

surrounded by a circle of radially disposed straight spicules, and as examination with a low power at once reveals, represents an oscular opening. The other fragment consists of a somewhat thicker (about 3 mm.) plate, with irregular ragged edges. On one surface smooth-edged oval or roundish pits occur, from which narrow diverticula pass towards the side and towards the interior (Pl. XXX. fig. 2). The other surface is rough and apparently damaged. This second specimen undoubtedly forms part of the internal wall of the body, and exhibits the surface limiting the gastral cavity and bearing the openings of the canals.

An examination of the siliceous elements shows, in the first place, that they are all strikingly slim and delicate, whence my choice of the specific designation *tenuis*. Among the long spicules of the parenchyma, between the numerous slim oxydiacts, one remarks an unusual abundance of oxyhexacts of medium and small size (Pl. XXX. fig. 8), with thin, gradually pointed smooth rays. Besides these, though not so abundantly, small oxyhexacts occur with perfectly smooth curved rays (Pl. XXX. fig. 5). In the external skin, on the smooth hypodermal oxyptacts, and on the tangential oxydiacts, numerous autodermal pentact pinuli are inserted, with four smooth basal rays which are relatively long (0.2 mm.), while the slim, finely pointed distal, beset with minute obliquely inserted teeth, attains a length of almost 1 mm. The amphidiscs of the skin are of medium size (from 0.2 to 0.1 mm. in length) and with simple, straight-rayed, campanulate, medium-sized umbels, occupying one-third of the total length. The umbels never have eight, but always thirteen or twelve smooth, lancet-shaped, umbel rays. The axial rod is beset with nodes, which attain especially in the middle a considerable prominence and a cruciate disposition. The marginalia, which are radially grouped round the oscular opening, attain a length of $1\frac{1}{2}$ to 2 mm. Their pointed proximal end is smooth, and not so long as the likewise pointed distal, which has a length of at least 1 mm. and is beset with oblique lateral teeth. On the boundary between the two rays, four cruciately disposed, globular tubercles project, the rudimentary representatives of the four tangential rays, as is readily demonstrated by the presence of a well-developed axial canal (Pl. XXX. fig. 7).

4. *Hyalonema robustum*, n. sp. (Pl. XXXII. figs. 1-10).

In the west of the North Pacific (Station 241, lat. $35^{\circ} 41' N.$, long. $157^{\circ} 42' E.$), from a depth of 2300 fathoms and a red clay bottom, the fragment of a *Hyalonema* was dredged, which had the form and size of half an apple, and evidently represented about half the entire body of a sponge. On the convex external surface of the hemispherical specimen, the dermal membrane is well preserved as a fine-meshed network, while the torn internal surface exhibits a loose, wide-meshed parenchyma, with cavities increasing in width towards the interior.