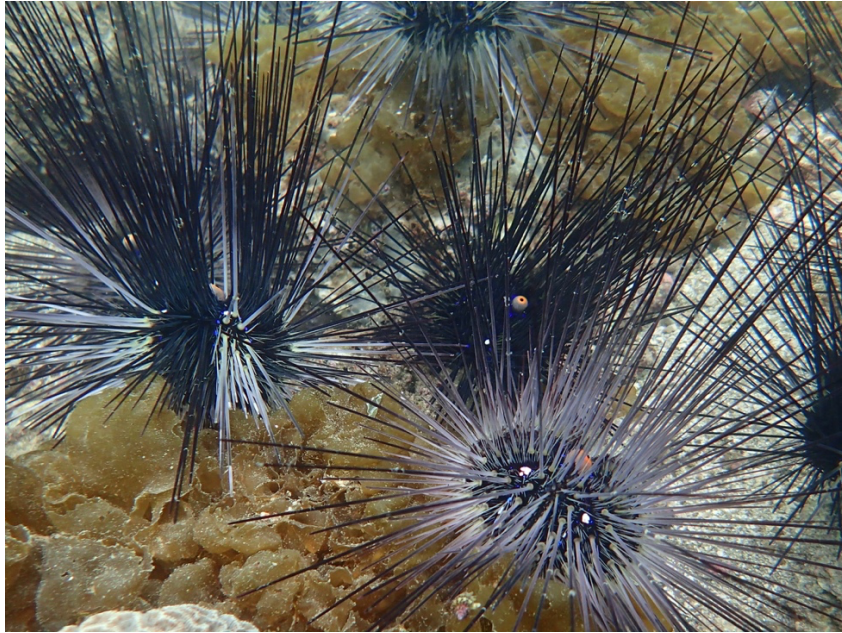


What's for dinner? Investigating food sources of the long-spined sea urchin

By Jake Dytnerki

Supervisor: Bayden Russell



Sea urchins are important grazers, known to shape the benthic community within which they live. The long-spined sea urchin, *Diadema setosum*, is abundant across the tropical and sub-tropical Indo-Pacific, including here in Hong Kong. Previous studies have conflicting results on the food sources of *D. setosum*, including which species of algae the urchins eat and whether urchin grazing promotes or inhibits coral growth. To date, no study has investigated the impact of *D. setosum* on the seasonally abundant algae that grow during the winter months in northern part of its range. In this study, I quantified the relative abundance of algae that grow amongst the habitat of *D. setosum*. Knowing the most abundant algae species, I then ran experiments to determine the algae which are preferentially grazed by *D. setosum*, quantified grazing rates for each algal species and estimated urchin growth rates when fed only one species of algae. *D. setosum* were found to preferentially graze on *Sargassum hemiphyllum*, had the highest grazing rate on *Colpomenia sinuosa* but gained the most weight when fed only *Sargassum*. To further confirm my results, I will look at fatty acid signatures from urchins collected during the winter and seaweeds found in the surrounding area to determine which seaweed species they are grazing *in situ*.



4:00pm Friday 15th of September

Room 3N01

All are welcome

