**The Influence of Energetic Status on Risk-Taking Behaviour in Wintering Birds**

Mathumy Sivatheesan1 and Liam McGuire1

1*Department of Biology, University of Waterloo, Waterloo ON*

Birds must stay alert and vigilant to escape threats, but risks must be taken to survive in the wild. As temperatures decrease in the winter, metabolic rate increases to stay warm. Energetic stress caused by increased metabolic rate leaves birds eager to replenish energy stores in the morning. We predicted that cold overnight temperatures cause Black-capped Chickadees more energetic stress, and therefore be more risk-tolerant in the morning. To test this, we simulated a gradient of risk using five bird feeders equipped with motion-activated cameras, from a forest edge out to an open field on the University of Waterloo main campus. Only one feeder was filled daily to remove an option of a safer feeder. Visitation rate to feeders decreased with distance from the forest edge. Indicating farther feeders are perceived as riskier. We also found vigilance increased at farther feeders. However, we did not find any temperature effects on visitation rate. This may be the result of the mild winter we experienced this year. We suspect there may be a threshold effect and that risk-tolerance may only be affected below some cold temperature threshold. Repeating this study in a colder winter field site may be revealing.