ECOFLOR 2026: Book of Abstracts

Table of contents

Welcome to the ECOFLOR 2026 Book of Abstracts.

Floral Evolution, Genetics & Breeding Systems

Pollinator-mediated floral evolution in the pollination-generalised plant Viscaria vulgaris

Presenter: Aarushi Susheel

Authors: Aarushi Susheel, Felipe Torres-Vanegas, Ciara Dwyer, Yedra Garcia, Sophie Hecht, Magne Friberg & Øystein H. Opedal

Pollinator-mediated selection can lead to large variation in floral traits. This has been well researched in specialist systems, where one pollinator species interacts with a flowering species. In generalist systems, where one flowering plant interacts with several pollinator species, changes in the size and composition of the pollinator community can alter the patterns of selection acting on the plant. Through my PhD, I will study how a pollination-generalised flowering plant, Viscaria vulgaris, adapts to a functionally diverse pollinator community that varies both spatially and temporally. The study involves measurement of plant and pollinator phenotypes, pollinator visitation, pollinator effectiveness, and plant fitness. Combining these data with selection studies across multiple years in multiple populations, I aim to quantify the importance of functionally distinct pollinators in pollination and floral divergence. Initial data analysis has revealed functionally diverse pollinator assemblages within each plant population, along with evidence for phenotypic selection on floral traits. I plan to link these patterns by presenting

findings from single-visit efficiency experiments and pollinator visitation rates to quantify the 'importance' of each pollinator in the local pollinator community of various populations. This would pave the way for constructing models that will assess the impact of functionally diverse pollinator assemblages on floral evolution.

Community Ecology, Networks & Niche Partitioning

How is the buzz-pollination niche partitioned among co-flowering plants?

Presenter: Agnes Dellinger

Authors: Benjamin Lazarus, Agnes S. Dellinger

Co-flowering plants may overlap or diverge in pollination niche, with traits related to pollinator attraction (e.g., color, scent) and fit (e.g., herkogamy) regarded as particularly important in mediating pollination niche position. Buzz-pollinated flowers are particularly interesting in this context since they have a third, invisible and understudied trait component determining niche position: their vibrational properties. Buzz-pollination is a functionally highly specialized pollination mechanism where large quantities of pollen can only be dislodged when bees apply vibrations in the range of 100-400 Hz to the flowers. Whether co-flowering, buzz-pollinated species are "tuned" to different bees, or rely on common strategies of niche partitioning such as differential attraction and fit, remains unclear. In my talk, I will explore these questions using community-level plant-pollinator interaction studies of the plant family Melastomataceae as a model. Melastomataceae are among the largest plant families worldwide (close to 6000 species), almost exclusively buzz-pollinated (96% of species, adaptive plateau) and multiple species are commonly co-flowering in diverse tropical habitats. Using comparative assessments of plant-pollinator interactions, single visit experiments and artificial vibration experiments (mimicking bees), we find that co-flowering Melastomataceae often overlap in their bee visitor assemblages, but that size-matching with bees (herkogamy) plays a critical role in niche differentiation. Our artificial vibration experiments further indicate that different species have different vibration optima, and that differential "tuning" may indeed be an important mechanism of pollination niche differentiation.
