

always rather depressed. The perisoma along the sides of the body, as well as round its anterior and posterior extremities, thick, forming a continuous more or less thin border or brim, the breadth of which is very considerable anteriorly. Tentacles from ten to twenty. Mouth completely ventral, at a considerable distance from the anterior extremity of the body. Round the edge of the brim there is a single row of numerous, commonly minute pedicels, often resembling protuberances or wart-like prominences; the foremost of those prominences belonging to the dorsal ambulacra, the rest to the ventral lateral ones. The odd ambulacrum generally with a double row of minute retractile pedicels; in one form naked. The dorsal surface naked (?) or with a few minute processes; or with a greater or smaller number of commonly minute but sometimes rather large, retractile or non-retractile processes, disposed in a single or a double row along each ambulacrum; or with a great many minute, completely retractile processes, scattered over the lateral interambulacra; or with fewer pairs of small, non-retractile processes anteriorly and a very large appendage, crossing the odd interambulacrum at a greater or smaller distance from the posterior extremity of the body. Calcareous deposits: spicula or four-armed, cruciform bodies. Calcareous ring incompletely developed, composed of five separate pieces (?), each consisting of a very fragile network.

The presence of pedicels along the three ambulacra of the ventral surface is to be regarded as a very valuable character for this family. A single genus, *Psycheotrepes*, forms an exception to this rule by having its odd ambulacrum naked. Considering this peculiarity, as well as the number of tentacles, it seems as if this genus may be considered as a transitional form connecting the family in question with the Elpidiidæ; consequently it remains to be decided to which of these two families it ought to be referred. The presence of the brim round the flat body has decided me in classing the animal in question in the family Psychropotidæ.

The remarkable large azygous appendage which gives the genera *Euphronides* and *Psychropotes* such a peculiar appearance is completely wanting in *Benthodytes*, which by its exterior seems to approach the representatives of the family Aspidochirota. On a closer examination it becomes evident that *Euphronides* and *Psychropotes* are closely allied, and more than once I have hesitated whether they ought to be considered as belonging to one and the same genus or not. The former is characterised by its very depressed body, which almost reminds one of gigantic Planarians; besides, its appendage is considerably smaller in comparison with the size of the body than is the case in *Psychropotes*, and is situated comparatively far from the posterior extremity of the body. The genus *Psychropotes* on the other hand has its body almost without exception rather high posteriorly and depressed anteriorly, and its gigantic appendage, being situated close to the posterior extremity of the body, bears a strong resemblance to a tail.