POSTER PRESENTATION

LARGE MAMMAL MANAGEMENT IN ALGONQUIN PROVINCIAL PARK, ONTARIO, IN RELATION TO LOGGING ROAD ECOLOGY

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ABSTRACT

An understanding of the interactions and movements of large mammals is important on many levels, including from the perspective of road ecology. As parks and protected areas realize their importance in the conservation of large-ranging species of animals, there is a greater need for greater knowledge on their ecological aspects and behaviour. The relevance of this research is growing, since ideal habitat is vanishing and road networks are increasing globally. The objective was to look at the use of primary and branch logging roads by six large mammal species in Algonquin Provincial Park, Ontario to determine if landscape level variables had an influence on their levels of movement and utilization. Tracking was done by vehicle on six transects across the park where species identification and local level variables were recorded. Landscape level variables were acquired through GIS analysis in the lab, which included mean ruggedness, road density, percent forest cover and percent water cover. Local level variables gave preliminary results that indicate more examination is needed for determining differences in primary and branch logging road use. Landscape level variables showed some significance towards mammal movement depending on the logging road type and the size of home range buffer that were examined. Overall, there was greater mammal presence on the branch logging roads than observed on the primary logging roads within the park. The four landscape variables had greater overall significance at the smallest home range scale and on the branch forestry roads. Management strategies used by Algonquin Provincial Park, and perhaps other protected areas, could utilize this form of data collection as economic and time-saving methods for managing their large mammals and how to plan logging roads or low-use roads in the future. This may assist in furthering an understanding of large mammal management in relation to roads, and how improvements can be done from a protected areas standpoint on road ecology.
BIOGRAPHICAL SKETCHES

**Hillary Roulston** is currently a second year Master’s student at the University of Waterloo, Ontario, Canada. Her general field of study is within the realm of road ecology with a specific focus on large mammals. Hillary’s undergraduate work was also completed in the Environment and Resource Department at the University of Waterloo and was capped off with an honors thesis looking at stakeholder perspectives on a management change to wolf legislation in Ontario from 2005. Currently, she is finishing her graduate thesis and hoping to continue working in the world of road ecology.

**Dr. Stephen Murphy** is currently a professor at the University of Waterloo, Ontario and is Department Chair for the Environment and Resource Studies Department. Dr. Murphy received his B. Sc. and Ph. D. from Queen’s University, Kingston, Ontario. He is a committed advisor at both the undergraduate and graduate level, and has many on-going students under his advisement. His main focus is restoration ecology with disciplinary and transdisciplinary research interests, as well as invasive species research, parks and protected areas and community ecology interactions.

**Jennifer Hoare** is an assistant park management biologist at Algonquin Provincial Park, Ontario and is in charge of focusing research within the park and managing their wildlife, natural areas, and use of their protected area by visitors. Jennifer’s position allows for important fieldwork to be accomplished and for getting new management plans on the ground.

BIBLIOGRAPHY


