Building a Foundation for Ecological Forestry in Nova Scotia

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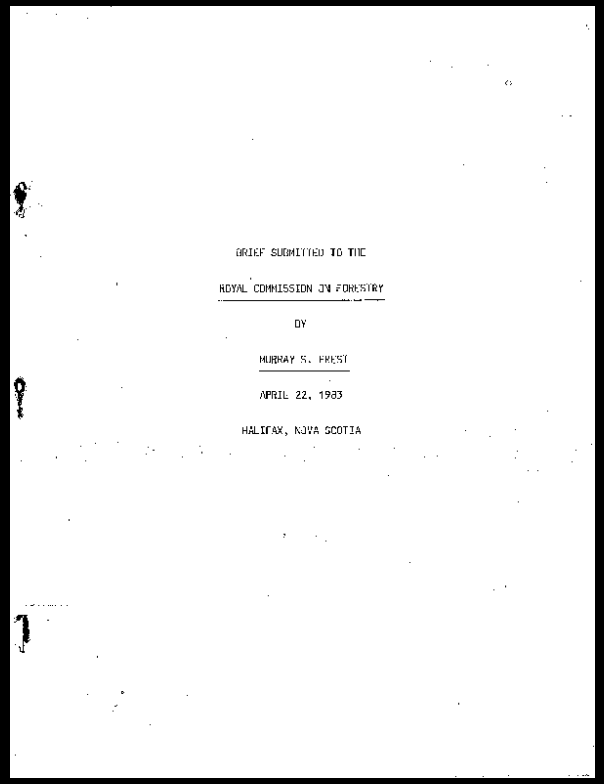
The Beginning of Change

- In a 1983 brief filed with the Royal Commission on Forestry in Nova Scotia, Murray Prest laid out the case for what would later become known as ecological forestry.

- Prest highlighted several problems with industrial forestry:

  - "Indiscriminate clearcutting, short harvest rotations, planting without soil testing or fertilization, destruction of forest residuals, and herbicide use on hardwood regeneration do not bode well for a forest in the future."



BRIEF SUBMITTED TO THE

ROYAL COMMISSION ON FORESTRY

BY

MURRAY S. PREST

APRIL 22, 1983

HALIFAX, NOVA SCOTIA

The Beginning of Change (cont.)

- “The solution is to use harvesting techniques and regeneration cutting systems that cooperate with, complement, and utilize the forces of nature.”

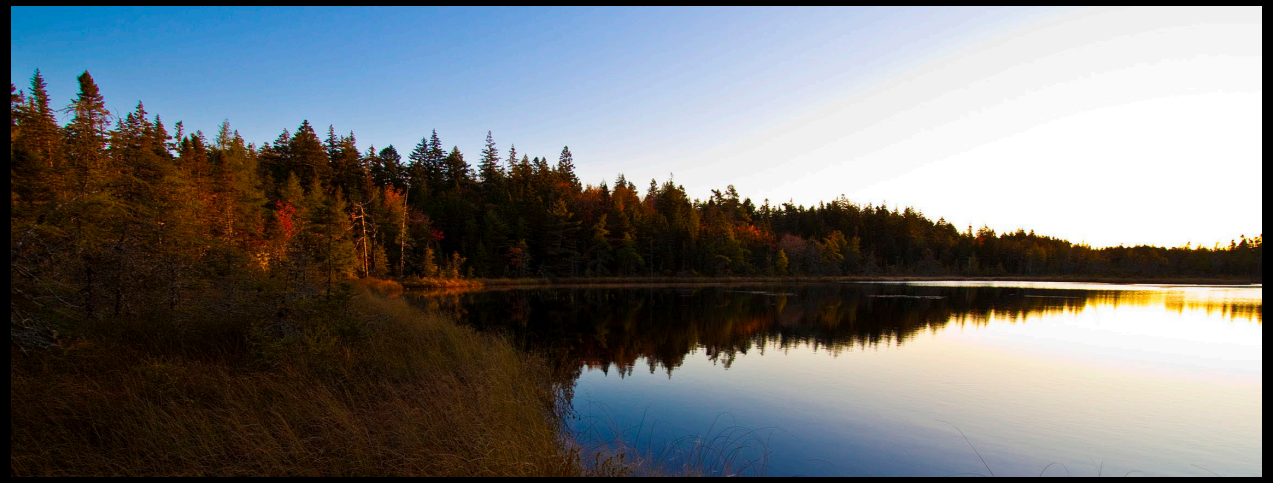
- “The illusion of 'forestry' through reforestation, the fallacies of genetically improved wonder seedlings, and the blackmail of the 'wildlife versus old-growth' issue can only be fully understood and judged by a far more open public forestry dialogue than presently exists.”

