so that on fracture of the mass the broken ends of the spicules form an almost level surface. When all the calcareous material is removed, there is very little alteration in the bulk of the axis, and a very slight alteration in the shape of the individual spicules.

The cœnenchyma is thin, with very large warty spindle-shaped spicules forming a dense pavement over the stem and branches; these get smaller at the base of the verrucæ, where they envelope the eight-rayed star projection, which covers over the completely retracted polyps.

The verrucæ are but little elevated; a coronet of minute acerate spicules surrounds the bases of the tentacles, and these are also to be met with in the tentacles.

The two largest of the fragments measure, respectively, 80 mm. in length by 7 mm. in breadth; 60 mm. long by 8 mm. broad. The verrucæ measure from 3 to 5 mm. in breadth.

When a fragment is dried, the pink colour slightly fades, owing to a white cuticle-like layer, which seems to envelop the whole of the spicules of the cœnenchyma, and which becomes opaque on drying; it is just possible that this may have given origin to the statement of Duchassaing and Michelotti already referred to.

The spicules measure as follows:—the large red spindles in the cœnenchyma, 2·4–0·32; 2·1–0·3; 1·84–0·3; 1·60–0·6; 1·08–0·4 mm. The flattish disc-like forms 0·4–0·2; 0·26–0·406; 0·5–0·3 mm. The small spindles 0·3–0·1; 0·28–0·04; 0·24–0·04; 0·20–0·04 mm. The spicules of the polyp and tentacles 0·2–0·06; 0·2–0·04; 0·1–0·02; 0·08–0·02 mm.

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

Family III. Melitodidæ.

Isidinæ (pars), Milne-Edwards, Hist. Nat. des Coralliaires, t. i. p. 192, 1857.
Melithæaceæ (pars), Kölliker, Icones Histiologicæ, p. 142, 1865.
Melithæadæ; Mopselladæ; Trinellidæ, Gray, Cat. Lithophytes, pp. 3–13, 1870.
Ellisellidæ (pars), Gray, Cat. Lithophytes, p. 24, 1870.
Melithæaceæ, Klunzinger, Die Korallenthiere des rothen Meeres, p. 57, 1877.
Melithæidæ, Ridley, Zool. Coll. H.M.S. "Alert," p. 356, 1884.
Trinellidæ, Ridley, Ann. and Mag. Nat. Hist., ser. 5, vol. x. p. 130, 1882.

The name *Melitæa* having been used for a genus of Insects by Fabricius in 1808, four years before it was employed by Lamouroux, it was replaced by Verrill in 1865 by the name *Melitodes*, and as the family name "Melithæidæ" has been used in so many various senses, it seems advisable to adopt the name suggested by Verrill also for the family.

The family, as understood by us, embraces those forms of Alcyonaria in which the axis consists of an alternating series of hard and soft joints; the intimate structure of both of these