

Composition of the Faunal Community Fouling On Long-Term Test Panels Deployed in Colombo Port, Sri Lanka.

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Studies in biofouling on artificial substrates have been carried out globally in order to understand the community succession, mechanisms, associated invasive species as well as addressing the issues. However, in Sri Lanka, such information is very much lacking and present study is to address such knowledge gap. The study was conducted in Colombo port in four sampling locations from February 2016 to March 2017 using experimental panels. Entire set up was pulled out of the water and photographed alive during monthly sampling cycle before placing them back in the water. Species identification was done to the lowest possible taxonomic level using live photographs which were taken in the field. In the laboratory, the photographs were analyzed to determine percentage cover using Photoquad software. From the succession analysis of permanent settlement collectors, 74 different fouling organisms were recorded belonging to 8 different taxa including Bryozoans (8 species), Annelids (12 species), lower Chordates (23 species), Molluscs (13 species), Arthropods (7 species), Poriferans (5 species), Cnidarians (5 species) and Echinoderms (1 species). Among the species recorded, eleven were globally known invasive species. Furthermore, the Dendrogram derived from cluster analysis showed a close relationship among members of the fouling community. Especially among the native bryozoan *Arbopercula bengalensis* and tube worms (Sabellidae); whereas one cryptogenic (*Celleporaria volsella*) and two native (*Parasmittina parsevalii* and *Hippoporina indica*) bryozoan species also shared a close relationship among each other. Moreover, arthropods and tunicates also showed a close relationship. However, two major nonindigenous species, *Schizporella errata* and *Mycale* sp. showed noticeable deviation, indicating their exceptional solitary behavior despite the presence of other members of the fouling community.

Keywords: Colombo port, Succession, Biofouling, Experimental panels