Biology Seminar

12:30 - 1:30 pm
Friday, February 14, 2020
WSC 240

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Swim fast and slow, cycle lipids high and low; differential responses of freshwater fish to winter conditions

The ecological consequences of winter in freshwater systems are an understudied but rapidly emerging research area. The historical oversight of winter has led researchers to underestimate the importance of time in the coexistence of species. This may be especially true for thermal and reasonably well-mixed aquatic ecosystems, where seasonal changes in the spatial thermal environment might fundamentally structure species dynamics and mediate coexistence. With climate change shortening winter periods, a conceptual framework for the ecological implications of winter, and altered winter conditions, is urgently needed. Using data for freshwater fishes, I will argue that physiological traits drive differential behavioral responses to winter among fish species. Such variation in ecological responses to winter could be important for biodiversity maintenance in a wide range of ecosystems. However, the importance of winter-mediated species coexistence is likely to be heavily context dependent (e.g. on lake size) in ways that are only beginning to be explored.