

Biology Seminar

By: Dr. Lauren Buckley

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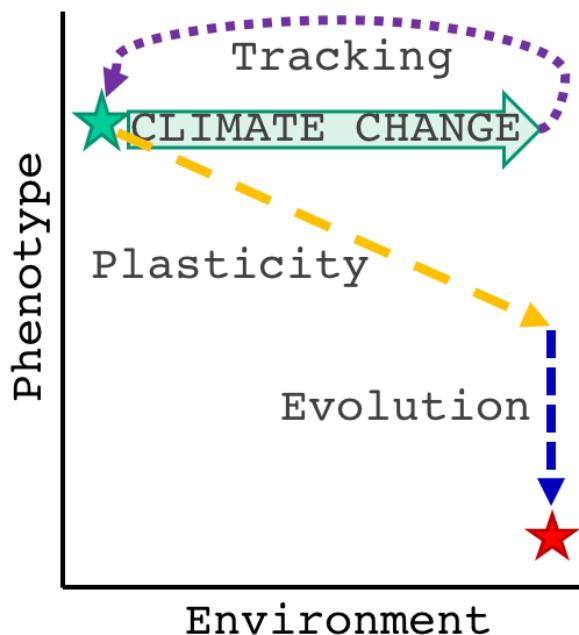
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The interplay of plasticity and evolution in seasonal, changing environments



Monday, October 22, 2018 | 12:00pm
HCK 132 Refreshments at 11:45am

Organisms respond to climate change via tracking through space or time, phenotypic plasticity, or evolution. A key question is whether plasticity facilitates evolution by enabling persistence or hinders evolution by buffering selection.



I will present a phenotype-based forecasting framework for montane butterflies, which finds that plasticity facilitates evolution by reducing fluctuations in selection, particularly in more seasonal environments. Repeating historic lab and field studies and examining museum specimens reveals both the viability of evolutionary responses and their constraints and lags. Additional recent work focuses on (1) evolutionary responses to thermal variability and extremes; (2) the genetic basis of historic and modern phenotypic clines; and (3) developing and disseminating computational and visualization tools for ecological forecasting.

