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STUDIES ON BRYOZOA.

PART I.

BY


(Figures 1-3).

NEOEUTHYRUS: A NEW GENUS TO ACCOMMODATE EUTHYRIS WOOSTERI, MacGillivray.

In a paper read before the Royal Society of Victoria, MacGillivray included his description of a new species which he named Euthyris woosteri. His description was based on the superficial characters of a small fragment of a specimen collected by Mr. W. H. Wooster at Cooktown, Queensland; and with his description MacGillivray gives his reasons for allotting this form to the genus Euthyris.

The holotype is housed in the collections of the National Museum, Melbourne, but the Australian Museum has now acquired the remainder of the original specimen from Mr. Wooster.

This species has not again been referred to by the many authorities on the Bryozoa, with the exception of the following remark by Harmer, which has led me to re-examine it. "I feel doubtful whether Euthyris woosteri, MacGillivray, is rightly referred to this genus............"

The results of my examination show that "Euthyris" woosteri has, with one exception, all the characters entitling it to a place in the family Euthyridae, according to Levinsen's diagnosis:— "The zoecia are provided with a slightly calcified cryptocyst, and in a larger or smaller part of their surface the surrounding covering membrane is kept distended by ridge-like or rod-shaped processes from the cryptocyst, which has a number of superficial rosette-plates. The interzooecial walls have scattered, uniporous rosette-plates. A compound operculum. No spines and no heterozoecia. There may be endozooecial zoecia with a projecting ectoectum."

The exception in the case of this form is in the last line of Levinsen's diagnosis, which reads "Free, branched colonies." The small specimen obtained by Mr. Wooster was found encrusting marine algae, but what value may be placed on this habit of growth I do not know. MacGillivray and others consider it to be of little importance, and I am of the opinion that the encrusting habit of "Euthyris" woosteri does not over-ride the structure and give enough reason to place it as yet in a separate family. It must however be considered as generically distinct from the other forms of the family Euthyridae, and I propose the name of Neoeuthyris to accommodate it. From the other genera of the family its differences will be seen from the key. It is closely allied to Euthyris, differing firstly in having only one form of the zoecium with no dimorphism of the operculum; and secondly in the presence and disposition of the aviculae.


(Fig. 1.)


Zoecia slightly calcified, arranged alternately in a longitudinal series, elongate oval in shape, and rounded anteriorly but flattened basally.

Fig 1. Neoeuthyris woosteri.
The covering membrane is hyaline, thickly covered with irregularly sized and arranged, minute elevations, and indistinctly marked with longitudinal grooves. Aperture lofty, broadly arched, contracted at the lower third, the proximal margin slightly hollowed. A compound operculum is present. A large avicularium may be situated to the right or the left of the aperture in the majority of the zoecia; it is broad above, with a triangular mandible produced into a downwardly projecting acuminated process. Numerous uniporous rosette-plates are present on the inter-zoecial walls, and the covering membrane is kept distended by chitinous filiform or rod-shaped processes. Oecia absent. Colony encrusting on marine alge.

Locality.—Cooktown, Queensland.

Paratype in the Australian Museum (U. 875).

Obs. From Levinsen’s observations on a supposed form of Euthyris obtecta, Hincks, in which he mentions that the single form of operculum is present, and remarks that it may be regarded as a new species, I should think that this form described may be referable to Neenthryria.

On Pollaploecium.

In September of last year the Rev. Dr. Thos. Porter of Petersham, N.S.Wales, presented two slides of Bryozoa to the Australian Museum representing, as he contended, a new species of Pollaploecium.

The specimens from which these slides were prepared were dredged in Bass Strait by Mr. J. Wilson of North Fitzroy, Victoria, a gentleman to whom microscopical science owes much, and it is with pleasure that I associate his name with this new species.

The genus Pollaploecium was created by Maplestone to accommodate his new form from the Gilbert Islands. He remarks on the differences between this and Diploecium, but with Kirkpatrick he does not allot his genus to a family. I have not seen Diploecium, but my examination of the species about to be described, and the paratype of P. gilbertensis, shows that Pollaploecium should be accommodated in the family Ochoporidae according to Levinsen’s diagnosis:

"The slightly calcified zoecia, the frontal surface of which is covered by a closely adhering (chitinous?) membrane, are generally provided with

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Levinsen—1. c. p. 259.
a number of superficial, uni- or multiporous rosette-plates, which are most often situated in the distal part of the zoecium. The distal wall, which is bent from side to side, has a number of uniporous or one multiporous rosette-plate, while the distal half of each lateral wall has a single multiporous plate. No avicennaria. The strongly projecting hyperstomial occia, the aperture of which may be closed by the zoecial operculum, consist of two membraneous (chitinious?) layers, between which there is a cryptocyst layer, which springs from the distal wall. Free, branched colonies."

The key to the genera of this family, accommodating Polioploecium, is thus presented.

A. The compensation sac opens outwards through a crescentic ascopore.
   a. The zoecium consists of three different segments, a short proximal, a long stem-like middle, and a widened distal one. The operculum may be compound or simple .......................................................... Catroellia.
   b. The zoecium does not consist of three different segments.
      ba. A simple operculum. The occia with two proximal and free rib-like processes .......................................................... Onchopora.

B. The compensation sac does not open outwards through a pore, but immediately on the proximal side of the operculum.
   a. Without pores .......................................................... Onchopodos.
   b. With pores .......................................................... Polioploecium.

**Polioploecium wilsoni**, sp. nov.

(Fig. 2).

Polyzooey.—A free branching colony, made up of internodes of ten to twelve zoecia situated back to back. Internodes connected by short corneous tubes.

Diagnosis.—Zoecia pyriform, slightly calcified and covered by a closely adhering membrane. The aperture is directed sideways, semi-ellipsoidal in shape and with a short spine at each side of the hollowed lower border. The frontal surface is covered by large and irregularly placed circular pores, and occasional small spine-like processes. Occia globose, situated above and continuous with the zoecium, a slight suture showing the line of demarcation. Avicennaria absent.

Colour (in Canada Balsam) brown.

Locality.—Bass Strait, Tasmania.

Holotype and Paratype in the Australian Museum (U.878 and U.879).
A paratype of *Pollenplocium gilbertensis*, Maplestone, is in the collection of the Australian Museum, and from the following figure and description its differences from *P. Wilsoni* will be seen.

![Image of Pollaploecium](image)

**Pollenplocium gilbertensis**, Maplestone.

(Fig. 3).


Polyzoary.—A free branching colony made up of internodes of from six to ten zoecia situated back to back. Internodes connected by short corneous tubes.

Diagnosis.—Zoecia oval or pyriform, ventricose, slightly calcified and covered by a closely adhering membrane. The aperture is strongly
arched above with a straight lower border bearing a deep central sinus. The frontal surface is minutely punctate, but otherwise without decoration.

The oecia are situated above and are continuous with the zoecia, a slight suture showing the line of demarcation. Avicularia absent.

**Colour** (dry) dirty white.

**Locality.**—Marshall Group, North Pacific Ocean.

**Paratype** in the Australian Museum (U. 877).