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AMERICAN EEL (*ANGUILLA ROSTRATA*) GROWTH RATES AND HABITAT USE IN A PRISTINE ENVIRONMENT IN NOVA SCOTIA

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American eels are a species of “Special Concern” as assessed by the Committee on Status of Endangered Wildlife in Canada (COSEWIC). If the Government of Canada accepts this assessment and lists American Eels under the Species at Risk Act (SARA) as such, then a management plan for the species and its habitat must be prepared. The objective of the management plan is to conserve the species and prevent it from becoming



“threatened” or “endangered”. The purpose of this research is to gain a better understanding of habitat use by American eels and to estimate their population size in a pristine watershed in Nova Scotia as a baseline for a long-term monitoring program. Twenty-nine baited eel pots were set around the near-shore waters of Oakland Lake in various habitats. Habitats were categorized based on depth, topography, and bottom composition. Captured eels were tagged using a Passive Integrated Transponder (PIT) tag and their capture area recorded. In 2009, a total of 91 eels were caught over 15 days of fishing between 19 July and 21 August with 67 total recaptures. In 2010, a total 249 eels were caught over 34 days of fishing between 21 May and 24 August with 130 total recaptures. In 2010, the number of eels caught tended to be fewer at the end of the season in comparison to the beginning. It was also found that few recaptured eels returned to the same trap. Gaining a better understanding of growth patterns and habitat use will enable conservation of habitat, and provide valuable information to help prevent further declines in American Eel populations.



Lydia Stevens is from Chester Nova Scotia and graduated from Forest Heights Community School in 2007. Lydia is currently completing her Honours Thesis in her fourth year of Biology at Acadia. Lydia has worked for the Bluenose Coastal Action Foundation for three consecutive summers researching American Eels. Aside from academics, Lydia has spent two years

as a Resident Assistant at Acadia. Lydia has received the Acadia excellence scholarship and recently received funding from the Canadian Wildlife Federation to complete her Masters degree at Acadia. She plans on continuing the research she did for her Honours project.

