Biology Seminar

Western
UNIVERSITY · CANADA

12:30 - 1:30 pm
Friday, October 22, 2021
On ZOOM

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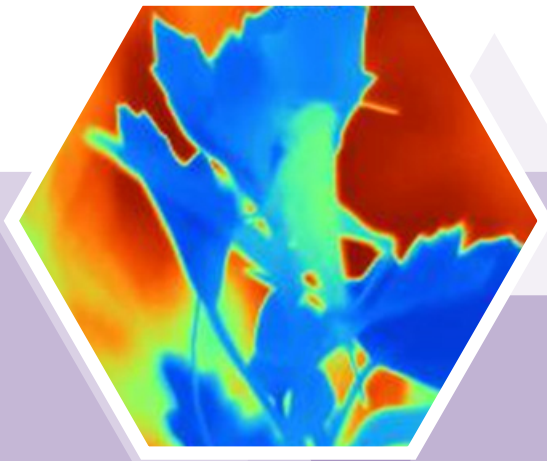
How do montane insects experience and respond to climate change means and extremes?

Characterizing how exposed and sensitive organisms are to climate change is needed to understand their responses. Climate means and extremes tend to most strongly constrain fecundity and survival, respectively. Our research is investigating whether understanding how constraints shift across elevation gradients can improve predictions of climate change responses. I will first present research examining how coloration determines how montane butterflies experience climate means and extremes and the consequences for fitness and evolution. I will then present research examining how development and growth constraints underlie grasshopper climate change responses including phenological shifts. Populations in high-elevation, season-limited environments can exhibit more developmental plasticity. I will conclude by highlighting new TrEnCh (Translating Environmental Change) project tools for estimating microclimate and body temperatures (TrenchR), visualizing how organisms experience their environment (TrEnCh-IR), and building student understanding of climate change responses (TrEnCh-Ed, trenchproject.com). The seminar will highlight the need to accurately characterize how organisms experience environmental variation and present tools to meet that need.



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