



## ***Biflustra perambulata* n. sp. (Cheilostomata: Bryozoa), a new alien species from Cochin Harbour, Kerala, India**

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### **Abstract**

During a study of the Bryozoa of Cochin Harbour, *Biflustra perambulata* n. sp. (Membraniporidae) was discovered at an oil-tanker berth. Two erect foliaceous and brittle colonies of the species were found attached to a wooden rack deployed to suspend test coupons to collect fouling bryozoans. The present record documents the recruitment to this harbour of a genus most naturally occurring in geographically distant localities. Insofar as a number of *Biflustra* species are known to be distributed via shipping to contiguous waters, the new species is interpreted to be an alien introduction, with a probable provenance from South-East Asia via a merchant vessel.

**Key words:** Bryozoa, Cheilostomata, Membraniporidae, *Biflustra perambulata*, *Biflustra grandicella*, new species, alien species, fouling, Cochin harbour, India

### **Introduction**

Marine bryozoans are predominantly sedentary colonizing organisms, growing upon hard substrata like rock and shell, but also on macroalgae, corals and other firm invertebrates. As has been well-documented, they also grow on anthropogenic substrata such as wooden and concrete piles, harbour structures, mooring buoys, underwater transoceanic cables, vessel hulls, etc. (Ryland 1965; Gordon & Mawatari 1992). Hence the phylum Bryozoa tends to be well represented in fouling assemblages, within which representatives of the three living orders of marine bryozoans can be found, although the anascan cheilostomes frequently dominate. Indian seas are known to support a diverse bryozoan fauna — previous studies conducted by various authors have recorded around 200 species from various depths around the subcontinent.

Fouling of ships and other vessels is of zoogeographical importance, allowing certain species to spread beyond their original area of distribution (Watts *et al.* 1998). Such species require particular attributes, enabling them to tolerate the movement of their substratum (vessel hull) through different waters, encountering varied temperatures, salinities and other parameters. Further, their larvae must be capable of settling on and adhering to a varied range of substrata, including artificial, ranging through wood, metal, plastic, and painted surfaces (Soule & Soule 1977).

Ballast water is also a major vector for marine-species introductions, although not for bryozoans. Nevertheless, Carlton (1985) has shown that species with planktonic cyphonautes larvae could certainly be transported in ballast waters. The present report documents the presence of a new species of bryozoan (*Biflustra perambulata*), anticipated to have planktonic larvae owing to its systematic position. Its sudden presence in a shipping port previously well-studied for bryozoans raises the question of how it came to be there. It was found during a bryozoan settlement study conducted at an oil-tanker berth in Cochin harbour on