

The long basalia of the root-tuft which I examined in the small specimen (Pl. XXIX. fig. 4) exhibit opposite or spirally disposed, obliquely projecting ledges with marginal teeth, like those which M. Schultze has figured in *Hyalonema sieboldii* in his well-known work (Taf. ii. fig. 4). The extreme distal end of the long basalia was not preserved.

5. *Hyalonema kentii*, O. Schmidt (Pl. XXX. figs. 9-17).

In his *Spongien des Meerbusens von Mexico*, O. Schmidt describes (p. 65), under the designation *Asconema kentii*, a Hexactinellid which was dredged at various localities off Grenada, Martinique, Guadeloupe, and Bequia, from depths of 300 to 1500 fathoms. This form occurred in two varieties, on the one hand, as a "flat or shallow bowl, either rounded off inferiorly or furnished with a short or somewhat irregularly twisted pointed stalk," and on the other, as "a saccular form with irregular margin, divided internally into irregular pouch-like divisions and cavities, separated by thin ragged partitions." "A delicate outer layer with fir-tree-like spicules, extends like a fine veil over the surface. The body is unusually rich in double verticils (Doppelquirren), occurring in very varied dimensions and forms in the several parts of the body." As my esteemed fellow worker in Strassburg was kind enough to give me for examination a dried specimen of the goblet-type, I am able to include this beautiful form in the series of species of *Hyalonema*. A figure, drawn from a photograph, represents the sponge of the natural size. Both the external and the concave superior and internal surface of the loose cup- or funnel-shaped body are covered by a delicate reticulate membrane. On the outer wall this network is much finer and more uniform than on the concave upper surface, where it seems to form a sieve with unequal, and in some cases, large meshes. It is either attached to the subjacent body parenchyma, or extends freely across the large cavities. On the superior external margin there is, as O. Schmidt pointed out, a cuff-like fringe of fine spicules.

The loose parenchyma of the sponge is supported by numerous straight or curved smooth oxydiacts, with or without rudiments of the four abortive transverse rays, and by smooth, simple, medium-sized oxyhexacts, which frequently exhibit a slight roughness, and are furnished either with straight or with curved rays as represented in Pl. XXX. figs. 14, 15. It is noteworthy that the oxydiacts are generally thin and often so long that they become readily curved, not unfrequently appearing much bent or even coiled.

The hypodermal oxypentacts are perfectly smooth. Their tangential rays are mutually apposed and form a beautiful rectangular meshwork. To these rays are attached a great number of autodermal pinuli, with four straight, somewhat substantial, basal rays which are comparatively short, conically pointed, and either quite smooth or equipped terminally with minute distally directed teeth. The distal ray, on the other hand, measures about 0.45 mm. in length, is smooth at the base, but elsewhere