

*Hyalonema species diversæ indefinitæ* (Pl. XXXII. figs. 11-16; Pl. XXXIX. figs. 1-15).

Of the above-described species of *Hyalonema*, more or less perfectly preserved specimens were at my disposal, so that an approximately accurate investigation was possible, and diagnoses sufficient for the determination of the several species were obtained. But besides the above, the Challenger collection included several fragments which could be certainly enough referred to the genus *Hyalonema*, but not with any definiteness to any of the species previously known, or now established by my investigations. They belong to new, not yet described species. Following the frequent precedent of many investigators, I might have selected the most prominent characteristics of these forms, and used them for the erection of distinct species. I have, however, preferred to refrain from designating these imperfect and torn fragments, of which I should be unable to frame a description or diagnosis sufficient for their re-identification. I have, nevertheless, figured several of the more remarkable spicular structures of sponges from these localities for the use of future investigators, and by way of extending our knowledge of the variety of form within the genus *Hyalonema*.

Several large but insufficiently preserved fragments, referable to a sponge form about the size of one's fist, were dredged from the Mid-Pacific, near the Equator (Station 271, lat. 0° 33' S., long. 151° 34' W., where *Hyalonema depressum* was found), from a depth of 2425 fathoms and a Globigerina ooze ground. The smooth oxyhexacts and oxydiacts of the parenchymal skeleton do not exhibit any marked peculiarities. Small oxyhexacts are only represented by somewhat abundant forms with straight or slightly curved pointed rays (Pl. XXXII. fig. 15). The complete absence of small curved oxyhexacts essentially distinguishes this form from the species *Hyalonema depressum* found in the same locality. The hypodermal oxypentacts and oxydiacts of the dermal skeleton resemble, in form and size, the similar forms of *Hyalonema clavigerum*. The autodermal pentact pinuli are, however, peculiar, and resemble most closely the external pinuli of *Hyalonema robustum*. Like the latter, they exhibit short, strongly developed, and minutely spinose basal rays, and also a free, spindle-shaped, somewhat bushy distal, almost 0.4 mm. in length, beset with numerous rather long spines disposed like scales. The very end of the ray frequently exhibits a strongly developed, thick point, which is not very satisfactorily represented on Pl. XXXII. fig. 16.

The much extended, larger and medium-sized amphidiscs of the skin, are distinguished by the slender, delicate character of the slightly toothed axial rod, and also by the long umbels, which bear eight slender rays, and exhibit a campanulate form, somewhat truncated terminally. These forms of amphidisc differ greatly in size, as may be seen from some of the modifications represented in Pl. XXXII. figs. 11, 12, 13. Occasional giant-forms (fig. 11), 0.4 mm. or more in length, occur. Besides these, there is an abun-