

ABSTRACT

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Eco-evolutionary community dynamics: From theory to experiments and back

Global change is inducing ecological and rapid evolutionary responses in species. Increasing evidence that ecological and evolutionary processes can occur at similar temporal and spatial scales and might thus frequently interact has raised the concern that these processes should not be studied in isolation from each other, but instead should be integrated when predicting species responses to environmental change. Even more so, because species are embedded within communities, environmental change does not act on a single species, but acts simultaneously on all species within the community, giving rise to potentially complex eco-evolutionary dynamics in communities. However, how such eco-evolutionary feedbacks play out in communities is still understudied. In this seminar, I will introduce a framework to address and study eco-evolutionary dynamics within communities by focusing on interactions between well-known community ecological and evolutionary processes. This framework may enable explorations of the full range of eco-evolutionary community dynamics, provide a way forward to reveal generalities and formulate hypotheses about eco-evolutionary community dynamics and guide the design of novel experiments and theoretical models.