FRIDAYS AT 16:00 IN 3N01 – ALL ARE WELCOME!

ECOLOGY & BIODIVERSITY SEMINAR SERIES

DR. ALISON CORLEY

Alison is a senior research assistant in David Baker's Coral Biogeochemistry Lab at the University of Hong Kong, where she recently earned her PhD. Her thesis used stable isotope analyses to trace coral–algal metabolic fluxes, and metabarcoding to assess marine biodiversity across Hong Kong's urbanization gradients. Since graduating, her interests have centered on developing eDNA-based monitoring as a tool to effectively measure the outcomes of marine restoration and conservation. Looking ahead, she is excited to explore the potential for eDNA to serve as the basis for a functional biotic index—a proxy for coral ecosystem processes and states.

Date: Fri, November 21st
Time: 16:00
Venue: 3N01
Social: 17:30 between Central Piers 3 & 4

Metabarcoding for Monitoring Marine Restoration and Conservation: Evidence and Next Steps

Community metabarcoding—sequencing DNA from bulk samples or the environment—allows detection of thousands of organisms from a single sample. In the breadth and depth of this method lies both opportunity and challenge: turning complex community data into scalable tools for restoration and management.

This talk presents exploratory work toward building metabarcoding-based indicators of ecosystem function: Two studies that relate community structure to ecosystem condition and recovery. A bulk benthic metabarcoding survey of eukaryote diversity across Hong Kong found less-impacted sites richer and more alike, while more disturbed sites were species-poor and compositionally divergent; focusing on algal reads, crustose coralline algae were widespread at healthier sites but nearly absent at the most disturbed. At a coral restoration site, eDNA indicated elevated eukaryote richness and community shifts versus unrestored and natural reference sites. The talk concludes with forthcoming work characterizing spatial and seasonal variability in eDNA, groundwork for more robust marine community monitoring.