

and between these two an immense series of gradations exists. The short and arcuate spokes—in the large wheels from eight to ten in number, or sometimes less, while the smaller wheels have twelve or thirteen—support a large, discoidal nave with a large hole in its middle, from the edge of which proceed five, sometimes four or six, small slightly arcuate rods, which converge to form a conical figure, the top of which is directed towards the inside of the body-wall. The wheels are concave, more or less like a crown, and have their felly directed outwards from the body. The ventral perisoma is almost exclusively strengthened by small wheels which are usually rather scattered, whereas wheels of all dimensions are to be seen on the dorsal surface; nowhere are these deposits so crowded as in the tentacles and processes. The wheels lie in the outer layer of the connective tissue, while the spicula are placed close to the layer of circular muscular fibres. Besides those above-mentioned deposits I have found here and there, though especially in the processes, some minute, round bright particles, and numerous slightly larger bodies of a discoidal form; these are doubtless chemical products which have originated by preservation in alcohol. The layer of connective tissue of the integument contains an immense quantity of violet pigment which is partly scattered, partly crowded in masses, and partly disposed in lines which cross one another in all directions, thus forming an obvious network; the large nerve-cords as well as their ramifications contain pigment, and the pigmented network just mentioned is constituted by them.

The sole-like terminal part of the pedicels is strengthened either by a single, large, more or less circular perforated plate (Pl. XXXIV. fig 1), with the holes in the centre considerably larger than at the circumference, or by some smaller ones; round these plates lie partly some short, thick spicula of a variable shape, which are often provided with branches, and have their slightly enlarged ends spinose, and partly longer arcuated unbranched ones. The processes contain, besides a multitude of wheels of various dimensions, some scattered spicula. The ends of the tentacles are supported by a great number of unbranched spicula of diverse forms and dimensions resembling those of the pedicels; the stem of the tentacles, however, contains only a few scattered spicula but a greater number of wheels.

The calcareous ring (Pl. XXXVII. fig. 11) seems to be made up of a continuous spongy, extremely fragile and thin network, no radial and interradial pieces being distinguishable. By treating it with a solution of potass it separates into small pieces or fragments. The very pliable ring is capable of being considerably contracted, thus forming numerous larger or smaller wrinkles. The polian vesicle, 20 mm. long, has a considerable width. The ambulacral cavities (Pl. XLII. fig. 7) are small, and do not give off any branches; their form is more or less evidently triangular, or approaches almost the shape of a semicircle. The madreporic canal (Pl. XLIII. fig. 4a) presents the greatest difference when compared with that of *Oneirophanta*; it runs out, as usual, from the