A NEW CYCLOSTOMATOUS BRYOZOAN.

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INTRODUCTION.

During an examination of Victorian littoral bryozoan assemblages, the interesting species described below was found. The specimens were collected early in January, 1934, amongst seaweed on the beach behind the Warrnambool railway station (Victoria). Three small zoaria were collected. The type specimens have been lodged with the National Museum (Melbourne).

Systematic Description.

Family Crisiidae.

Genus Bicrisia d'Orbigny, 1853.

Crisidia d'Orbigny, 1839 (*non* Milne-Edwards, 1838), "Voyage dans l'Amérique-Méridionale," v., part iv., 7.

Bicrisia d'Orbigny, 1853, "Paléontologie française," Terrain Crétacé, v., 601. Type (by monotypy): *B.* (*Crisidia*) *edwardsiana* (d'Orbigny, 1839).

Bicrisia warrnamboolensis, sp. nov.

(Figs. 1-4.)

Description.—The primary disc was not observed on the present specimens, but the free, articulated, bizooecial internodes were seen to arise from a stolon, adherent to seaweed, consisting of short cylindrical kenozooecia separated by chitinous joints. The free branches begin with the development of an erect, non-adherent, short, cylindrical kenozooecium separated by a chitinous joint from the stolon. From the summit of the erect kenozooecium arises an internode, consisting of a single autozoid which develops, at each upper angle of the zooecium, a long, thin tapering filament composed of four calcareous segments separated by chitinous joints. The bizooecial internodes then commence and continue to develop from chitinous joints arising between the zooecia of the proximal internode until a brood chamber develops. New branches probably arise at intervals of about ten bizooecial internodes from the upper angle of one zooecium (or perhaps both zooecia) of a fertile internode, replacing the segmented calcareous filament present at the abzooecial upper angle of each zooecium. The brood chambers arise between the two zooecia of an internode.

The bizooecial internodes scarcely vary in character, the only noticeable variation being that the first two or three internodes are slightly more elongate than those which succeed them. The greatest width of the internode is approximately equal to its length. The well-developed peristomes are directed obliquely upward and outward. A short distance within the peristome, about five minute spines project from the proximal wall into the circular peristomice. The calcareous frontal wall is dotted with sparsely-scattered pseudopores. The calcareous filaments arising from each upper abzooecial angle slightly below the level of the peristomice, consist of four or five segments which arch over the zooecia and probably offer protection for the protruded polypide.

The brood chamber, dotted with sparsely-scattered pseudopores, is elongate-oval in outline and has the transversely elliptical, narrow, projecting ooeciostome placed a short distance from the summit and facing in the opposite direction from the peristomes.

Dimensions.—Bizooecial internode, length 0.33 mm., greatest width 0.38; unizooecial internode, length 0.32, greatest width 0.22; peristome, diameter 0.07; brood chamber, length 0.43, width 0.29; ooeciostome, width

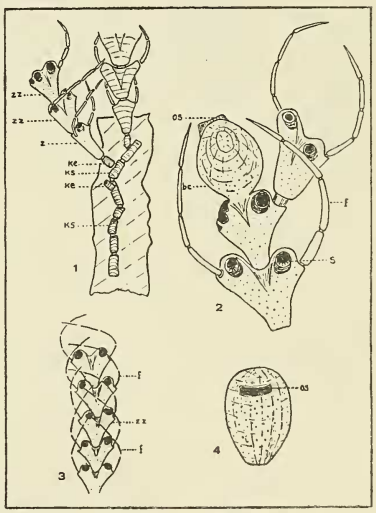
0.12; filament, length 0.8. (All measurements, except those for the unizooecial internode, are taken from the holotype.)

Type Material.—Holotype (Fig. 2), Nat. Mus. Coll., Regd. No. 68,331. Paratypes (Fig. 1), Nat. Mus. Coll., Regd. No. 68,332 (Fig. 3), Nat. Mus. Coll., Regd. No. 68,333.

Affinities.—This species differs from the genotype (*B. edwardsiana*) in the more squat appearance of the internodes, the segmented filaments projecting from each, instead of from one, of the upper angles of the internode and in the more elongate outline of the brood chamber.

From *Bicrisia biciliata* (Macgillivray, 1868) it differs in having a less salient peristome, relatively shorter internodes and a single segmented filament, in place of two filaments to each upper angle. The brood chamber in both species is, however, almost identical.

Observations.—The brittle nature of the zoaria did not permit of full observations on the mode of branching. Only one instance of an attached branch was observed. This occurred on the upper abzooecial angle of a fertile internode, while the upper angle of the other zooecium was unfortunately broken. It is suggested that a branch may arise from each upper abzooecial angle of a fertile internode and that dichotomous branching of this type is the probable mode of development of the zoarium. In only two of the eighty-one internodes examined were two filaments present in place of the normal single filament, and then they arose from one angle of the internode only.



BICRISIA WARRNAMBOOLENSIS, sp. nov.

Fig. 1.—Proximal region of zoarium illustrating early development. (Paratype, No. 68,332 x 30. Fig. 2.—Fragment of zoarium showing zooecial detail, brood chamber and mode of branching. The brood chamber (bc) is foreshortened owing to its oblique attitude. (Holotype, No. 68,331) x 60. Fig. 3.—Portion of branch displaying the possibly protective function of the filaments. (Paratype, No. 68,333) x 30. Fig. 4.—Unforeshortened view of brood chamber. x 60. bc, brood chamber; f, segmented filaments; ke, erect kenozooecium; ks, kenozooecia of the stolon; os, ooeciostome; s, peristomial spines; z, unizooecial internode; zz, bizooecial internode. (All except Fig. 4 drawn with camera lucida.)