

sometimes attain a considerable size as in *Colochirus quadrangularis*, Less., *Stichopus naso*, Semp., *Holothuria armata*, Sel., &c. The pedicels, which seem to be indefinite in number can with few exceptions be entirely retracted within the body-wall; they are either irregularly scattered all over the body as in *Thyone*, Oken, &c., or disposed in rows all along the five ambulacra as in *Cucumaria*, Blainv., &c., or they are found only on the ventral surface, where they are generally arranged in three rows as in *Colochirus*, Troschel, *Psolus*, Oken, &c. The ambulacral papillæ, which are present in the genera *Stichopus*, Brandt, *Mülleria*, Jäger, *Colochirus*, Troschel, and in most species of the genus *Holothuria*, L., are sometimes disposed in more or less plainly marked rows, but are ordinarily scattered, and show no traces of any regular arrangement; in some cases they are found not only on the dorsal surface, but dispersed all over the body, as in several forms of the group *Sporadipus*, Grube. The form and the position of the pedicels and processes as well as their number being usually well-defined are highly remarkable in the Elasipoda, and give the external configuration of the body its characteristic appearance. Consequently, it is of the greatest importance to point out as plainly as possible in what respects these organs differ from those in the Pedata. I never found any pedicels fully corresponding to what Semper terms "ambulacral pedicels," and it would be more correct to class all the pedicels of the Elasipoda under the head of "ambulacral papillæ." Thus, when describing the order in question, I prefer to give the name "pedicels" to the ambulacral appendages on the ventral surface, these being exclusively adapted to purposes of locomotion, contrary to those on the dorsal surface, which may be called "processes." Just as the ventral is in most cases obviously distinct from the more or less highly convex dorsal surface, so a generally striking difference may be observed between the ventral pedicels and the dorsal processes, this difference being not only conspicuous in the external shape, in the size and in the number, but also in the corresponding ambulacral cavities or ampullæ, which will be described more in detail under the rubric "water-vascular system." Only a few examples in the Psychropodidæ, viz., *Benthodytes sanguinolenta* and *Benthodytes typica*, exist, which correspond with several forms in the Pedata in carrying on the dorsal surface a number of appendages which by their narrow cylindrical shape, their minute size, and their capability of being entirely retracted within the integument, bear the strongest resemblance to true pedicels. My intention is to give a summary account of these appendages a little further on after having first described the pedicels more in detail.

Two kinds of pedicels are distinguishable in the Elasipoda; the first, small, and often resembling rounded protuberances, are generally strengthened by a small number of spicula, their rounded or slightly flattened ends being without any calcareous terminal plate; the second, large, generally cylindrical or conical, more or less stiff, not retractile, but to a certain degree contractile, and with their tops either large, sole-like, or discoidal, as in *Orphnurgus*, *Lætmogone*, &c., or more or less tapered as in *Scotoplanes globosa*, &c.