

vided with such a pentact and distal ray, always alternates both in the longitudinal and in the transverse direction, as in *Euplectella suberea*, with an intersection without a pentact.

Both the tangential rays and the basal portion of the distal ray are surrounded by numerous greatly extended comitalia which are for the most part triacts. Over the meshes of the lattice-work which are not perforated by parietal gaps, there extend spiral strands of thin, elongated parenchymalia, which cross each other obliquely, and which are also for the most part triacts.

In the circular membrane which surrounds every parietal gap there occur near the free inner margin numerous short blunt monacts of a sceptre-like form, whose five reduced rays project at the one end as short rounded stumps or hemispherical knobs (Pl. VI. fig. 5). The occurrence of this form has induced O. Schmidt to dedicate the species to Jupiter. Besides the fully formed sceptre spicules numerous diacts also occur with projecting cruciate axial knots, which show very clearly how the sceptres have arisen.

More characteristic than those sceptres, which also occur singly in *Euplectella suberea*, are the clasps or fibulæ which are scattered with comparative uniformity throughout the whole parenchyma of *Euplectella jovis*. These exhibit a straight, thick, middle portion with a central node and two curved hook-like terminal rays which run out to fine points (Pl. VI. fig. 5). The latter are as a rule clearly marked off from the middle part, but their curves usually lie in different planes, turned towards opposite sides, so that when seen in a certain direction they seem to present the figure of an S. I regard these clasps, which I also met with in *Holascus fibulatus*, as derived from oxyhexasters with bent terminal rays. I do not derive them from simple hexacts, because on each side a terminal ray springs from the corresponding principal ray. Important also in this respect is the generally very clearly developed median node, on which four lateral tubercles may sometimes be seen. Here and there triacts or tetracts may also be seen whose rays have the same form as in these diact fibulæ. This interpretation also harmonises with the fact that in *Euplectella jovis* the oxyhexasters which are present in all other species of *Euplectella* do not occur, but are, as might be expected, converted into the clasps.

On the outer surface of the distal ray of the sword-like hexact-hypodermalia, large floricoles occur with a small number of terminal claws exactly as in *Euplectella suberea*.

5. *Euplectella owenii*, Herklots and Marshall (Pl. VI. figs. 1, 2).

1868. Herklots and Marshall, Arch. Néerl. des sci. nat., iii. p. 435.

1875. Marshall, Zeitschr. f. wiss. Zool., Bd. xxv., Suppl., p. 142.

1876. Marshall, Zeitschr. f. wiss. Zool., Bd. xxvii., p. 113.

Of that elegant Japanese *Euplectella*, which was first described by Herklots and Marshall and named *Euplectella oweni*, no specimens were brought home by the Challenger Expedition. There occurs, however, a relatively well-preserved specimen of this species among those Japanese Hexactinellida which were handed over to me by Dr. Döderlein of