



Sortir des sentiers battus

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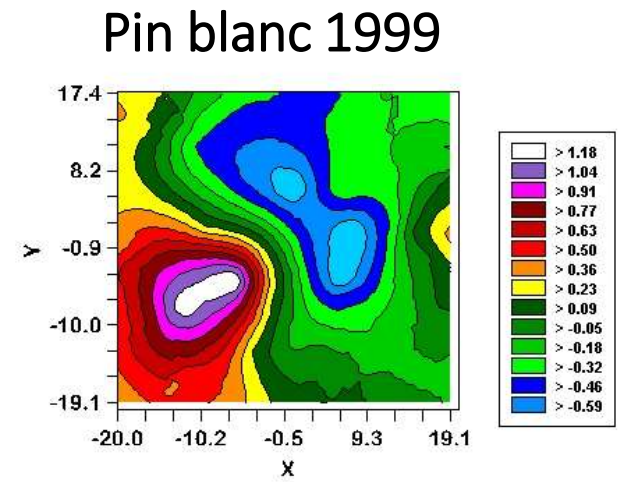
On peut sortir la fille de la forêt, mais pas la forêt de la fille...





M.Sc. Université Laval 1998
Jean-Claude Ruel & Marius Pineau

Raymond et al. 2000
Ruel et al. 2003



Ph.D. Université Laval 2004

Alison Munson, Jean-Claude Ruel & Dave Coates

Raymond et al. 2003
Raymond et al. 2006



2002



2002



2014

2002: Débuts à la DRF avec Marcel Prévost et Daniel Dumais (projet SSAM Belle venue)

Prévost et al. 2010
Prévost et Raymond 2012
Raymond et al. 2016



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de la forêt
mixte

I. Sylviculture
écologique



II. Réhabilitation
des peuplements
dégradés



III. Adaptation aux
changements
climatiques





2008: SSAM II – Émulation de la dynamique de trouées naturelles avec la coupe de jardinage hybride & enrichissement en épinette rouge

The Irregular Shelterwood System: Review, Classification, and Potential Application to Forests Affected by Partial Disturbances

Patricia Raymond, Steve Bédard, Vincent Roy,
Catherine Larouche, and Stéphane Tremblay

ABSTRACT

Structurally different from even-aged and balanced uneven-aged stands, irregular stands are an integral part of forested landscapes in northeastern North America. The maintenance or restoration of irregular stand structure may be desirable, especially in areas under ecosystem-based management. This can be achieved at the stand level through the implementation of irregular shelterwood systems. The objectives of this synthesis are to assemble the existing knowledge about the system, clarify the terminology in use, and discuss its place in silviculture in northeastern North America. Irregular shelterwood is compared with other regeneration methods and we propose a classification based on three variants. This silvicultural system is compatible with ecosystem-based management in forest types driven by partial stand mortality and gap dynamics and provides opportunities for maintaining old-growth forest attributes. However, it presents important challenges, especially with respect to planning, growth and yield prediction, and operational application.

Keywords: ecosystem-based management, irregular uneven-aged silviculture, irregular stand, irregular shelterwood variants, regeneration methods

Other silvicultural practices must regulate ecological processes and interactions of succession, structure, and ecosystem function as to be maintained within their limits of natural variability (Kaufman et al. 1994, Seymour et al. 2002, Gauthier et al. 2006) at multiple spatial and temporal scales (Gaulds-Loi and Bursell 1995). At the stand scale, the growing interest in ecosystem-based management brings into question current silvicultural practices and how they can contribute to maintaining ecological values (Goldin 1996, Partemann and Anquez 2007).