Natural Processes in the Forest

- Average gap size in pre-settlement Wabanaki-Acadian Forest: no larger than 0.1 ha. (Seymour et al., 2002)
- Average area of forest disturbed annually: 1 percent (Fraver et al., 2009)
- “If the goal is to emulate most northeastern natural disturbance regimes faithfully, then the majority of the landscape must be under some type of continuous-canopy, multi-aged silviculture that maintains ecologically mature structures at a finely patterned scale.” (Seymour et al., 2002)

Economic Viability

- “Our analysis suggests that NDBS [Natural Disturbance-Based Silviculture] systems are capable of sustaining a greater diversity in forest structure and composition while producing volume yields and financial returns that are competitive with conventional even- and uneven-aged silvicultural systems.” (Saunders et al., 2013)



Following a Different Path

- To support the widespread adoption of ecological forestry on small, private woodlands in Nova Scotia, 11 organizations that serve forest stewards proposed the creation of a Family Forest Network in 2020. FFN recently was awarded $9.8 million to carry out this work.
- Over the next five years, FFN will conduct a large-scale pilot of ecological forestry on about 200 woodlots throughout Nova Scotia.
- The pilot will work only with willing landowners who volunteer to participate. In addition, forest stands to be included in the research must meet selection criteria that will be established by NS foresters and independent forest researchers.
- We will show “how forestry is best managed and practised in Nova Scotia within an ecological forestry paradigm,” to quote from the 2018 Independent Review of Forest Practices in Nova Scotia (the Lahey report).

A Different Path (II)

- The project aims to demonstrate that there are economically viable and ecologically preferable alternatives to intensive management.
- The pilot will quantify the economic, environmental and social benefits and costs of ecological forestry, and produce evidence-based recommendations for conducting ecologically sensitive management across a wide range of forest conditions.

A Different Path (III)

- Significant reinvestment – in time, training, equipment, and in the forest itself – is needed to restore our woodlands to their natural value and diversity.

- The first step is to acknowledge the biological limits to forest productivity and begin to walk the path that William Lahey laid out in the “Independent Review.”

The Network

- Under the sponsorship of NSWOOA, the Family Forest Network's steering committee includes:

Jane Barker, Mersey Tobeatic Research Institute, Kempt

Greg Watson, North Nova Forest Owners Co-op, Wentworth

Pat Wiggin, Federation of Nova Scotia Woodland Owners, Brookfield

Ian Ripley, Athol Forestry Cooperative, Amherst

Patricia Amero, Western Woodlot Services Co-op, Church Point

Peter Burchill, Nova Scotia Landowners and Forest Fibre Producers Association, Port Hawkesbury

Kirsten Campbell, Cape Breton Privateland Partnership, Port Hawkesbury

Jennika Hunsinger, Medway Community Forest Cooperative, Caledonia

Leif Helmer, Nova Scotia Community College, Dartmouth

Ashley Childs, Confederacy of Mainland Mi'kmaq, Millbrook

Zach Melanson, Community Forests International, Sackville, NB

Andy Kekacs, Nova Scotia Woodlot Owners and Operators Association, Truro

New Collaborations

- As a result of a special session called by the Forestry Innovation Transition Trust in July 2021, FFN partnered with five additional organizations to advance an integrated solution.
  - **Biodiversity (MTRI) and Carbon (Community Forests International)**
    Biodiversity and carbon assessments will be performed on every parcel in the pilot. Data collected will determine the forest treatments chosen, the layout of roads and trails that may be needed, and other aspects of the harvest.
  - **Nova Scotia Working Woodlands Trust**
    The Working Woodlands Trust, a project of the Medway Community Forest Cooperative, offers an alternative for stewards who are looking for responsible ways to manage succession.
  - **Internships for NSCC Students**
    The Nova Scotia Community College system will play a leading role in creating a workforce that can profitably and effectively perform ecologically sensitive management. FFN will provide valuable learning opportunities for interns from NSCC in forest management, biodiversity assessment, mapping and other areas.
  - **Partnership with CMM**
    FFN has partnered with the Confederacy of Mainland Mi'kmaq to directly involve a Mi'kmaw naturalist in the work of the steering committee, the final design and conduct of our harvesting pilot, and in our public and professional outreach events. The Council of Chiefs has endorsed the project.

The Silviculture Pilot

In late March 2022, NSDNRR awarded $500,000 to the Family Forest Network for a pilot of restoration-oriented silviculture treatments that are not permitted under current technical standards. Like the harvesting pilot, this proposed silviculture project will focus on privately owned lands being managed in the “ecological matrix.”

Pilot silvicultural treatments will support the development of multi-aged, multi-species stands in accordance with the Lahey recommendations and in keeping with “natural” stand conditions and ecological features. Building on current pre- and post-treatment assessment protocols for silviculture, we will also identify and assess other important stand attributes – including biodiversity features such as habitat, forage and thermal cover. This “wider lens” is a critically important part of an ecological approach to forest management.

Questions?

Learn more about ecological forestry at www.nswooa.ca, get more information about the Family Forest Network at www.nswoods.ca/family-forest-network or email Andy Kekacs at andy.nswooa@gmail.com.

(Photos courtesy of Dan Hutt)