

and probably also below, though the latter are either concealed by, or more probably coalescent with, the broad mucro. But in *Melicerita atlantica* the lower border of the orifice is quite even, without any appearance of a mucro, nor have I been able to detect any upper internal denticles, indeed I am not quite sure of their existence even below. If of small size they may, however, be concealed by the chitinous investment and operculum.

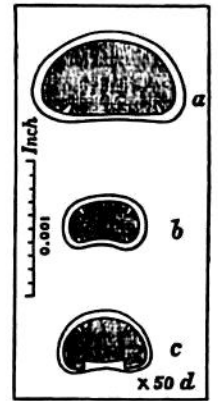
The relative dimensions of the zoecial areas in the three species are as under:—

<i>Melicerita charlesworthii</i> ,	0''·015 × ·010
<i>Melicerita angustiloba</i> ,	0''·022 × ·015
<i>Melicerita atlantica</i> ,	0''·025 × ·035

and as the size of the areas in all three species appears to be remarkably uniform, these dimensions afford an additional differential character of considerable value. They also show that, so far as size is concerned, the recent form shows an advance upon its Miocene predecessors.

The accompanying figures show the relative proportion of the orifice in three species, drawn to scale and magnified about 50 diameters.

- a. *Melicerita atlantica*.
- b. *Melicerita charlesworthii*.
- c. *Melicerita angustiloba*.



N.B.—As the only specimen of *Melicerita atlantica* is quite fragmentary, the account of its habit of growth is of course imperfect; nor is it possible to say how it is rooted, whether radicate or fixed, but most probably, like the rest of the Salicornariadæ, it is radicate.

(2)? *Melicerita dubia*, n. sp. (Pl. XXXIII. fig. 10).

Character.—Zoarium compressed, bilaminate, erect; composed of broad branching lobes of unequal width. Surface divided into uniform rhomboidal or hexagonal areas, angular at top and bottom, bounded by thick granular continuous ridges, and disposed in transverse series. Front much depressed, with a central rounded elliptical aperture, having a thick beaded or granular border, and the upper third occupied by a semicircular operculum; the lower part membranous. A few vicarious avicularia on the edges of the branches or lobes, with an obtuse mandible pointing upwards (fig. 10c).

Habitat.—Station 320, lat. 37° 17' S., long. 53° 52' W., 600 fathoms, green sand.

I have had great difficulty in assigning its family position to this very remarkable species, and it is with great hesitation that I place it with or next to *Melicerita* in that of the Salicornariadæ. The only other Family to which it might possibly be referred is