

Fauna associated with three seaweed types (*Padina antillarum*, *Cladophora herpestica* and *Gelidium* sp.) in Tangalle Beach, Sri Lanka

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Five replicates of seaweeds namely *Padina antillarum*, *Cladophora herpestica* and *Gelidium* sp. were randomly selected from Tangalle Beach, Sri Lanka. Each seaweed was fully covered by a transparent polythene bag and the full individual was pulled out into a polythene bag along with the surrounding water for studying the seaweed associated fauna. Ninety-seven faunal types were found from the three seaweed types including isopods, nudibranchians, polychaets, copepods, Littorinidae, Foraminifera, Tubificidae, *Drupa granulata*, *Planaxis* sp., Amphipoda, Penaeidae post larvae, nematodes, *Calcinuss* sp., *Cerithiu mobiliscus*, *Ophiothrix* sp., scyphozoan larvae and marine crustaceans. The mean total animal abundance (MTAA) in unit volume of seaweed (1000 cm⁻³) differed ($p<0.05$) between the species. *Cladophora herpestica* (983±510) had the highest MTAA per 1000 cm⁻³ of seaweed followed by *Gelidium* sp. (564.8±97.6) and *Padina antillarum* (194.7±178.1). The MTAA per gram (wet weight) of the three seaweed species did not differ ($p>0.05$). The MTAA per gram (dry weight) of the three seaweed species was significantly different ($p<0.05$) where *Padina antillarum* (150.9±60.5 g⁻¹) had the highest MTAA per gram followed by *Cladophora herpestica* (91.2±47.1g⁻¹) and *Gelidium* (59.45±21.05 g⁻¹). The median species diversity (MSD) Shannon H' in unit volume of seaweed (1000 cm⁻³) was significantly different (Kruskal-Wallis, $p<0.05$) where *Gelidium* sp (5.97) had the highest MSD followed by *Cladophora herpestica* (3.10) and *Padina antillarum* (1.32). The MSD per gram (wet weight) of the three seaweed species was not different (Kruskal-Wallis, $p<0.05$). The MSD per gram (dry weight) of the three seaweed species was different (Kruskal-Wallis, $p<0.05$) where *Padina antillarum* (5.97) had the highest MSD followed by *Gelidium* (0.55) and *Cladophora herpestica* (0.27). The present research showed that the seaweed morphology such as bushy nature and densely growing nature of *Cladophora herpestica* the fan shaped thalli of *Padina antillarum* and the compact rhizoidal holdfast *Gelidium* could be the reasons for the MTAA and the MSD differences observed.

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