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Floral and Faunal diversity in selected Seagrass beds in the Southern Sri Lanka

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Seagrasses are specialized marine angiosperms, adapted to the near shorehabitats. Theirphysical structure and associations withother flora provide diverse and complex habitatsfor other associated organisms including fauna and flora. Since there is a dearth of information on macro flora and fauna on seagrass beds, the present study was carried out to investigate the diversity of flora and fauna in selected seagrass beds in four study sites: Dondra, Dickwella, Ahangama and Hikkaduwa in the southern coast of Sri Lanka.

Line intersects method and visual sense methods were used to collect data from the four study sites, and the availability, coverage, density, diversity, evenness and dominance of the species were recorded and the data were analyzed using Minitab 17. Four seagrass species: *Thalassia hemprichii, Halodule uninervis, Syringodium isoetifolium, Cymodocea rotundata* were recorded from the sites. Coverage of *Thalassia hemprichii* in Dondra (P0.000) and *Halodule uninervis* in Dickwella were significantly higher (p=0.002), than other three sites. The highest seagrass diversity was recorded in Ahangama where epiphyte coverage also significantly higher (P0.000). Twenty two seaweed species thirty eight invertebrate and twenty four vertebrate species were recorded. Throughout the study the highest seaweed coverage (20.427%) was recorded in Dondra and highest seaweed diversity was recorded in Ahangama (1.7) while the highest invertebrate density and diversity were recorded respectively in Hikkaduwa (1.905 ind/m^2) and Dondra (2.60). Also the highest vertebrate density and diversity were recorded in Dondra (0.5ind/m^2) and Hikkaduwa (1.90).

The highest diversity of flora and fauna were recorded from the seagrass bed in Ahangama. Therefore, application of conservation measures and further research are highly recommended.

Keywords: *Diversity, Epiphytes, Seagrass, Seaweed*

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