
Feeding Preference of Sea Urchin *Tripneustes gratilla* in Ahangama Rocky Reef, Southern Coast of Sri Lanka during Southwest Monsoon

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Sea urchins play a vital role as grazers in shallow marine ecosystems throughout the world. Among tropical sea urchin species, *Tripneustes gratilla* is common in many shallow benthic habitats of the southern coast of Sri Lanka. *Tripneustes gratilla* is a delicacy in Southeast Asian countries and is used as a biological control agent against invasive algae. However, the economic benefits of this species are not fully realized in Sri Lanka. Although they are both ecologically and economically important, so far, no baseline data are available in Sri Lanka on the biology and feeding habits of this species. Therefore, the main objective of this study is to determine the feeding habit of *T. gratilla* population in the Ahangama rocky reef. Fifteen urchins were collected during the Southwest monsoon in 2020. Samples were transported to the laboratory, dissected and gut contents were analysed for organic and inorganic components using standard methods. The gut contents of *T. gratilla* were composed of organic materials (66.47±2.73%), calcium carbonate (26.99±3.06%), and sand (6.53±0.43%). The most abundant dietary items in the gut contents were *Thalassia hemprichii* (28.03±4.99%), Red fleshy algae (23.74 ± 1.02%), Red filamentous algae (22.71 ± 1.02%), and *Sargassum* sp (19 ± 0.55%). These groups were highly abundant in *T. gratilla* habitats in the Ahangama reef during the southwest monsoon period. Even though *Helimedea* sp. was highly abundant in the high tide zone, it was absent in the gut contents of *T. gratilla* probably due to less palatability due to the calcified nature of *Helimedea* sp.. *Tripneustes gratilla* is a generalist herbivore and prefers red algae and seagrass. The impact of seasonal changes in algae cover on the food selectivity of *T.gratilla* is needed to be studied further.

Keywords: Algae, Gut contents, Seagrass, Tripneustes gratilla