

ribs, but with large rough warts. Only those of the last row higher than broad, with longer teeth on the end. Height to breadth in mm.—0·42–0·33; 0·26–0·4; 0·24–0·46.

Opercular spicules.—Pointed, triangular, hollowed out in the middle line, with two lateral combs, 0·4–0·15; 0·33–0·15 mm.

Cœnenchyma—spicules of the upper layer, irregularly three- or four-sided. Height to breadth, 0·25–0·3; 0·3–0·47; 0·19–0·33; 0·3–0·22; 0·29–0·25 mm. Lower layer, irregularly polygonal with a few small warts, 0·28–0·28; 0·23–0·2; 0·3–0·16 mm.

Habitat.—Station 135D, off Inaccessible Island, Tristan da Cunha; depth, 55 to 70 fathoms.

6. *Thouarella variabilis*, n. sp.

Main stem simple. The twigs come off from the main stem in three directions at nearly right angles, they are thin, flexible and frequently branched. The polyps are placed on the twigs in short spirals of always three in number. The calyces are cup-shaped, 2 to 2·5 mm. long, covered with only a few scales, forming four to five transverse rows. The scales of the uppermost row are produced into longer or shorter spines, which surround the calyx wall. The operculum consists of eight concave scales, which vary slightly according to position. When closed it forms a low, slightly projecting cone, the apex of which is generally overtopped by the spicular spines. The scales of the cœnenchyma are large, and their edges overlap laterally.

This species, of which there are numerous examples, varies to an extraordinary degree in the size of the calyces, the development of the spines, and the development of the colony, without it being possible thereby to sharply separate the individual forms specifically. Nevertheless one can generally distinguish the following three varieties from each another.

Var. *a*. *The type* (Pl. XIV. figs. 1, 2; Pl. XXI. fig. 1).

The commonest form. The main stem is simple and in the largest specimen attains a height of 300 mm. The base is wanting in all the specimens. The axis is in its lower part firm and brittle, and consists of a layer of concentrically placed, calcified horny lamellæ and a softer medulla; above, the axis becomes softer and flexible.

Its transverse section is elongatedly oval, the largest transverse diameter, in the largest piece, reaches near the base 3 mm., in the upper third 1·5 mm. The entire stem exhibits a spiral twisting round its axis. The colour is brownish-yellow. The cœnenchyma is very thin and contains only a single layer of thin calcareous scales. The thin twigs, all the way up, come off from the stem mainly in three directions, at