

# I. A New Lunulitiform Polyzoan (Ascophora) from South-east Australia

## ABSTRACT

A monotypic family is erected in order to accommodate a new lunulitiform ascophoran polyzoan, referred here to *Australiana* n.gen. Family characteristics comprise the cupuliform zoarium with quadrate zooecia radially arranged in single or double rows. The dimorphic orifice is elongate in ordinary zooecia and transversely elliptical in fertile zooecia. A pair of large fenestrae perforate the outer wall of the ectooecium. The basal surface, strongly concave in mature zooecia, is perforated by large foramina, interpreted as kenozooecia, and bears several radicular chambers. Avicularia are not developed. The species is known as a fossil from the lower Muddy Creek (Middle Miocene) beds of Victoria, and from the Recent Peronian faunal province.

## INTRODUCTION

The characters of the genus here described, including the remarkably regular arrangement of the zooecia not covered by a mass of secondarily formed avicularia and convexities, as well as the distinctive fenestrate ovicells, clearly distinguish it from other previously described lunulitiform ascophoran genera, and therefore justify its reference (as the type genus) to a new family.

## AUSTRALIANIDAE new family

*Diagnosis:* As for the genus.

## *Australiana* new genus

Type species (here chosen): *Australiana bifenestrata* n.sp. (see below).

*Diagnosis:* Loosely attached, cupuliform, unilaminar Ascophora with a thin porcellanous frontal wall. Zooecia quadrate, radially arranged in uniserial or biserial rows, extending vertically from the frontal to the basal surface. Orifice dimorphic, the proximal end directed towards the apex of the zoarium, elongate in ordinary zooecia, with two condyles at the proximal third; transversely elliptical in fertile zooecia. Ovicell entozooecial, with a pair of conspicuous frontal pores perforating the outer wall of the ectooecium. Ancestrula membraniporine, apical, giving rise to three first-generation zooecia. Basal surface deeply concave in mature zooecia, with large foramina and scattered radicular chambers. Avicularia wanting.

*Remarks:* The holotype (plate 1, fig. 5) is chosen from material retrieved by the *Thetis* Expedition (1898) off Bulgo, New South Wales. Additional paratypic material was taken near Gabo Island, Victoria; Bass Strait; and off the New South Wales coast by the *Endeavour* Expedition (1909-14). I have also examined three specimens collected off New South Wales by members of the Australian Museum, also a single specimen from Port Jackson, N.S.W.

The majority of this material was examined some time before 1921 by R. Bretnall, of the Australian Museum staff. He identified this form as a new species of the genus *Lunularia* but his manuscript name was never published, nor is it mentioned in the unpublished and incomplete Bretnall manuscript on the Polyzoa of the *Endeavour* Expedition.