

is a small flat tubercle-like process, representing the abortive sixth ray. The long stalk exhibits, like the four anchor teeth, a distinct *axial canal*.

Subgenus 2. *Stylocalyx*, n. subgen. (Pl. XXXI.; Pl. XXXIV. figs. 1-11;
Pls. XXXV., XXXVII., XXXVIII., XL., XLI.).

The superior aperture of the gastral cavity is not covered by a sieve-plate, but remains quite open. The gastral cavity is divided into four chambers by a central cone and four cruciate radial septa.

1. *Hyalonema (Stylocalyx) thomsoni*, Marshall (Pl. XXXIV. figs 1-11).

In his memoir on the Hexactinellidæ¹ W. Marshall describes a species of *Hyalonema* obtained by Wyville Thomson on the "Porcupine" Expedition to the north of the Shetland Islands, at a depth of 550 fathoms. This form measured 7 cm. in length, 3·5 being occupied by the body proper, and 3·5 by the basal tuft, and about 8 mm. in thickness. Through the kindness of O. Schmidt I have been able to examine this dried specimen. The body² has a spindle-like form, the upper end not being transversely truncated, but extending to a somewhat pointed apex, in the form of a projecting cone. The basal tuft is surrounded, just below the lower pointed end, by an encrustation of *Palythoa*, 3 mm. in length, and with four or five polypes. The number of slightly twisted basal spicules is estimated by Marshall at fifty or sixty. On some of them he observed a ridge with nail-like teeth, which was absent from others; the lower ends are all broken off. In the still partially preserved external dermal skeleton Marshall found regular "four-rayed" spicules which were mutually apposed by their limbs, and also several five-rayed forms. In the fir-tree forms situated on these spicules of the dermal network the spinose principal ray projects, according to Marshall, into the lumen of the rectangular dermal meshes in the plane of the skin, that is, lies tangentially. Besides these, amphidiscs occasionally occur, 0·03 to 0·08 mm. in length, and with six long, narrow, pointed anchor-teeth, as well as very small (0·008 mm. in length) double anchors. Within the body of *Hyalonema thomsoni*, Marshall describes four large cavities, into which large and small parenchymal passages open. On the wall of these cavities long curved uniaxial spicules occur, besides isolated smooth six-rayed forms and amphidiscs with small double anchors. In the parenchyma proper he found, besides the long uniaxial spicules, four-, five-, and six-rayed forms, and most frequently small hexacts.

In the covering membrane, which extends from the truncated superior and external margin to the conical knob projecting freely in the centre, Marshall observed four cleft-

¹ *Zeitschr. f. wiss. Zool.*, Suppl.-Bd. xxv. p. 225, 1875.

² *Loc. cit.*, Taf. xvii. fig. 84.