

apex as the branches are given off. Its terminal portion is in no way distinguishable from a lateral branch. The lowermost branches are still abundantly ramified, and project at right angles from the stem. They are short, flattened branches, which radiate into several stiff, finger-shaped secondary branches, which may bear still slenderer twigs coming off at acute angles. The upper branches are generally simple; they seldom bear twigs, and are directed upwards at acute angles. The branches and twigs are stiff and very fragile, being incrustated with large spindle-shaped spicules.

The polyps stand at wide intervals from one another, and are directed obliquely upwards; they measure 1 to 1.3 mm. in length, and the distances between them measure from 3 to 4 mm. The apices of the twigs are occupied by from one to three polyps, which are closely crowded together.

The spicules of the stem and branches are usually curved or slightly *f*-shaped spindles, which are somewhat blunted at both ends and thickly surrounded with blunt vertical warts. In the stem they have an average length of 1 to 2 mm., with a diameter of 0.05 to 0.15 mm. In the branches and twigs they form longitudinal bands, measuring 2.5 to 3 mm. in length and 0.17 to 0.29 mm. in diameter. The spicules range in colour from white to yellow; between them are embedded smaller red or yellow spicules, usually straight, and measuring 0.71 by 0.03, 0.67 by 0.04 mm.

In the polyps a calicular portion may be distinguished, it is appressed to the stem and composed of longitudinally arranged, yellowish spindles; it does not rise up sharply from the *cœnenchyma*. The tentacles are folded together over the mouth, and form a conical tentacular operculum; beneath them is a broad collar of spicules arranged in a circle, which extends for some distance up the *œsophageal* portion. It consists of curved, spiny spindles of a purplish-red colour, measuring 0.2 by 0.03 mm. In the bases of the tentacles, which form the operculum, the spicules are arranged in a Λ -like manner, with the apices directed towards the distal end. They measure 0.12 by 0.017 mm.

The stem and branches are yellow to reddish yellow, especially at the base. The polyps outside of the calyx are purple.

In a younger colony the barren stem is markedly shorter, and about the same size as the branch-bearing portion.

Habitat.—Station 232, *Hyalonema*-ground, Japan; depth, 345 fathoms.

Chironophthya scoparia, n. sp.

The cylindrical stem gives off, even at a slight height, stiff, finger-like branches, which are directed obliquely upwards at acute angles, and some of which extend themselves to the apex of the stem. The branches are stumpy and gradually diminish in size towards the apex; they bear in turn sparse twigs, coming off at greater or less angles, and usually not more than two or three in number. The polyps have laterally appressed