

yellow-coloured spicules of the polyps and of some few spicules of the same colour which are scattered in the outer surface of the cœnenchyma.

The spicules measure :—the Stachelkeule or Blattkeule 0·22–0·1; 0·2–0·06; 0·19–0·06; 0·1–0·06; 0·1–0·08 mm. The one-sided spiny spindles 0·14–0·08; 0·2–0·1 mm. The bent spiny spindles 0·26–0·06; 0·16–0·08 mm. The straight warty spindles 0·1–0·08; 0·1–0·04 mm. The polyp spicules measure 0·1–0·04; 0·08–0·02 mm.

*Habitat.*—Station 162, off East Moncœur Island, Bass Strait; depth, 38 to 40 fathoms.

*Melitodes rubeola*, n. sp. (Pl. XL. fig. 7).

A large mass torn from its basal attachment was found at Station 190. It forms portion of a colony about 175 mm. in height by nearly 200 mm. in width. The colony is extensively branched, but these branches are not always in the one plane, and they form by a series of outgrowths and anastomoses a number of fan-shaped nets united to one another by several cross anastomoses, thus presenting the appearance of a series of parallel fans. Towards the basal portion anastomoses form a net with somewhat close meshes; these, however, become somewhat more elongated towards the circumference.

The stoutest of the basal internodes are about 2·5 mm. in diameter, but become of extreme fineness towards the terminal twigs; in length they vary from 4 to 13 mm. The nodes are conspicuous, 2 mm. in diameter. When deprived of cœnenchyma, the internodes are smooth, cylindrical, and white; the nodes are of a bright pink colour; the internodes are slightly grooved towards the base of the axis.

The polyps are placed on the branches with a marked bilateral tendency, but sometimes are alternate and in spires. They are retractile within well-developed verrucæ, which latter have elevated edges and are 1 mm. in diameter and 0·5 mm. in height.

The cœnenchyma is rough, with large, very spinous, spindle-shaped spicules (Stachelkeule).

The colour of this fine species in spirits is white, with bright pink nodes. These pink nodes are not so conspicuous in dried specimens. It is not related to *Mopsea bicolor*, Kölliker.

The spicules measure :—the Stachelkeule 0·18–0·07; 0·18–0·06; 0·14–0·06; 0·12–0·04 mm. The one-sided spiny spindles 0·12–0·08; 0·1–0·08; 0·12–0·1 mm. In some of the spindles the protuberances from the one side of the spindles are continued out into a long blunt or pointed arm; these measure, length and greatest breadth, 0·2–0·06; 0·2–0·04; 0·16–0·04; 0·1–0·06 mm. The simple spiny and bent spicules are 0·3–0·04; 0·1–0·02; 0·2–0·1; 0·24–0·1; 0·26–0·1 mm.

*Habitat.*—Station 190, Arafura Sea; depth, 49 fathoms.