

character in the tubular efferent canals, especially through the degeneration and final disappearance of the supporting hypocanalicular pentacts, as also through the shortening of the autocanalicular pentact pinuli, which further exhibit a less thickly spinose free ray and longer roughened basal rays. Lastly, in the finer canals the pinuli gradually become further and further distant from one another, until just before the diverticula of the membrana reticularis only isolated very delicate pinuli occur (Pl. XXXVI. fig. 1). Numerous amphidiscs lie in the gastral-canalicular membrane, but do not penetrate as far as the layer of chambers. The large form of amphidiscs (Pl. XXXVI. fig. 3) is here altogether absent, but the medium-sized, and especially the smaller are often present in great abundance.

The marginalia form a closed ring on the free sharp edge of the oscular aperture. They have the form of moderately long oxydiacts with perfectly smooth proximal, and somewhat thickly spinose distal rays. On the boundary between the two rays, two opposite, or rarely four cruciate tubercles or bosses almost always project. These are usually hemispherical or somewhat longer than broad, or else completely rounded off.

The basal pad contains the familiar firm spicules with six to two rays, the ends of which are beset with spines, while the inner portion remains smooth (Pl. XXXV. fig. 8). The strongly developed spicules of the basal tuft, almost as thick as pins, are in part smooth, and in part studded with numerous nail-like barbs, which are not inserted on annular or spiral cross ridges, but are disposed in isolated fashion in indistinct and irregularly developed spiral rows (Pl. XXXVI. fig. 7). Viewed from the surface, the freely projecting points of the teeth appear to be marked off by a line of basal tubercles. Such a bounding line does not really exist above, as may be readily seen when viewed in profile, but is merely the optical expression of the upper margin of the origin of the barbs on the surface of the spicule. Towards the lower end the long spicules become markedly thinner, the lateral barbs diverge further from one another, and the spicule ends below in a peculiar hemispherical anchor structure with four double hooks cruciately disposed (Pl. XXXVI. fig. 11), or in a hemispherical terminal knob from which four minute simple cruciate pointed barbs project backwards, as in the anchors of *Hyalonema thomsoni*, var. *exiguum* (Pl. XXXIV. fig. 16).

Several forms of *Hyalonema*, differing only in subordinate characters from that above described, and wholly agreeing with it both in general organisation and in the structure of the spicules, and therefore undoubtedly belonging to the same species, were dredged in the Mid-Pacific (Station 271, lat. $0^{\circ} 33' S.$, long. $151^{\circ} 34' W.$) from a similar depth of 2425 fathoms and from a *Globigerina* ooze bottom. There are two perfect specimens, destitute only of the freely projecting portion of the basal tuft, and also the fragment of a third form, all procured at the same locality. All the three seem somewhat smaller than the above, and exhibit either a conical form with an inferior point, or a flat cake-like shape. The breadth varies from 5 to 6 cm; the height from 3 to 4, and in the latter form