cally grooved on the surface. Polyps arranged in spirals or sometimes in rows on the stem; tentacles and upper portion of the polyps retractile within prominent verrucæ. Cœnenchyma moderately thick, with spiny spindles and double clubs forming a roughened outer layer. The following four species are from the Pacific Ocean.

The known species of *Scirpearia*, Studer, are from the Atlantic Ocean.

Scirpearella profunda, n. sp. (Pl. XXXI. fig. 2; Pl. XXXII. fig. 1; Pl. XXXIV. fig. 7).

The colony is feebly branched; the specimen occurs in fragments, of which that figured on Pl. XXXI. was the first found in the contents of the dredge; afterwards several others were disentangled from the tow, and an attempt to put them together has been made in the figure on Pl. XXXII., which is drawn of the natural size.

The main axis is attached by a calcareous oval disc, 11 mm. by 6 mm.; the stem is slightly curved, and at a height of about 80 mm. gives off one slender simple branch of about 100 mm. in length; a second similar branch is given off in the same plane, and from the same side, at an interval from the first of 10 mm.

The basal diameter of the main stem is 4 mm., and it has the same diameter for some distance beyond the origin of the second branch. The main axis then appears to divide into two terminal branches. The axis is calcareous, brittle, and of a circular outline, with some spiral grooves, it is formed of several concentric calcareous layers which easily peel off; without the cœnenchyma it is 2·5 mm. in diameter.

The polyps are in irregular spirals on the stem and branches, from 2 to 3 mm. apart; closer to one another towards the termination of the branches, with a width at base of 1 mm. While all the polyps are capable of being completely retracted, the older polyps appear to develop a more conical shaped verrucæ than the younger ones, and when the tentacles are folded together, and the polyps invaginate themselves, they do so in a one-sided manner, that portion of the polyp nearer the axis being drawn in more deeply than that furthest off, so that an appearance is presented of a shallow ledge, that reminds one of the edible nests of the swallow (*Callocalia*). Afterwards this flap-like protuberance is also drawn in, leaving an oblong conical verruca, which measures about 2 mm. in its greater diameter. The cœnenchyma is moderately thick, and finely granular; the outer layer consists of double clubs, the inner layer of the same but of a smaller size; in the polyps quadrate or stellate forms and a few needle-shaped spicules with spiny edges are met with; the spicules are very uniform in size. The spindles measure 0·1–0·04 mm.; the double clubs 0·1–0·05; 0·08–0·04; 0·06–0·02 mm.; the stellate forms 0·08–0·08; 0·08–0·06 mm.; the needle-shaped forms 0·06–0·02 mm.

The colour in spirits is a whitish-brown.

Habitat.—Station 177, off the New Hebrides; depth, 130 fathoms; bottom, volcanic sand.