Medway Community Forest Cooperative
Research Internship Opportunity

Studying forest stand complexities and effects of management on habitat suitability and bird species abundance

About the MCFC:

The Medway Community Forest Cooperative (MCFC) is a Crown land licensee in Kespukwitk (southwest Nova Scotia), managing 15,000 hectares in Annapolis County. MCFC is a member based for-profit cooperative promoting the multiple values of forests through diverse local economies to support rural communities. MCFC is leading the implementation of ecological forestry practices in Nova Scotia, demonstrating an ecological approach to Crown land forest management. Research and monitoring procedures are ongoing and seek to guide forestry operations and inform best management practices.

Position Overview:

Duration: 16 weeks starting May 9, 2022
Hours: 35/week
Pay: $10,000 stipend for duration of internship
Remote Work Expectations: We may be able to assist in finding local accommodations, or individual is expected to commute to Caledonia 3 days/week.

MCFC is interested in examining the effects of past intensive forest management on forest structure and bird communities, and to utilize beneficial management practices to promote habitat suitability and restore Wabanaki-Acadian Forest conditions. The Intern will assess upcoming harvest blocks for species at risk (SAR) bird habitat suitability and prioritize blocks to conduct point count surveys this spring. The intern will work with the MCFC Ecological Forestry Coordinator to conduct migratory breeding bird point-count surveys and assess coarse woody debris (CWD) volumes in permanent sample plots (PSPs) across the license area. A comparative of CWD from a baseline study conducted in 2019 to current day will be conducted, investigating the relationship with bird species and abundance from annual migratory breeding bird monitoring. The report will include an examination of how harvest prescriptions could be used to promote SAR bird habitat suitability and on anticipated bird responses to forest management in the ecological matrix[1].

The Intern will engage in the following activities over the total internship duration (May – August 2022):

[1] The ecological matrix refers to the leg of the Nova Scotia triad forest management model where lands are managed for both timber production and biodiversity, through application of ecological forestry practices that create forests with older-lived forest species.

1. GIS analyses: Prioritize upcoming harvest blocks for bird habitat potential & determine the harvest history of 25 PSP sites. The initial month of work aims to locate sites for point count surveys. Utilize existing SAR bird habitat models and beneficial management practices (BMPs) to assess forest stands. PSP harvest history data will be utilized from past landowner, Bowater Mersey Paper, combined with stand data from 2019 an assessment of past management. Timeline: May 9 - 27, 3 week duration.

2. Field work:
    a. Conduct migratory breeding bird point count surveys in future harvest blocks & resurvey PSP line transects for CWD. Conduct dawn chorus 10-minute point count surveys throughout harvest blocks, visiting each point twice 10 days apart. Timeline: May 30 - June 24, 4 week duration.
    b. Measure downed woody debris and snags along each of the 25 PSP line transects, following MCFC protocol. Timeline: June 27 - July 15, 3 week duration.

3. Analysis:
    a. Compile report on CWD changes from 2019 PSP data collected to current day. Quantify how CWD has changed through time, and how its abundance and decay rates relate to bird species occurrence data.
    b. Assess how harvest prescriptions impact bird communities. Report the effects of various harvest prescriptions on habitat suitability and report on bird responses to matrix forest management, consider where silviculture could be used to restore habitat availability. Timeline: July 18 - August 26, 6 week duration.

Qualifications:

- An enrolled graduate student or undergraduate student commencing graduate studies in the fall studying resource management, biology, forestry or similar.
- Previous experience with ArcGIS and field-based research, previous experience with bird point count surveying and aural bird identification is an asset.
- Excellent written and oral communication, as well as research skills.
- Willingness to engage with a variety of partners from academia, non-profit organizations, government, and Indigenous groups during the project.
- Strong interest in ecological forestry management.
- Self-motivated, with excellent time management and organization skills to ensure that deliverables are met while working both remotely and in-person between your university and the partner organization.
- A valid driver's license and access to a high clearance vehicle are highly recommended.
- First aid certification is an asset.
- Previous awareness of community forestry or the Medway Community Forest Coop is an asset.
- Access to laptop with required software (GIS program, Microsoft Office, statistical program etc.)

Research Proposal Development:

The intern will be involved in refining the research proposal, assisting with the defining the research direction, determining methods etc., based on their own experience and research objectives. The proposal will be completed collaboratively between the academic supervisor, MCFC staff, and the intern.

Renumeration:

The intern will be provided with a $10,000 stipend and budget for research expenses, however the position is contingent on funding approval. The Intern will use their own computer and required programs. Field data collection equipment will be supplied by the MCFC.

Please send a cover letter and CV as a single PDF document to both maryjane@medwaycommunityforest.com and a.westwood@dal.ca with the subject line "MCFC Intern Application"

Deadline to apply is February 18th, 2022.