Vita

Candidate's name: Nickolas Francis Lake

Universities Attended:
Memorial University (2018)
Bachelors of Science
Honours

University of New Brunswick (2022)
Masters of Science
Biology

Conference Presentations:

27th Annual UNB Graduate Research Conference, University of New Brunswick, 2021. "Holocene Fire History Reconstruction of Terra Nova National Park"

Atlantic Forestry Centre Winter Speaker Series, 2021. "Slow to Burn: Preliminary Fire History from Arnold's Pond Terra Nova National Park"

Nick Novakowski Senior Project Conference, Memorial University of Newfoundland, 2018. "Growth and morphological development of eastern white pine along an elevation gradient in western Newfoundland"

Science Atlantic Environment Conference. Mount Alison University, 2018. "Growth and morphological development of eastern white pine along an elevation gradient in western Newfoundland"

Holocene Fire History of Terra Nova National Park

UNIVERSITY OF NEW BRUNSWICK

THESIS DEFENCE AND EXAMINATION

in Partial Fulfillment

of the Requirement for the Degree of
Master of Science

by

Nickolas F. Lake

in the Department of Biology

U.N.B., Fredericton, N.B.

Wednesday, February 9th, 2022
2:00 p.m.

Via MS TEAMS

Examining Committee

Dr. Les Cwynar	Supervisor
Dr. Alexa Alexander-Trusiak	Internal Examiner
Dr. Audrey Limoges	External Examiner
Dr. Shawn MacLellan	Chair of Oral Examination

Abstract

Fire is one of the largest natural disturbance factors in the boreal forest and plays a critical role in shaping the composition and trajectory of a forest; however, on the island of Newfoundland, with its unique climate, the fire dynamics are poorly understood. Arnold's Pond, located in Terra Nova National Park, Newfoundland and Labrador, was selected to investigate how fire dynamics changed throughout the Holocene in relation to vegetation changes. I used macro-charcoal to reconstruct local fire events, and pollen to determine what vegetation was present throughout the ~11,900 cal. yr BP represented in the pond sediment core. My results show that the 271-yr mean fire return interval associated with the current vegetation type is longer than most boreal forest regions within Canada. My results also show that climate, in addition to changes in the dominant vegetation, influenced the frequency of fire events during the Holocene, rather than vegetation alone.