



## New genus for a unique species of Indo-West Pacific bryozoan

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### Abstract

Larval type, larval morphology, ancestrular morphology and colony astogeny have great systematic value in the cheilostomate bryozoans, but for most species these characters are undocumented. Whilst most cheilostomate bryozoan species produce lecithotrophic coronate larvae; a minority of species produce planktotrophic cyphonautes larvae, all belonging to genera within the superfamily Membraniporoidea. *Biflustra laboriosa* Tilbrook, 2006 nominally belongs to a membraniporid genus whose species are otherwise characterised by having a twinned ancestrula. The production of a single ancestrula from a cyphonautes larva and overall zooidal morphology excludes *B. laboriosa* from the Membraniporidae and its zooidal characters are alien to any other membraniporoidean genus. Accordingly, *Tarsocryptus* n. gen. is erected to accommodate it, resulting in the new combination *Tarsocryptus laboriosa* n. comb. Its reassignment here to the membraniporoidean Electridae is tentative.

**Key words:** Bryozoa, new genus, Indo-West Pacific

### Introduction

Larval type, larval morphology, ancestrular morphology and colony astogeny have great systematic value in the cheilostomate bryozoans, but for most species these characters are undocumented (Hayward 2001). Of those cheilostomate species in which larval type is known, most produce a lecithotrophic coronate larva that is non-feeding and has a short free-swimming period (hours or a few days). In a minority of species, fertilised eggs are released into the water column where embryogeny and larval ontogeny take place, producing planktotrophic cyphonautes larvae. The cyphonautes larva is distinctively triangular-shaped, possesses a pair of lateral shell valves, a gut and may have a long free-swimming period (weeks or months). These larval types were reviewed by Zimmer & Woollacott (1977), who concluded that they do not necessarily imply or reflect higher systematic relationships. That being said, all cyphonautes larvae described in cheilostomates belong to species within genera of the malacostegine superfamily Membraniporoidea Busk, 1852 (Hayward 2001). At settlement the cyphonautes larva metamorphoses into the ancestrular zooid of a new colony by flattening and losing its shell valves. Ancestrular morphology and the subsequent pattern of budding of the primary and secondary autozooids (colony astogeny) has been used to differentiate species and genera (e.g. Taylor & Monks 1997; Tilbrook 1999, 2001). For instance, cyphonautes larvae belonging to species of genera within the malacostegine family Membraniporidae Busk, 1852 (e.g. *Membranipora* and *Jellyella*) metamorphose into a twinned ancestrular complex of zooids. This was cited by Taylor & Monks (1997) as an autapomorphy of the family. The ancestrula is as yet unknown in the type species of *Biflustra*, but it is assumed to be twinned as it shares a suite of morphological characters shared by other species of the genus in which the ancestrula is known. However, cyphonautes belonging to species of genera within the malacostegine family Electridae d'Orbigny, 1851 (e.g. *Electra* and *Conopeum*) metamorphose into a single ancestrular zooid.

A decade ago, Tilbrook *et al.* (2001) described the cheilostomate bryozoan fauna of Vanuatu; of the 92 species documented, 20 were described as new including *Biflustra reticulata*. This species was subsequently recorded by Liu *et al.* (2001) from the South China Sea and by Hayward (2001) from Lizard Island, on the Great Barrier Reef, Australia. Unfortunately it transpired that *Biflustra reticulata* Tilbrook *et al.* (2001) was a junior homonym for a