

The spicules of the cœnenchyma are again large, and lie very irregularly on the stem and larger branches. In the smaller twigs they lie longitudinally. They are spindle-shaped, often straight, often more or less curved, sometimes thickened at each extremity. They are thickly beset with rough warts, which lie closely together. The largest spicules are 2.1 mm. long and 0.38 mm. broad, but usually they have the following dimensions—0.97 by 0.154 mm.; 0.89 by 0.15 mm.; 0.84 by 0.126 mm.; 0.7 by 0.12 mm.

Within the cœnenchyma, especially around the principal canals, the spicules have a slender form, and bear only widely separated, delicately pointed, minute spines; they are chiefly straight, but sometimes curved, more rod-like than spindle-shaped. Their dimensions are 0.434 by 0.042 mm.; 0.75 by 0.09 mm.; &c.

The colour of the spicules of the cœnenchyma is throughout a beautiful violet-red. The low calyces are formed of circlets of spicules which spring straight from the stem; the spicules are indistinguishable in form from those of the cœnenchyma, but have a yellow colour, being red only in the older parts of the stem. The collar of the polyps consists of curved spiny spicules. At the base of the tentacles lie curved spicules having one end thickened and covered with the points of sharp spines. They converge in pairs with the points towards the distal end of the tentacle. Their dimensions are 0.336 by 0.028 mm. The spicules of the oral region are white, or, in one case, of a dark purplish red.

*Habitat.*—Station 177; lat. 16° 45' S., long. 168° 7' E., off Api, New Hebrides; 63 to 130 fathoms; volcanic sand.

*Siphonogorgia pallida*, n. sp. (Pl. II. figs. 2a, 2b; Pl. V. fig. 5; Pl. VI. fig. 3).

Of this species only two fragments have been obtained; these are, however, sufficiently well marked to form the basis for a new species. The largest piece is a branch giving off at an acute angle near the lower fracture a secondary branch of uniform strength. Numerous remains of twigs show that these arise directly from the main axis, and that they themselves give off short side-twigs. The main branches and twigs have an irregularly bent course. Apparently the whole colony is stiffly-branched and rigid. The main branches are very slightly flattened in one plane, the twigs rising chiefly from two sides. The largest branch is 6 mm. thick at its lower end, and 4 mm. thick where it is broken at its further extremity, a distance of 100 mm. A secondary branch is 5 mm., the twigs 3 mm. in thickness at the base. The polyps are borne only upon the twigs and sub-twigs. They are small, arranged in a spiral, having conical calyces, which, towards the lower portion, are somewhat laterally compressed. The oral region of the polyps is highly retractile. Three or four closely clustered calyces form the apex of the twig, and give to it an apparently thickened end.

In a transverse section of a twig may be seen the four central stem canals, which are