This article focuses on the silviculture of irregular stands. In American forestry textbooks, even-aged stands are clearly distinguished from uneven-aged stands (Smith et al. 1997, Nyland 2002). Even-aged stands are composed of trees in the same age class, with the older and youngest trees differing

(Kilim and Franklin 1997). In a managed territory, applying principles of ecosystem-based management is a way of achieving sustainable forest management objectives (Gaulds-Loi and Bursell 1995). This implies

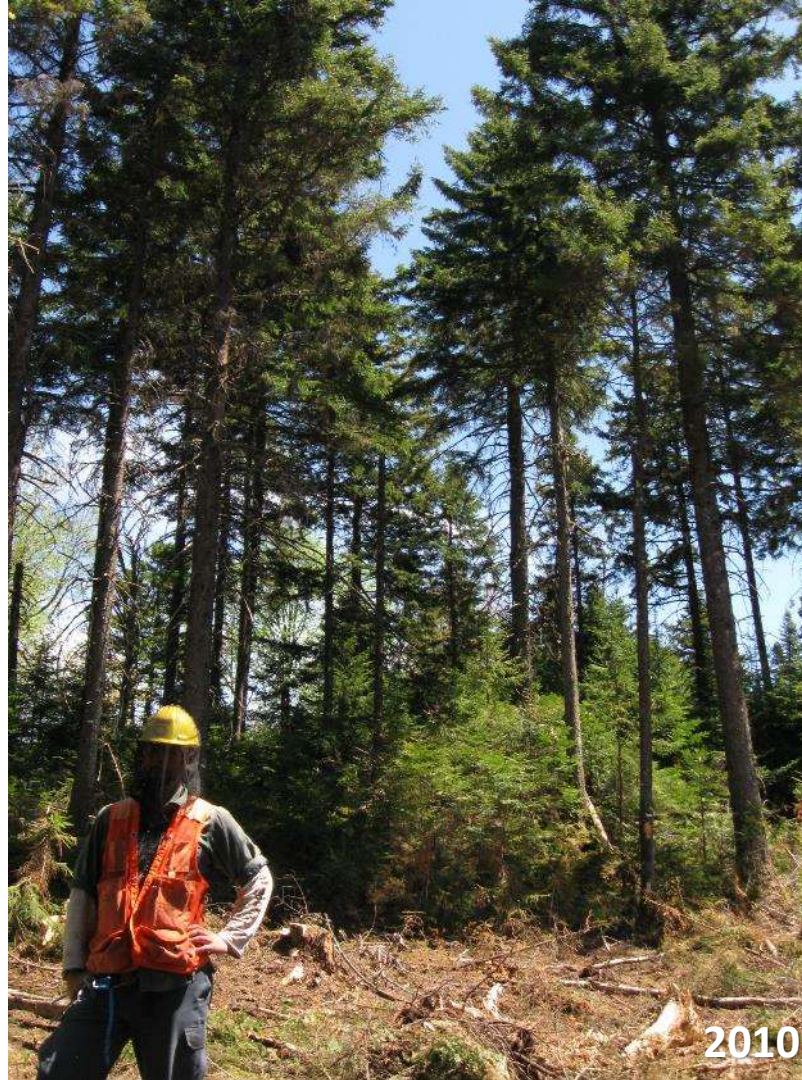
In many North America jurisdictions, the management of public forestslands has gradually shifted from timber production to ecosystem-based management, with a focus on late-successional habitat

