

The rostriform avicularium in this case differs essentially from that in the preceding species, in its being apparently simply a development of an original true mucro and not a subsequent growth altogether below the orifice. The minute structure of the ectocyst is very remarkable. At first sight, with a magnifying power of about 50 diameters, the appearance is something like that of "crackling" china, which is apparently due to the wall being constituted of exceedingly fine calcareous fibres, forming a sort of felted texture not unlike that of a spider's cocoon.

(6) *Mucronella bisinuata*, Smitt (sp.) (Pl. XIX. fig. 5).

*Escharella bisinuata*, Smitt, *Florid. Bryoz.*, p. 59, pl. xii. fig. 229.

*Character*.—Zoarium thick, coarse looking, expanded. Zoecia subserial, irregularly quincuncial, broadly ovate or subrhomboidal in front, oblong posteriorly; the wall is seen to be punctured when the thick epitheca is removed. Orifice coarctate, lower lip straight, with two lateral incisions. Many of the zoecia with four avicularia, two on the sides near the orifice and two lower down on the front; (mandibles acute, slightly curved and pointed in various directions). Sometimes only one avicularium and occasionally none, especially in the zoecia towards the growing edge. On the dorsal aspect, the wall is thin, smooth, slightly convex and presents a rounded oval or reniform opening with a slightly raised border. Oecia inapparent. Zoecia about 0''·02 wide. Operculum 0''·012 × ·01.

*Habitat*.—Station 190, lat. 8° 56' S., long. 136° 5' E., 49 fathoms, green mud.

[Gulf of Florida, 9 to 19 fathoms, Pourtalès.]

There appears no reason to distinguish this form from that described by Prof. Smitt, the only differences between them being that in the present the zoecia in front are not so decidedly rectangular and that the number of avicularia is occasionally much greater, Prof. Smitt ascribing only one to his species, whilst in the present the number is very often four to each zoecium. I have been unable to discern any oecia in the Challenger specimens, and consequently no character derived from them is afforded. The double notching of the lower lip is a striking character possessed in common by the two forms, and as it is of extremely rare occurrence among the Polyzoa, must be held as of great importance, at any rate as a specific character.

(7) *Mucronella castanea*, n. sp. (Pl. XIX. fig. 6).

*Character*.—Zoarium flat, expanded. Zoecia rhomboidal or subovate, wide, slightly convex in front; surface shining, uneven; wall punctured. Orifice coarctate; lower lip bluntly mucronate; peristome neither thickened, nor raised; usually an avicularium on one or both sides of the orifice in front, varying much in size, from 0''·005 to ·02 in length;