

Genomics of eco-evolutionary dynamics

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The recognition that evolution operates at the same timescale on which ecological processes are happing has fuelled a growing interest in understanding how ecological and evolutionary dynamics interact to shape species diversity and species interactions. Temporal resolution of genomics changes allows to observe molecular and genome evolution in action and sheds light onto the drivers and limitations of eco-evolutionary dynamics. I will present data from two projects in my lab making use of genomic data with a temporal resolution observing evolution of genomic changes in action. Studying whitefish populations in Swiss lakes sheds light onto diversity loss following human-mediated habitat disturbance. Eco-evolutionary dynamics in an algae virus experimental system show a remarkable demographic and phenotypic reproducibility, however shaped by complex underlying genomic dynamics. In summary, I will demonstrate how rapid genomic changes are occurring and how those impact the feedbacks between ecology and evolution.

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FCUL (Building C2), 12h00-13h00, room 2.2.14