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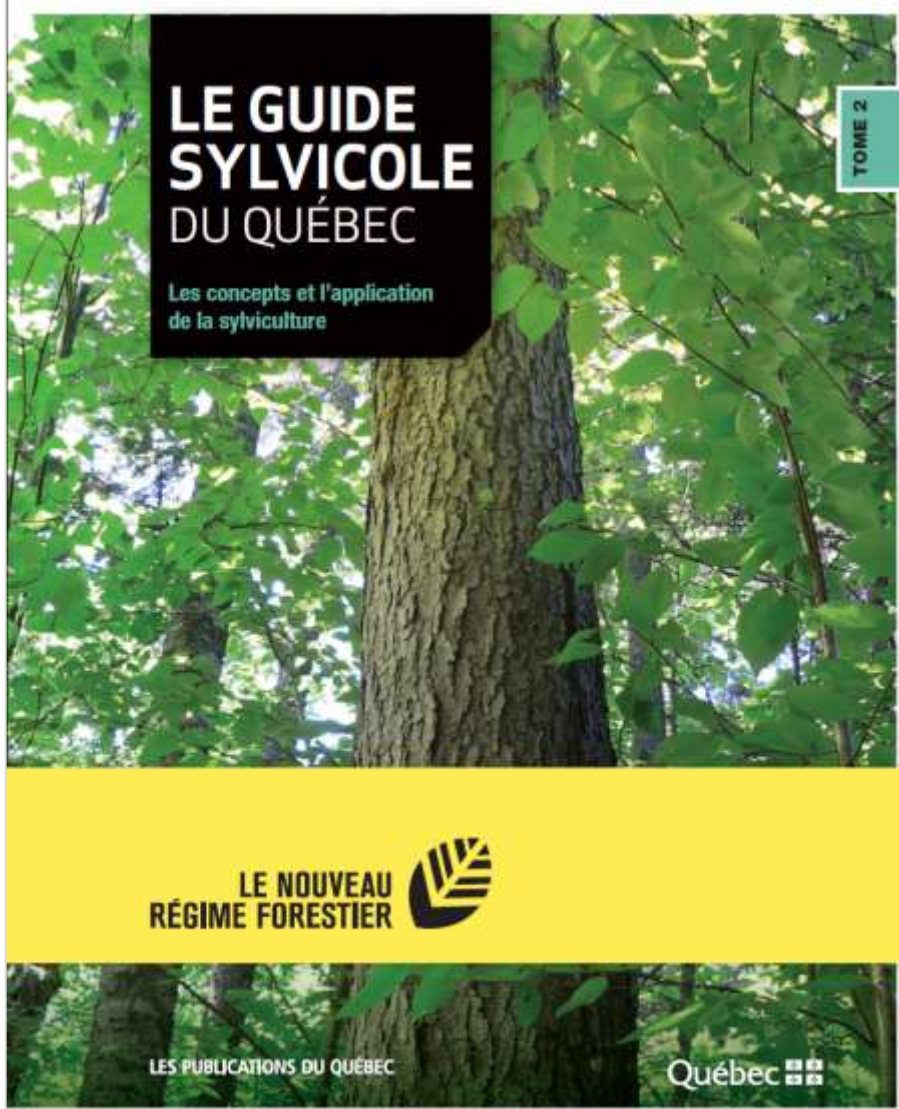
2010



2022

2009: CPI-M1 – S’inspirer de la tordeuse des bourgeons de l’épinette pour établir une cohorte de régénération diversifiée et comme alternative à la coupe totale

Raymond et al. 2009
Raymond et Bédard 2017
Dumais et al. 2019
Martin et Raymond 2019



