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Marine Biodiversity and Ecosystems

Behavior:

**A Bridge between the Micro and Macro in
Ecology and Evolution**



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Time: 2025. 03. 11 Tue. 10:30

Venue: Auditorium, 1st Floor

Interdisciplinary Research Building
跨領域科技研究大樓1樓演講廳

Host: Dr. Che-Hung Lin 林哲宏助研究員



Abstract

A growing call has emerged to synthesize data, approaches, and theories across both ecology and evolution, as well as across both micro and macro processes, to enhance our understanding of biodiversity. Behavior, a fundamental phenotype exhibited by all animals, often serves as the initial response to environmental changes. This sensitivity makes behavior highly variable across space, time, and taxa, constituting a fundamental source of biological diversity. In this talk, I will use studies on fiddler crabs and a sea turtle-lizard community to illustrate how behavior can serve as a crucial link between ecological and evolutionary theories and between micro- and macro- scale patterns. I will demonstrate how biotic and abiotic environmental pressures act upon a range of animal behaviors, ultimately shaping trait evolution or triggering ripple effects on higher ecological processes. Additionally, I will also introduce my two ongoing research projects, which integrate sensory, theoretical, and behavioral ecology. One aims to refine ecological niche theory, while the other one aims to re-evaluate intertidal ecosystem services. This talk hopes to highlight the potential of the behavioral ecology perspective in uniting distinct ecological and evolutionary dimensions to better project biodiversity change.