

the latter species they vary in number as well as in position. The dorsal lobe seems to arise exclusively from the anterior part of the back, as in the genus *Peniagone*, or constitutes a rather broad brim round the anterior flat extremity of the body, as is the case in *Scotoanassa* and *Enypniastes*. It might seem as if these two forms of dorsal appendages should offer particularly valuable generic characters by representing the animals in very different aspects, but it must be noted that a series of gradations is to be found between the lobes and the conical processes. I am of opinion that *Kolga hyalina*, &c., is a striking example, in having its processes disposed in a transverse row, and united at their base, thus running out from a low ridge.

The calcareous deposits of the integument represent several types, also suitable for drawing lines of demarcation between the genera. The four-armed deposits, being the most common, are found in *Parelpidia*, *Elpidia*, *Scotoanassa*, and *Peniagone*,—excepting *Peniagone naresi*,—and resemble one another so closely, that no important peculiarities are to be found among them. Besides, these deposits which sometimes, as for instance in *Elpidia glacialis* and *Elpidia ambigua*, are associated with small wheel-shaped bodies, seem to be of little or no value in defining species. With regard to the four-armed deposits of *Elpidia glacialis* they certainly differ very considerably from all others of the same kind, though constructed after the same idea. The three-armed bodies are found in *Achlyonice*, *Scotoplanes insignis*, *Scotoplanes robusta*, and *Peniagone naresi*,—the latter possessing besides those C-curved spicula, otherwise exclusively characteristic of the genus *Scotoplanes*. I do not attach so much importance to the three-armed shape of the deposits as to feel justified in associating the above-mentioned forms with one another. *Kolga* and *Irpa* are very closely allied to one another, and have very small horseshoe-shaped spicula, which are peculiar to them. I do not think it possible to found the determination of genera on the form of the calcareous bodies alone, and I consider the value of the characters which they present to be of necessity subordinate to those depending upon the number of the tentacles, the form of the body, and the conformation of the dorsal appendages; it is of comparatively slight importance if a species is seen to agree as to its deposits more closely with another genus than with the other species of its own genus.

The madreporic canal offers distinctions which seem to be most applicable as generic characters. It is either connected to the inside of the body-wall, as in *Irpa* and *Elpidia glacialis*, or it pierces it, thus communicating with the exterior, as is the case with *Kolga hyalina* and several other species. From want of materials, however, I have not been able to examine the madreporic canal in all the different species, wherefore I am obliged to neglect taking it into account in the classification. I know with certainty no other forms than *Irpa* and *Elpidia glacialis* in which the madreporic canal is connected to the body-wall and does not communicate with the exterior. It is, however, remarkable that these two modes of termination of the madreporic canal, though of the