

truncated mouths, they are directed upwards and bent towards the stem. Their length reaches 0·6 to 0·7 mm. They stand in not very distinct spirals, still not so closely crowded as in *Mopsa encrinula*. At the apex of the twigs they arise only from two sides alternately. On the thicker twigs they still stand in spirals, but the individual polyps are smaller and stand at wide distances from one another; on the stem they are still isolated, but in part can still be recognised as projecting papillæ. Accordingly, on the older part of the colony degeneration of the polyps appears to take place.

The horny joints of the axis are, in the lower part of the stem, longer than the calcareous joints, but soon become shorter, and already in the stem the calcareous joints become double their length. In the branches and twigs the calcareous joints are more than four times as long as a horny joint. In the stem the calcareous joints are slightly compressed in one plane and distinctly fluted longitudinally; sometimes the ribs between the longitudinal furrows show sharp indented edges.

The branches sometimes arise from the middle of the calcareous joint, more frequently from the upper edge, where their first horny joint fuses with the horny joint of the axis.

The spicules in the cœnenchyma are prickly, lancet-shaped, often curved plates, with strongly toothed edges and with sharp warts on the surface; they are thickly placed and give the surface of the cœnenchyma a rough appearance. Length to breadth in mm.—0·22–0·05; 0·12–0·08; 0·16–0·1; 0·2–0·07; 0·18–0·06.

In the polyps the plates became strong scales convexly bent on the surface, whose lower edge is incised and whose toothed upper edge is overhung by sharp spines. Height to breadth 0·08–0·16; 0·07–0·15; 0·05–0·22 mm.

Colour in alcohol, yellowish-white.

This species is excellently characterised by Lamouroux, and after his well-defined characterisation of the genus it is not well possible to confuse it with a Melithæidean. He gives the diagnosis as follows:—"Rameaux grêles, cylindriques, presque filiformes, avec dichotomies à chaque articulation; polypes mamilliformes dans les rameaux supérieurs, tuberculeux dans les moyens, superficiels dans les inférieures; écorce unie sur la tige." The original specimens of Lamarck's *Isis dichotoma* in the Zoological Museum at the Jardin des Plantes, Paris, agrees in all particulars with our specimens, and it still has the original label attached to it, with the name written thereon in Lamarck's handwriting.

Gray's *Mopsella dichotoma* is, on the other hand, a Melithæidean, as is sufficiently evident from the description, and this is confirmed by Verrill when he says:—"I am unable to find any generic differences between this species and those subsequently referred by him to *Melitella*."

*Habitat*.—Port Jackson, Australia; depth, 35 fathoms. Three specimens.

The Indian Ocean is given by Lamouroux as the place where the species was found.