pl. XXXIX. fig. 1) affords a striking example, but at the same time it becomes evident that these canals are fully analogous to the lateral branches, which the radial ambulacral vessels in Pedata give off to the pedicels and processes.

A remarkable peculiarity in a great number of Elasipoda is the presence of large ambulacral cavities, which lie enclosed within the perisoma, and being in direct communication with the pedicels and processes should be regarded as only continuations of these. Two kinds of such cavities are present, the branched and the unbranched, the former being found in *Oneirophanta*, *Deima*, *Orphnurgus*, *Ilyodæmon*, and *Achlyonice*. In *Oneirophanta mutabilis* the lateral pedicels as well as the processes are in communication with large branched ambulacral cavities. The cavities which belong to the processes of the dorsal ambulacra are enclosed within the odd interambulacrum (Pl. XXXVI. fig. 4), and those communicating with the processes of the lateral ventral ambulacra lie within the lateral interambulacra, while those of the pedicels, principally belonging to the trivium, send out numerous branches into the lateral interambulacra (Pl. XLI. fig. 2, *g*). Each cavity resembles a flat room of considerable width which gives off in all directions branched and unbranched, longer and shorter cæcal prolongations (Pl. XLI. figs. 1, 2). Since the cavities of the lateral ventral ambulacra are closely crowded, the thick perisoma of each side of the body contains a very complicated system of cavities and canals. Here and there the radial ambulacral vessels seem to send out a larger or smaller cæcal prolongation, which does not communicate with any pedicels and processes (Pl. XLI. fig. 1, *e*).

As to the ambulacral cavities, *Deima* closely resembles the above-mentioned form. It has already been noted that true unbranched ampullæ are present in communication with the dorsal processes only in *Ilyodæmon maculatus*, while the pedicels of this species without ampullæ communicate with elongated cavities which run towards the medio-ventral line and terminate in some small branched and unbranched prolongations (Pl. XLII. fig. 4). But, even in *Orphnurgus*, *Achlyonice*, *Pannychia*, &c., plain evidence is given that the ambulacral cavities or vesicles of the processes do not always resemble those of the pedicels. In the first-mentioned genus all the processes are in communication with small branched ampullæ, while the pedicels proceed from somewhat large ambulacral cavities, which give off a small number of large, obtuse, slightly branched prolongations (Pl. XLI. fig. 3); it is, however, to be noted that these cavities send out a branched freely depending ampulla of the same appearance as that of the processes, though slightly smaller, thus constituting a combination of cavities and ampullæ. In *Achlyonice* the ambulacral cavities of the dorsal processes are small, oval, and unbranched (Pl. XLI.