

Environmental Research, Technology Demonstration and Conference Project

ECF Project:	ECF 2022-66
Project Title:	Environment and Conservation Fund - Assessing prevalence of pathogens in endangered freshwater turtle populations
Principal Investigator:	Dr Sung Yik Hei, (1/6/2023 to 31/7/2023) and Dr Jonathan Fong, (w.e.f. 1 Aug 2023), Associate Professor, Science Unit, Lingnan University
Total Approved Grant:	\$499,200
Duration:	1/6/2023 to 31/5/2025
Project Status/Remarks:	On-going
Project Scope:	<p>Infectious diseases are major threats to biodiversity as they can lead to mass mortality events and significantly increase extinction risk. Therefore, baseline data is needed on the prevalence of pathogens in wild populations, especially endangered species. This study will examine the prevalence of pathogens in endangered freshwater turtles for the first time in Hong Kong. It will focus on three potentially potent and prevalent pathogens, ranavirus, herpesvirus, and haemogregarines.</p> <p>The results will contribute to conservation in three ways. First, conservation breeding is being conducted for two endangered species in Hong Kong, the Golden Coin Turtle and Beale's Eyed Turtle, with the goal of reintroducing them to the wild. Before reintroduction, individuals need to be screened for pathogens to minimise the risk of introducing pathogens to the natural ecosystem. Second, the project will screen exotic turtles captured in the wild to determine the baseline prevalence of disease to evaluate the risk of pathogen spillover by mercy or pet release and inform management of exotic species. Last, it will compare the prevalence of haemogregarines in wild-caught and captive-bred turtles to evaluate whether this method can be applied in wildlife forensics, identifying wild-caught individuals in the illegal turtle trade.</p>
Summary of the Findings/ Outcomes:	To be available upon completion of the project