

aperture, which is more or less triangular or sub-rhomboidal; the outer angle running into the digital process, which is continued from the external angle, and supports on the upper side four or five long curved articulated spines. Two long articulated dorsal spines near the upper part of the zoëcium and a slenderer one near the rachis. No avicularia. The median cell at a bifurcation has a triangular aperture, the upper border arched in the middle, and no digital process. Oëcium helmet-shaped, with a slightly thickened border.

Habitat.—Station 196, lat. $0^{\circ} 48' S.$, long. $126^{\circ} 58' E.$, 825 fathoms, hard ground.

Brought up in the same haul together with *Bicellaria bella* and *Bicellaria moluccensis*, the present form is indistinguishable, by the naked eye, from the former of these species, and for some time I was inclined to regard it as a variety; but notwithstanding the several points in which they show strong similarity, in all important respects they differ very widely. I may add that the comparison has been made with abundance of specimens, and the distinction appears to me to rest on ample grounds.

The chief points of resemblance may be stated to be:—

1. The general habit, which is precisely the same, including the mode in which the numerous spines arch over the front of the branches, though these appendages are less numerous in *Bicellaria macilenta* than in *Bicellaria bella*.

2. The outer angle of the aperture is prolonged into the base of the digital process; but in *Bicellaria macilenta* this prolongation is more extensive.

3. The curious angular curvatures of what may be termed the rachis, which forms an abrupt angle at the base of the body of each zoarium.

The similarity in form of the oëcia might also be cited; but as that organ presents exactly the same appearance in several other species, it is not a distinctive character of any value in the present case.

The differences are:—

1. The form of the body of the zoëcium, which in *Bicellaria macilenta* is very much narrower and almost cylindrical.

2. The absence of a digital process in the median zoëcium at a bifurcation, whilst in *Bicellaria bella* that, or rather it may be said, the two median zoëcia, in the same situation, are furnished with a digital process, projecting directly in front, owing to the circumstance that the zoëcia in question look sideways and not directly in front, as in *Bicellaria macilenta*.

3. The total absence of avicularia of any kind in *Bicellaria macilenta*.

2. *Bugula*, Oken.

Bugula, Oken, Busk, Smitt, Gray (sp.), Smitt, Hincks, &c.

Acamarchis, Lamx., Blainv., d'Orb. (sp.).

Crisia (sp.), Lamx.