Habitat preference and usage of Strombus canarium Linnaeus, 1758 (Gastropoda: Strombidae) in Malaysian seagrass beds.

ABSTRACT

Despite their economic importance, the ecology of Strombus canarium is poorly understood and factors influencing their habitat preferences remain largely unexplained. The species was reported as highly associated with seagrass bed ecosystems, but their distribution and specific preferences within the habitat remain unknown. Determining the mechanisms that regulate conch distribution and abundance is of fundamental importance for management of the species. In this study habitat preference and usage of conch in their natural habitat were investigated. The population was patchily distributed and present in local colonies that comprised of mixed age groups. There was high spatial variation in conch abundance, where multivariate analysis (PCA) showed high preferences for microhabitat with mixed seagrasses dominated by Halophila spp. Other important habitat characteristics preferred were high sediment organic content (% LOI), high sediment sorting (φ), and low mean sediment particulate size. Areas with dense Enhalus acoroides meadows, though in many reports have been linked with the species, were surprisingly the least preferred microhabitat. It is concluded that the preference towards specific microhabitat within the seagrass bed is associated with their feeding, and intra-specific interactions among individuals.