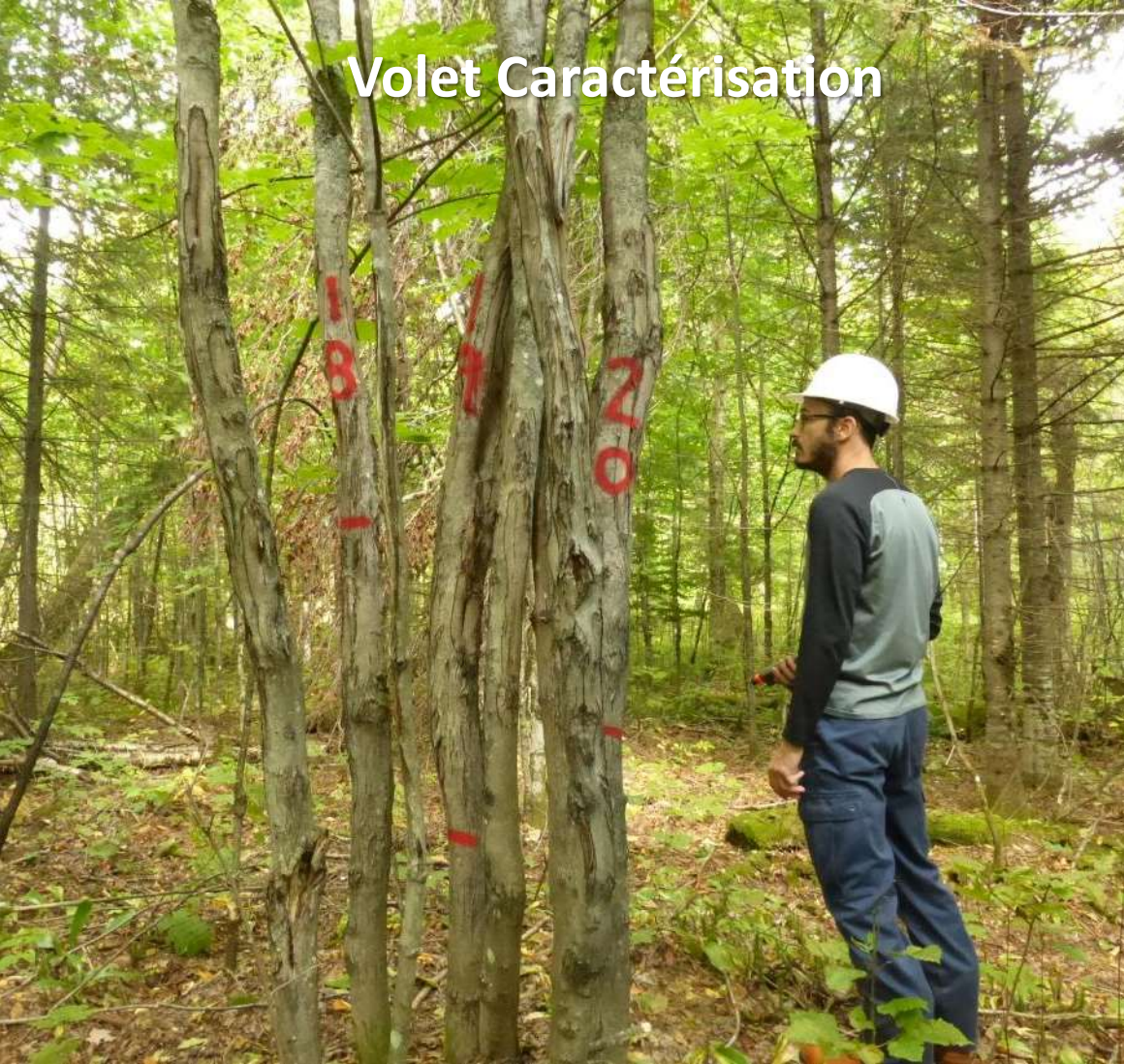
2014

2010-2013: Comité d'édition scientifique du tome 2 du Guide sylvicole du Québec (749 p.)



2014: CPI-M2 – Tester l’hypothèse des perturbations intermédiaires avec la CPI pour régénérer une diversité d’espèces

Volet Caractérisation



Volet Expérimentation



Réhabilitation des peuplements dégradés – Projet initié par Vincent Roy et Marcel Prévost en 2000



Mixedwood Initiative Program – Collaboration canado-américaine en écologie et sylviculture des peuplements mixtes

Kabrick et al. 2017
Kenefic et al. 2021
Vickers et al. 2021



2018: Migration I (DREAM-QC) – Développer des scénarios sylvicoles d'adaptation aux changements climatiques en tenant compte des contraintes biotiques et abiotiques

Champagne et al. 2021a
Champagne et al. 2021b
Champagne et al. 2021c
Champagne et al. 2020

Sanghuyn
Kim

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Darquié

Daniela
Robles

Marion
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Mura

Collaborations universitaires



L'équipe
« forêt
mixte »
est
devenue
mixte...



N'hésitez pas à sortir des sentiers battus!