

distinctly turned towards the ventral surface. The lateral ambulacra of the ventral surface bearing very long and wide, cylindrical or conical, slightly retractile pedicels, disposed either in a single or a double row along each side of that surface, and sometimes provided with another series of extremely elongated, conical, non-retractile processes placed externally and above the pedicels. The odd ambulacrum generally naked, seldom with a few rudimentary pedicels or with a double row of rather large ones. The dorsal surface with very long, elongated, conical, mostly non-retractile processes, disposed in one or more rows all along each of its ambulacra. Calcareous deposits: perforated plates, spicula, wheels, cruciform and dichotomously branched bodies. Calcareous ring composed of a rather fragile and imperfect net-work; no distinct radial or interradial pieces.

The genera which are included under the head of this family seem in general to be well defined. *Deima* differs from the others not only in having its calcareous skeleton more fully developed and in the minute size of its tentacles and their capability of being drawn within the body, but by the presence of a highly characteristic system of canals, which is in communication with the water-vascular system, and is more fully described in the anatomical part of this report. *Oneirophanta* bears the nearest resemblance to this genus from the shape of its calcareous bodies, but it differs from it not only in the above noted peculiarities, but also in the number and position of its processes and their degree of flexibility, and above all by the pedicels of its ventral lateral ambulacra being arranged in a double row.

As *Orphnurgus* is distinguished by its characteristic calcareous bodies, it keeps its place as an independent genus. *Lætmogone*, *Plyodæmon*, and *Pannychia* constitute a group by themselves, which is characterised by the perisoma containing wheels of diverse dimensions. *Lætmogone* carries only a single row of processes along each of the dorsal ambulacra, and a single row of pedicels along each side of the ventral surface; while the two other genera are provided with numerous dorsal processes which are either arranged in several more or less distinct rows along each ambulacrum or are scattered irregularly over the lateral interambulacra. Like *Lætmogone*, *Plyodæmon* possesses fifteen tentacles, and has its odd ambulacrum naked, but its lateral pedicels are disposed in double rows. *Pannychia*, on the other hand, is provided with twenty tentacles, and carries a single row of pedicels along each side and a double row of smaller ones along the odd ambulacrum. There can be no doubt that these three genera are closely allied, and this affinity is most striking between *Plyodæmon* and *Pannychia*. As three species of *Lætmogone* have been discovered which have all the above-mentioned generic characters in common, I feel convinced that this genus is well defined; with regard to the two others I take it for granted that the difference in the number of tentacles, and above all in the arrangement of the pedicels, will justify their being placed as different genera.