

The stem, which is attached to the rocky substratum by means of a broad base and shows no development of stolons, gives off on all sides, and at tolerably wide distances from one another (viz., 5 to 8 mm.), larger branches, which resemble the main stem, and small branchlets which surround the stem and larger branches equally. These branchlets are flattened, from the base outwards, in a direction at right angles to the long axis of the colony. They are sparsely ramified in one plane, and each usually divides into two or three twigs diverging from one another at obtuse angles. From the sides and apex of the twigs the polyps arise, they are placed on long peduncles and surmounted by spicules.

One twig thus bears from five to eight polyps, which sometimes come off at right angles and sometimes radiate, at the apex, in a fan-like manner. The flat twigs sometimes fuse together, especially towards the base of the stem, so as to form serrated folia, whose margins are covered with divergent polyps. Or the branches and twigs may be fused together immediately above the base so as to form a collar-like pad, convex downwards, from which the divergent polyps originate. The branches and twigs are soft and yielding, and the entire colony has a spongy consistence. The stem and branches are covered with spindle-shaped spicules, arranged irregularly and crossing one another. In the branchlets and twigs they are arranged in longitudinal series, and they are continued into the peduncles of the polyps, of which one spicule projects like a spine above each polyp head, for a distance of 1 mm. at the most. These spicules are partly straight and partly *f*-shaped, and they are covered with small, sharp spines; their length varies from 0·8 to 5·0 mm.; the latter occurring especially in the polyp-peduncles. Length to breadth, 1·3 by 0·032 mm.; 4·0 by 0·09 mm.; 5·0 by 0·12 mm.; 5·0 by 0·013 mm.

The polyp heads are small, measuring 0·8 mm. They have at their bases a number of peripherally arranged spicules, from which eight larger ones arise, surmounting the margin of the calyx. These spicules are truncated at the base, pointed at the free end and provided with small, straight spines; size, 0·58 by 0·03 mm. Some convergent spicules at the base of the tentacles form a kind of operculum to the calyx. In the tentacles there occur small spicules. The smaller spicules of the polyp heads measure 0·36 by 0·025; 0·2 by 0·033; 0·3 by 0·018 mm.

The colour of the colony is white, the twigs and polyps at the base and over half the extent of the colony are purplish-red.

*Habitat.*—Tahiti; depth, 30 to 70 fathoms.

The description of the following species will make this section more complete:—

*Spongodes semperi*, Studer.

*Spongodes semperi*, Studer, Ann. and Mag. Nat. Hist., ser. 6, vol. i. p. 69.

A thick, cylindrical, barren trunk, whose base is fixed in the sand by means of stolons. It gives off from its upper end, which is bounded by a circular fold covered on