

The stem with cœnenchyma is 1.5 mm. in diameter at its base, and preserves the same diameter until the branch is given off, when it gradually tapers to a fine end. The other two specimens with simple unbranched stems attain a height of 325 mm.

The axis without the cœnenchyma is very deeply grooved; ten grooves can be very easily counted on the older portion of the axis, but these diminish to two at the apex. These ridges show through the cœnenchyma as linear furrows.

The polyps are arranged on the stem, the lower portion in four irregular rows; towards the apex they are alternate and arranged on either side of the stem, while for the first 60 mm. of the stem, counting from the basal disc, they are absent. They are retractile within the well-marked but shallow verrucæ; these latter measure at their base 1 mm. An occasional verruca will be found larger and more elevated than the rest, measuring 1.5 mm. in diameter and the same in height; these generally are to be found near the summit of the axis.

The cœnenchyma is thin, with a layer of spiny spindles, with some warty clubs mixed throughout. The polyp spicules are minute needle-shaped and stellate forms.

The spicules measure—the spindles 0.18–0.06; 0.12–0.04; 0.08–0.04; 0.06–0.02; 0.04–0.02 mm.; the clubs 0.14–0.04; 0.16–0.06; 0.14–0.08 mm.; the stellate forms 0.12–0.06; 0.1–0.06; 0.1–0.04 mm.; the needle-shaped forms 0.04–0.02; 0.03–0.02 mm.

While closely related to *Scirpearella gracilis*, the form of the axis and of the spicules will distinguish between the two.

The colour in spirits is white.

*Habitat.*—Amboina; depth, 100 fathoms.

*Scirpearella rubra*, n. sp. (Pl. XXXIV. fig. 5).

Colony (so far as can be judged by the single fragment) simple, the stem (in two pieces) measures 620 mm. in length, but was evidently much longer; at the supposed base it measures 2 mm. in diameter, and at the other extremity it tapers to 0.75 mm. The axis is calcareous, brittle, with two shallow grooves.

The polyps are numerous, arranged in spirals on the stem. Towards the termination of the axis the polyps are arranged in an alternate manner, on the opposite sides of the stem. They are retractile within moderately developed verrucæ. The spirals are about 1.5 mm. apart, and the closed oval verrucæ are about 1.5 mm. in their broadest diameter; they seem when partly closed to be bilabiate.

The cœnenchyma is thin, with a compact layer of spiny spindles and warty clubs. In the polyps the spicules are stellate, with a few needle-shaped forms. They are of a light sherry colour. The spindles measure 0.1–0.06; 0.08–0.04 mm.; clubs 0.12–0.06; 0.1–0.06 mm.; the stellate forms 0.1–0.06; 0.1–0.08; 0.08–0.08 mm.; the needle forms 0.06–0.02 mm.