

or transversely. The deeper layer in all the species consists of very differently shaped calcareous bodies. First, there are fine, transparent, roundish, oval, biscuit-shaped or lobate forms, which are finely toothed at the edge. They are firmly joined together by these teeth, which interlock in the contiguous plates. Frequently two or more plates fuse, and form double and fourfold ones. In addition to these there are spindle-shaped, warty, and variously branched spicules, always much smaller than the spicules of the upper layer.

So far as can be made out from the material at disposal, the budding of new polyps takes place on the terminal twigs, between the end polyp and the base of the twig.

The buds always arise on one side.

The sexual cells are developed in the basal portion of the polyp. Polyps with eggs have the base distended like a sack, which then projects on both sides beyond the twig which bears the polyp. The dioecious condition appears to predominate. In some colonies all the polyps contain eggs.

The species of the genus *Dasygorgia* are very numerous in deep water. Ten species were collected in the three oceans, of which nine are new. Hence the number of species, counting the five described by Verrill, at present amounts to fourteen.

A. *Spiculosæ*.

1. *Dasygorgia spiculosa*, Verrill (Pl. IV. fig. 1; Pl. V. fig. 1).

Dasygorgia spiculosa, Verrill, Bull. Mus. Comp. Zool., vol. xi. p. 23, pl. ii. fig. 5, 1883.

A colony broken into several pieces agrees in general with Verrill's description, and also with his fig. 5 on pl. ii. The entire fragment is 100 mm. in height; the base is wanting. The main stem is 1 mm. thick at its lower end and appears to be bent in a zigzag manner, forming an angle wherever branches arise; at the same time its axis is spirally twisted. The branches arise from three sides of the stem at nearly right angles, at intervals of from 1 to 1.5 mm. They are themselves also bent at angles and give off lateral twigs almost at right angles, these again develop further lateral twigs. Since the main branches themselves are again somewhat spirally twisted, the twigs lie in different planes. The woodcut explains the ramification.

The longest branches, midway up the stem, reach a length of 25 mm.

The axis is of a yellowish hue, with a shining, somewhat iridescent surface. The stem and branches are rigid and brittle, even to the terminal, hair-like twigs.

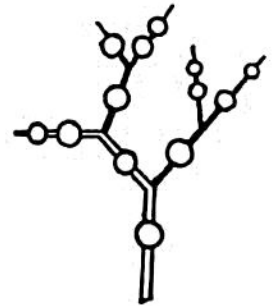


FIG. 2.—The ramification of *Dasygorgia spiculosa*, Verrill.