

Lantau Conservation Fund

Research Project

Project Number	RE-2024-22
Recipient Organisation	Hong Kong Baptist University
Project Title	Diversity, abundance and distribution of epibenthic fauna from western Lantau waters
Project Description*	<p>Although epibenthic animals are an important component of the coastal ecosystem, little is known about their diversity and abundance in Hong Kong. This knowledge gap is especially large in Lantau's western coastal waters where high water turbidity makes it difficult to conduct scientific surveys. To address this issue, we propose an integrative study of the benthic fauna from western Lantau waters. We expect to collect at least 100 species of epifauna and infauna, including Cnidaria (gorgonians, soft corals, hard corals), Mollusca (gastropods, bivalves, cephalopods), Crustacea (crabs, shrimp, mantis shrimp), Annelida and Pisces. We will identify the collected species by applying an integrative approach based on morphological characters and DNA barcodes using the COI gene, determine their abundance and distribution, and evaluate the conservation statuses of these species. In addition, we will explore the use of environmental DNA (eDNA) as a tool for biodiversity monitoring by extracting DNA from water samples, developing novel genetic markers, and comparing these novel and conventional markers to determine their relative efficiencies in identifying epibenthic fauna. We will also enhance biodiversity education by organizing a DNA-based species identification workshop. Overall, this study will enhance our understanding of the species and</p>

	genetic diversity, and conservation of marine animals in Lantau's coastal waters, contribute to the realization of the government's Lantau Tomorrow Vision, and provide useful results for assessment of the applicability of eDNA-based biodiversity monitoring programs in the future.
Project Period	36 months
Approved Grant	\$2,356,600

*The project description is provided by the project proponent