

length of the internodes, including the cœnenchyma, is 8 mm., with a diameter of 1 mm.; while the nodes measure 2·5 by 3 mm. The branching seems to consist of a division of each of the twigs, at the nodal regions, into two portions, which then proceed upwards in a quasi-parallel manner; the anastomosis taking place by a series of short lateral twigs, about 3 mm. in length, which stretch from one node to another.

The internodes when stripped of cœnenchyma are found to be broad, flattened, or broadly oval on section; in the older portions of the colony this is so markedly the case, that while the broad diameter is 1·5 mm., the short diameter is only 0·575 mm., bevelling off to nothing at the edges; they are of a bright pink.

The polyps are scattered all over the branches, with shallow verrucæ; they are somewhat lateral on the terminal portions, and they are not so numerous and indeed are even absent from the dorsal aspect of the colony. The verrucæ are from 0·5 to 1 mm. in height.

The cœnenchyma is thick; the large spiny spindle-shaped spicules forming a dense layer.

The spicules measure:—the Stachelkeule, which have sometimes rather flattened heads, 0·24–0·06; 0·2–0·1; 0·16–0·06 mm. The one-sided spiny spindles 0·1–0·06; 0·1–0·04 mm. The warty bent spindles measure 0·24–0·06 mm., these are mostly in the cœnenchyma. In the verrucæ, the double crosses measure 0·01–0·04; 0·08–0·06; 0·06–0·04 mm. At the base of the tentacles, the curved spiny spindles measure 0·3–0·02; 0·24–0·025; 0·22–0·025 mm. A few four-rayed forms are found, measuring 0·04–0·04 mm. in the polyps, where also occur some simple spindles with eight small central knobs, 0·04–0·02 mm.

The colour in spirits is a deep red; the polyps yellow. The colours when dry fade a good deal.

*Habitat.*—Torres Strait.

*Melitodes fragilis*, n. sp. (Pl. XLI. fig. 1).

Some few fragments of this small but interesting species were found in a dredging at Amboina; they were so entangled in the meshes of the tow that it was impossible to obtain a very accurate idea of the appearance of the perfect colony. It was apparently of small size.

The largest fragment is a detached branch of 40 mm. in height and 15 mm. in width; it branches irregularly, but the branches have a tendency to assume the one plane. The branches are twisted; in this fragment there is but one anastomosis, which is between two parallel branches, but in other fragments mesh-like anastomoses occur. The internodes which are often curved and twisted vary greatly in length, measuring 4, 8, and 12 mm. in length; in various fragments the largest are 1·5 mm. in length,