

double row is often not very plainly marked, and now and then there is only a single though slightly irregular row distinguishable. The pedicels in the inner row being fewer in number and smaller in size than those in the outer row seem to be developed subsequently; and this fact becomes most evident on examining very young individuals in which the inner pedicels are usually rudimentary, while those in the outer row are well developed.

The dorsal surface is supplied with processes which in most cases strikingly differ from the pedicels, but which sometimes, as, for instance, in *Benthodytes sanguinolenta* (Pl. XLII. fig. 6) and *Benthodytes typica* (Pl. XLIV. fig. 8) resemble the pedicels in Pedata by their smallness and cylindrical shape as well as by their capability of being entirely retracted within the body, but it must be remembered that their rounded terminal part is without the characteristic disk-like sucker with its supporting calcareous plate. It is of great importance to pay special attention to the fact that—though the difference between the ventral and dorsal ambulacral appendages is generally so plainly marked that no further explanation is necessary with regard to the two terms “pedicels” and “processes”—a transition, nevertheless, is found between them, consequently, no definite limit can be marked; however, their functions being unquestionably diverse, the use of different terms is fully justified. Even those Elaspoda which carry on their dorsal surface small foot-like appendages never use the rounded, convex dorsum for the purpose of locomotion, but move forwards on their flat, ventral surface, which becomes fully evident when we consider the position of the mouth, &c. Thus it would be inaccurate to term these foot-like dorsal appendages pedicels, which, being present only in a few forms, are most certainly just as inapplicable for the purpose of locomotion as the large dorsal processes or appendages.

The dorsal ambulacral appendages are either simple or compound; the former I prefer to call processes, and the latter appendages. Both kinds are often found in the same animal, and vary considerably in size as well as in form and position.

The processes are regularly more or less elongated, conical, and sometimes tuberculous, and often attain a size so considerable as not to admit of being retracted within the body, excepting in the genus *Ilyodæmon*, which seems to have all the dorsal processes completely retractile, which is probably owing to their communication with true ampullæ (Pl. XLII. fig. 3). In the Deimatidæ the processes attain the greatest size, and it ought to be specially pointed out that *Oneirophanta mutabilis* and *Lætmogone wyville-thomsoni* carry processes of the same length as the body itself, thus reaching a length of 125 mm. or more. The processes are in general more or less flexible, but in certain forms, as, for instance, in the two species of *Deima*, they are very stiff and directed straight out from the body, thus bearing a resemblance to gigantic spines. Sometimes, as in *Parelpidia*, the processes are extremely minute, almost rudimentary. I have recently drawn attention to the small foot-like and completely retractile processes in *Benthodytes sanguinolenta* and *Benthodytes typica*.