

and then in the vertical plane, at the point of departure of the twigs, and gives off the lateral twigs at angles of  $40^{\circ}$  to  $45^{\circ}$ ; the branching proceeds to the development of twigs of the fifth order. The length of the branches reaches 40 mm., that of the internodes 3 to 3.5 mm.

The polyps are placed only on the branches and twigs, they are wanting even on the first internodes, then comes one polyp to each internode. The polyps are small, with broad bases, constricted in front of the mouth-opening; their length reaches 1 to 1.5 mm. The zooids are like those described in the preceding species. The body is 0.12 mm. long, and the ectoderm at its apex is very thick and full of thread-cells, the latter forming, in certain states of contraction, a cap-like hood which calls to mind the batteries of thread-cells in the tentacles of many Hydroids, such as *Coryne*. The mouth-opening is lateral, and has, when contracted, a three-cornered or a slit-like form. Here also no cesophageal tube could be distinguished.

The axis is elastic and flexible, in the main stem as well as in the twigs yellowish; in the thicker branches and in the stem shining, and iridescent. The upper layer of spicules consists in the polyps of flat iridescent scales, which overlap one another. Under a high magnifying power one sees that the edges are finely toothed, and that fine wrinkles radiate outwards from a central nucleus to the edges. The scales, which are placed transversely to the long axis of the polyp, are dissimilar. Those appear greatest which are placed immediately at the base of the tentacle, their upper edges project in front of the base of the tentacle. Thereby an operculum is formed; such as occurs in such full development in the Primnoidæ.

The scales of the calyx are usually unsymmetrical, the lower edge generally somewhat indented, the edge of one side straight, truncated, the other pointed. Height to breadth in mm. 0.12-0.35; 0.13-0.48; 0.25-0.41. The spicules of the cœnenchyma are smaller scales of oval, often biscuit-like shape, measuring 0.1-0.18; 0.11-0.67 mm. The spicules of the deeper layer are oval, flat, or spindle-shaped to rod-shaped, at times branched, 0.12 mm. long; at the base of the polyp they are bent according to the curvature of the periphery and are 0.23 mm. long.

*Habitat.*—Station 201, off the Philippines; depth, 82 and 102 fathoms; bottom, stones, gravel.

Station 171, north of the Kermadec Islands; depth, 600 fathoms; bottom, hard ground.

#### 14. *Dasygorgia japonica*, n. sp. (Pl. IV. fig. 8; Pl. V. fig. 10).

From a main stem, which is curved and many times bent, arise branches, chiefly from one side. Some of these are as thick as the main stem and again give off stout branches, which develop lateral twigs in one direction to the sixth order. Branches and