

referable to this species. One, which was purchased by Professor Steenstrup at Cette and is probably from the East Indies, bears four fine specimens of the rare *Rhizochilus antipathum*, Stp. This specimen is 26 cm. high and 41 cm. broad. The stem is strong and the branches are distinctly stronger than the branchlets; the latter only become reduced to the thickness of the pinnules at the extreme apex of the corallum. Fusions are numerous and extend quite to the apex of the specimen. The branches and their derivatives form flat leaf-like fronds, not all in the same plane, but the subdivisions of each are chiefly in one plane. Part of the reticulum forms a median vertical plate at right angles to the main growth; I have observed a similar condition in *Tylopathes?* *flabellum* (Pall.). The other specimen, received through the Museum of Comparative Zoology at Harvard College from Manila, is smaller and does not show such a contrast between the thickness of the branches and branchlets.

The spines are conical with a sharp apex, and are placed at right angles to the axis; they are arranged in regular sinistrorse spirals, excepting near the apex of a pinnule. Six longitudinal rows may be counted from one aspect, the members of a row being about two and a half lengths apart. Near the apex of a pinnule they are somewhat triangular, but never crowded and thickened as in *Antipathella assimilis*. On the older portions they are subcylindrical and more elongate than is shown in Pl. XII. fig. 3.

*Habitat*.—East Indies? (Esper); Manila (Mus. Comp. Zool. Harvard Coll.).

*Antipathella assimilis*, n. sp. (Pl. I. figs. 4–7).

Corallum forming a flabellate reticulum similar to that of *Antipathella reticulatu* (Esp.), but the lateral branchlets are longer, not arched, and the reticulum is closer. The spines are at first crowded and very irregular in shape; later they have a blunt apex and are arranged in dextrorse spirals (Pl. I. figs. 4, 5, 6, 7).

The specimen consists of the apical portion of a branch fused with the derivatives of other branches. This specimen is 16 cm. in length and 12 cm. broad. The main branch is 16 cm. long, and gives off numerous lateral alternate branches, about five to a centimetre. Some of these are 6 to 7 cm. long, but most are considerably shorter. A number of them are slender and simple, not over 1 cm. long, and are, in all respects, similar to the ultimate pinnules. Most, however, bear alternate pinnules (3–5 to 1 cm.), the longer of these being again alternately pinnate. The whole specimen extends chiefly in one plane, but a few of the pinnules arise from the antero-lateral margin of the branchlets and thus destroy the uniformity. Some of these are pinnate and have then the appearance of a small frond inserted obliquely into the general mass. The sclerenchyma is dark reddish brown. The pinnules of adjoining branchlets overlap one another and become fused together into a network, and the branchlets derived from one branch, taking a subvertical course, become confluent with others which extend subhorizontally and are derived from