

upwards at angles of  $35^{\circ}$  to  $40^{\circ}$  to the stem. Their law of branching is the same as in the foregoing species, only the twigs coming off form sharper angles with the branches, and the lateral twigs with the twigs. The terminal twigs are hair-like. The axis is yellowish-brown, the stem has a shining, feebly iridescent surface, soft and flexible, the same in the twigs. It rises sharply and directly from the completely calcified base.

The polyps are pitcher-shaped, with very broad bases, constricted beneath the circlet of tentacles. This form seems conditional upon the fact that the lower portion of the body contains in all a great number of ova, and cannot therefore be regarded as specifically characteristic, since it is dependent upon the maturity of the sexual organs at the time.

The spicules of the outer layer are large spindles, rounded off at one end, pointed at the other, often somewhat constricted in the middle. Little warts cover their surface, and at the blunt end are produced into minute teeth. In the polyps they are placed longitudinally, with the blunt end in front, in the tentacles they form four to five rows, towards the base they assume an oblique direction, and then pass up the stem, where they are placed longitudinally; while broad near the polyp, further away they assume a more spindle-like shape, with a blunt end, and they are covered with sharp little spines.

Spicules of the polyps, length to breadth in mm.— $0.41-0.07$ ;  $0.41-0.04$ ;  $0.25-0.03$ ;  $0.33-0.03$ ; in the cœnenchyma  $0.4-0.04$ .

The deeper layer consists of flat, very differently shaped bodies, which are attached to one another by fine teeth. At the base of the polyp they form large, transversely elongated, somewhat crooked bodies, which in their curvature are adapted to the convexity of the body wall. Length to breadth  $0.08-0.267$ ;  $0.1-0.19$  mm.; towards the mouth they become small flat scales or flat spindles without sculpture. In the tentacles one also meets with longish scales with sharp teeth on the edges. Length to breadth  $0.1-0.18$ ;  $0.04-0.14$ ;  $0.04-0.12$ ;  $0.06-0.14$ ;  $0.12-0.16$  mm. Finally there are spindles with serrated edges, one end of which is produced into three or four finger-like processes. Height to breadth  $0.2-0.018$ . In the cœnenchyma the lower layer consists of small plates, of oval, three-cornered, polygonal form, of very different sizes,  $0.25-0.05$ ;  $0.18$ ,  $0.2$ ,  $0.1$  mm.

*Habitat*.—Station 307; coast of Chiloe; depth, 120 fathoms; bottom, blue mud.

### 3. *Dasygorgia cupressa*, n. sp. (Pl. V. fig. 3).

The strong stem, rising from a flat, expanded, calcareous basis, gives off successive spirals of branches at short intervals. These develop twigs and lateral twigs, which come

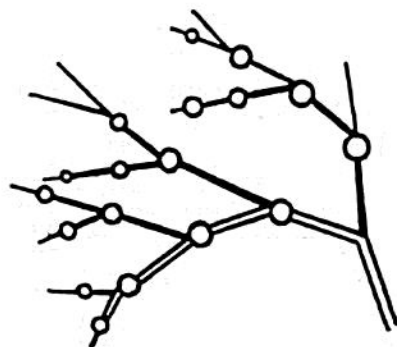


FIG. 3.—Ramification of *Dasygorgia flexilis*, n. sp.