

attaining a length of about 130 mm., twice dichotomizes. There is a pretty regular series of intervals of 10·50 mm. between the side twigs; the diameter of these twigs tapers from 1 mm. to the thinness of a hair. The total expanse of the fan-shaped colony is about 450 mm. at its widest portion. The axis is brittle.

When the drawing on Pl. XII. was made, the remainder of the branches had not been found, but this description is taken from the specimen as complete.

The cœnenchyma on the axis is thin, but covered with a single layer of large, irregular, thickened oblong or triangular scale-like spicules, which are proportionally denser on the younger portions of the twigs.

The polyps are in verticils of threes, fours and fives, with the tentacular region looking upwards and inwards towards the stem; there is an interval of about 3 mm. between the verticils. The polyps are (contracted) about 5 mm. long by 2 mm. wide at the basal portion. At the base of each polyp the large spicules of the axis seem to form a bilateral collar, under cover of which is inserted the first large horned annular spicule, which, broadly expanded on the dorsal aspect, completely surrounds the lower part of the body of the polyp; beneath this is a second large annular spicule with many spines, and with the ventral portion, larger than in the former spicule, it is apparently joined by fibre to the former, within which it is movable. These spicules do not present an appearance of being lateral spicules joined together. The opercular spicules are eight in number and form a complete operculum over the tentacles. The six opercular spicules nearest the dorsal aspect of the polyp are larger and more perfect than the two on the inner or ventral aspect; they are keeled and slightly overlap each other when closed.

Spicules.—Those of the cœnenchyma are scale-like but various as to shape; the oblong forms measure 2–0·5; 1–0·5; 1·5–0·75 mm. Those at the base of the polyps are oblong, curved, forming a collar, and measure 1·75 by 0·75 mm. The two-horned annular spicule forming the second row measures from base to extremity of spine 3 mm., with a broad diameter of 1·5 mm. The second annular spicule is 3 mm. (to end of spines) by 1·75 mm. in the expanded portion, and 1·50 mm. in the narrowed or neck-like part. The opercular spicules of the outer row measure 1–0·5; 1·25–0·75; 1–0·75 mm., and are triangular in form with broad bases. Of these the outer four seem to fit closely together when the tentacles are withdrawn, they then slightly overlap and lie almost against the main stem or its branches. In shape they are not unlike the petals of a Crucifer, the claw broadly expanded, the blade deeply pinched in. The spicules are in general punctate all over.

This species, originally described from Japan, has been found off Bourbon (Paris Museum, 1862; in this specimen the polyps are very small, 2 mm. by 1 mm.), and is now described from the Southern Pacific (Fiji).

*Habitat.*—Station 174c, of Kandavu, Fiji Islands; depth, 610 fathoms; bottom, Coral mud.