Zoology Part XIII: Report on the HOLOTHURIOIDEA. First Part.-The Elasipoda. By Hjalmar Théel. Bound in Volume 4,1882.

they are disposed in a simple row or in a double crown, though I believe the former to be the case. The end of the tentacles carries five or six processes, of which a couple appear to be larger than the others.

The perisoma is hard, unpliable, and particularly thick, the latter is especially the case with the body-wall along both sides on the transition between the ventral and dorsal surface where the layer of connective tissue is greatly developed. Three different layers of calcareous deposits are distinguishable. The outermost layer consists of scattered, very small, more or less curved, and branched spicula (Pl. XXXI. fig. 8) of various shapes. The intermediate layer is composed of closely placed plates (Pl. XXXI. figs. 4, 5, and 6), which cover one another completely or with their edges alone, and give the perisoma its firmness. These plates are partly large, about 7 mm. in diameter, and of a more circular form, partly smaller arranged round the former and of a more variable shape. Each plate presents the appearance of a flat network with the upper surface convex, its greatest thickness being at its centre; its under surface is perforated by numerous more regularly rounded holes, while the upper one presents an irregular network provided with some small scattered spines. The innermost layer is made up partly of more or less branched spicula and partly of larger net-like bodies (Pl. XXXI. fig. 9) with wide meshes. Besides those deposits I have found some minute bodies in the form of grains, which are sometimes joined together in bands within the connective tissue, but those are probably a chemical product formed during preservation in alcohol. The tentacles contain a minute number of deposits in the form of small scattered spicula. The deposits of the pedicels and processes strongly resemble the above-described plates, though smaller; the ends of the pedicels have no supporting terminal plate, but are instead provided with small generally more or less branched spicula (Pl. XXXI. fig. 7).

From want of material I have not been able to closely examine the calcareous ring, but it appears to resemble in form as well as in structure that of *Deima fastosum*; it is extremely fragile, and becomes separated into small pieces on being treated with solution of potass. The polian vesicle reaches a length of 30 mm. The water-vascular system corresponds with that in *Oneirophanta*, and in regard to its details I refer to the anatomical part of the report. The cloaca is insignificant. The digestive tract is attached to the inside of the dorsal perisoma by a mesenteric membrane. The reproductive organ (Pl. XLVI. fig. 5) consists of two fascicles, one on each side of the mediodorsal mesentery, each fascicle composed of from five to six long, narrow cylindrical tubes, which carry a number of larger or smaller globular cæcal sacks. A great part of the internal organs such as the water-vascular system, the pseudhæmal vessels, the alimentary canal and the genital organs, contain a great abundance of calcareous deposits in their walls, which generally have the form of branched or simple more or less curved spicula, of net-like bodies and of perforated plates. The mesentery also contains numerous small spicula.

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