



The University of Hong Kong
School of Biological Sciences

**Qualifying
Seminar**

Shifting Lepidoptera and host plant relationships in tropical East Asia

Date: 2025/02/25

Time: 10:00

Venue: 6N-11, KBSB, HKU

About the speaker:

Kit Lee is a PhD student in the Global Change and Tropical Conservation Laboratory, supervised by Prof. Timothy Bonebrake and Prof. Louise Ashton. Her work focuses on shifting range of tropical butterfly species and host plant relationships under a changing climate.



Abstract:

Species distributions are shifting globally due to climate change. However, there may be hidden factors which facilitate the spread of some species. Butterflies are known to be highly dependent on host plants during their larval stage and thus the availability of suitable hosts is likely to be an important, but often overlooked, factor.

My research will investigate spatial and ecological aspects of interactions between butterflies and their host plants as their range expands in East Asia under climate change. I have three overarching questions: (1) How important is host plant availability to Lepidoptera range expansion relative to climate change and other factors? (2) To what extent are Lepidoptera range expansions limited by taxonomic conservatism in host plant preference? (3) Do ecological traits defining specialist versus generalist Lepidoptera affect the likelihood of range expansion?

These questions will be addressed by using species distribution modelling to quantify the contribution of different variables to butterfly spread. Dual-choice host plant trials will be carried out to assess the impact of non- native species on range expansion and local ecosystems.

Results of these studies will shed light on the botany and ecology of host plant availability in facilitating range expansion in butterflies.