中央研究院生物多樣性研究中心
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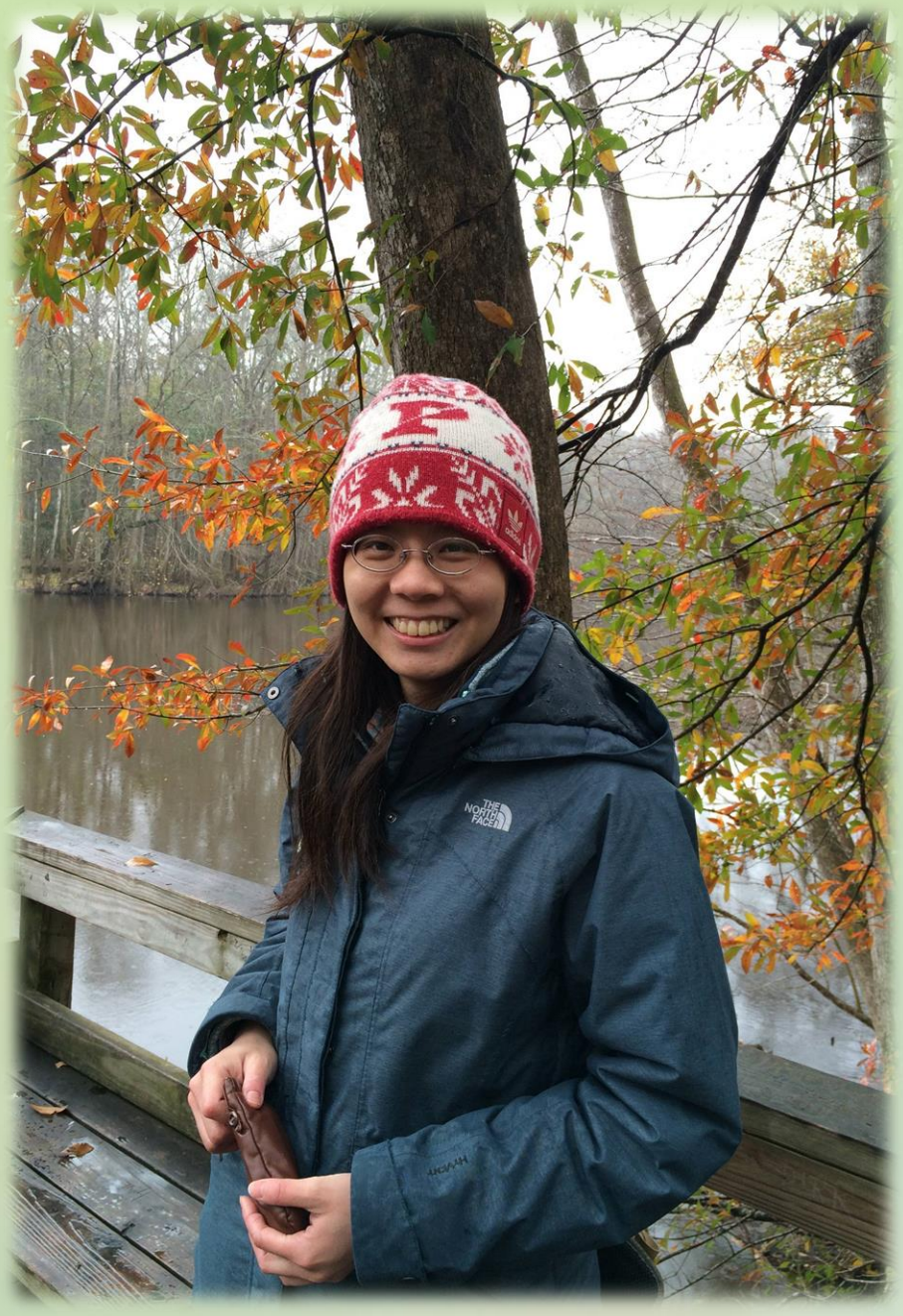
02-2789-9621

Terrestrial Biodiversity and Ecosystems

Genetics, Regulation, and Evolution of Anthocyanin-based Pigmentation Patterning



Dr. Rong-Chien Lin
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Postdoctoral Fellow
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Time: 2025. 03. 18 Tue. 15:00

Venue: Auditorium, 1st Floor,
Interdisciplinary Research Building
跨領域科技研究大樓1樓演講廳

Host: Dr. Isheng Jason Tsai 蔡怡陞研究員

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Abstract

A fundamental goal of evolutionary biology is to understand how genetic changes alter the developmental processes and generate phenotypic variation. My research focuses on floral pigmentation patterning, an ecologically important trait that shows high morphological diversity. Anthocyanin-based pigmentation patterning (e.g., spots or stripes on flower petals) is widespread in flowering plants. Given that one function of flower color is to attract animal pollinators, floral pigmentation patterning is a trait sitting at the intersection of ecological interaction, genetics, and evolution. In this seminar, I will discuss genetics, development, and evolution of petal pigmentation patterning in an allotetraploid annual *Clarkia gracilis* ssp. *sonomensis*. I will also introduce my current projects on anthocyanin-regulating factors in *Mimulus* and show the promise of gene function characterization with an efficient agrobacterium-mediated, *in planta* transformation protocol that has been developed in the *Mimulus* system. Finally, I will describe my future research plans, which aim to deepen our understanding of pigmentation patterning, a major contributor to morphological diversification in flowers.