

Biology Seminar



Western
UNIVERSITY · CANADA

12:30 - 1:30 pm
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BGS 0153



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The importance of intraspecific variation for ecological prediction

Different individuals of the same species can be extremely diverse in their traits and interactions with the environment. Yet ecological models typically ignore this variation by assuming average responses across individuals and populations. This has prompted calls for ecologists to build more reality into models of connectivity, invasions, range dynamics, and responses to climate change. However, the level of detail needed for accurate predictions remains an open question. In this talk I will present our recent work characterizing the variation and potential drivers of individual dispersal in the Glanville fritillary butterfly across a metapopulation in the Åland Islands, Finland. I will show that the factors that maintain dispersal variation in this system are complex, but that there are clear consequences when we ignore this variation when modeling gene flow, colonization, and extinction risk. I will finish by discussing my group's ongoing work using whole-genome sequencing and common garden experiments to characterize spatial variation in plastic and locally adapted responses to climate across the butterfly's European range.