

spines, 0·24–0·06; 0·22–0·08; 0·2–0·06; 0·18–0·08; 0·16–0·06 mm. Irregular branched spicule 0·18–0·6; 0·12–0·1 mm. Bent spiny spindles 0·24–0·06 mm. Four-rayed forms measure 0·1–0·1 mm., and in the polyp there are double crosses 0·1–0·04 mm.

Habitat.—Station 177, off the New Hebrides; depth, 60 to 120 fathoms.
Station 232, *Hyalonema*-ground, Japan; depth, 345 fathoms.

Melitodes lævis, n. sp. (Pl. XL. fig. 11).

This species is represented by a small colony broken away from its basal attachment, it is about 70 mm. in height, the whole colony is fan-shaped, about 50 mm. in its widest diameter. It branches frequently and irregularly; and the branches anastomose freely. The branches are arranged in three parallel fan-shaped masses, with a free anastomosis between each parallel portion. The basal internodes are 2 mm. in diameter, gradually diminishing in diameter to 3 mm. beneath the terminal free extremities, and are often twisted. In length they vary from 5, 6, and 7 mm. in the basal internodes, to a length of 8 and 9 mm. for the terminal internodes. The nodes are prominent, 3 mm. in width towards the basal portion of the colony, and 2 mm. towards its apex. When deprived of their cœnenchyma, the older internodes are seen to be cylindrical in outline and they are distinctly grooved; they are of a faint pink colour.

The polyps are scattered over the front of the stem and its branches, but with a very well-marked tendency to a bilateral arrangement; which is indeed clearly to be seen on the terminal twigs; they are from 1 to 1·5 mm. distant from each other. They are retractile within but slightly elevated verrucæ, which latter are from 0·75 to 1 mm. in diameter.

The cœnenchyma is very thin. The spicules forming a nearly smooth surface, through which the grooving of the internodes is seen.

The spicules are Stachelkeule, which are frequently found with much longer spines on one side than the other; these measure 0·24–0·06 at apex and 0·02 at base, 0·18–0·04; 0·04 mm. The slightly bent spiny spindles measure 0·22–0·02; 0·16–0·02; 24–0·06 mm. The one-sided spiny spicules measure 0·1–0·06; 0·06–0·04; 0·08–0·04 mm. Some small warty spicules measure 0·08–0·02 mm., and some stellate forms 0·12–0·06 mm.

Colour a dull grey-white, with polyp tentacle spicules yellow.

Habitat.—Amboina; depth, 15 to 25 fathoms.

Melitodes esperi, n. sp. (Pl. XL. fig. 12).

The colony is branched, fan-shaped, about 140 mm. in height by 150 mm. across its extreme outline, the branches being all in the one plane; the main axis is oval, with a basal diameter of 10 mm. at its broadest and 5 mm. at its narrowest. The average