

Environmental Science Seminar Series

Thursday, February 29, 2024, 4:00 – 5:00 pm, S203

TITLE

Thermoregulation: Convergence between bats and nightjars?

SPEAKER

Dr. Mark Brigham, University of Regina

ABSTRACT

Amongst endotherms (birds and mammals who use metabolism to regulate a high body temperature), heterothermy refers to animals that substantially adjust metabolism to save energy which leads to significant changes in body temperature. These changes can occur on a daily (torpor) and or annual (hibernation) basis. Heterothermy is well studied and commonly used by many small mammals, with bats often used as model systems. My talk will provide an illustration about how various bats employ heterothermy and then show that Nightjars, an understudied group of birds found worldwide, use much the same strategy. I will also show how the two groups appear less similar in their ability to cope with heat which may be crucial in the context of climate change. I will conclude that for endotherms, the overriding importance of energy has likely driven evolutionary convergence in physiological responses.