



***2014 Winter Workshop
Vancouver Island University
February 27th***

**SILVICULTURE SPECIESISM
DOES IT MATTER TO AAC?**



<http://static.guim.co.uk/sys-images/Guardian/Pix/pictures/2009/11/20/1258746789326/Planet-of-the-Apes-starri-001.jpg>

This is what you get for promoting monocultures!

pLANTATION
of the
ApES

Acknowledgements

The Coast Silviculture Committee wishes to thank the following people for contributing their time and efforts in organizing the 2014 Winter Workshop...

- Bryce Bancroft
- Ron Elder
- Lauchlan Glen
- Don Pigott
- Michel Vallee
- Craig Wickland
- Doug Corrin
- Cosmin Filipescu
- Lisa Meyer
- Jack Sweeten
- Dave Weaver

The CSC would also like to thank Vancouver Island University for the venue.

On behalf of the CSC, the organizing committee would like to thank all the presenters for taking the time out of their very demanding schedules and lives to share their experience and knowledge with the rest of us.

THEME: SILVICULTURE SPECIESISM - DOES IT MATTER TO AAC?

*Speciesism = prejudice or discrimination based on species ... think ...



ABSTRACT

The 2014 winter workshop will focus on silvicultural practices, including choice of species, and their relationship to Timber Supply and its linkages to Allowable Annual Cut (AAC).

The importance of species management and related silvicultural practices will be discussed in the context of Timber Supply. The workshop will look at the effects of silvicultural decisions, such as species selection, establishment density, use of high genetic gain seed, and harvest timing, on future timber supply.

The workshop will explore whether speciesism may affect basic or incremental silvicultural decisions, by incorporating greater understanding of stand development through monitoring (e.g., Young Stand Monitoring) to ultimately inform timber supply through impact on growth and yield and future options. In addition, how species selection may help mitigate the effects of projected climate change will also be discussed.

Stay tuned for an exciting forum with a follow-up field workshop in June.



<https://i.chzbgr.com/maxW500/5683060224/hC6F93750/>

Coastal Silviculture Committee (CSC)

Winter Workshop - VIU Nanaimo, Feb. 27, 2014

Silviculture "Speciesism"

Does it matter to AAC?

- 9:00 Introduction **Chairs: Craig Wickland and Bryce Bancroft**
Introduction, Safety, Washrooms, CSC committee, Agenda, First Speaker
- 9:15 **First Speaker** (5 min intro 30 min presentation and 10 min questions)
Pat Bryant - FORSITE; **TSR 101 and Species Impact on TSR**
- 10:00 Coffee Break
- 10:30 **Second Speaker** (5 min intro 30 min presentation and 10 min questions)
Stefan Zeglen & Jim Brown - MFLNRO; **Forest Health and Timber Supply Review: how do pests "move the needle"?**
- 11:15 **Third Speaker** (5 min intro 20 min presentation and 10 min questions)
Dr. Gordon Weetman; **Allowable Cut Effect (ACE) on the Coast of BC**
- 12:00 **Business Meeting** and scholarships Lisa
- 12:10 **LUNCH**
- 13:00 **Fourth Speaker** (5 min intro 20 min presentation and 10 min questions)
Annette Van Niejenhuis - WFP; **The Effect of Basic and Incremental Silviculture Assumptions within TSR**
- 13:35 **Fifth Speaker** (5 min intro 30 min presentation and 10 min questions)
Rene De Jong & Paul Barolet - MFLNRO; **Applying Young Stand Monitoring in TSR – Morice Case Study & TSR and Species Management**
- 14:20 Coffee Break
- 14:50 **Sixth Speaker** (5 min intro 35 min presentation and 10 min questions)
Jeff and Eleanor McWilliams; **Early second growth harvesting – Good or Bad?**
- 15:40 **Wrap-up and Intro of Summer Session**
Cosmin and Russell/Blake
- 16:00 Race to the Ferry

Presenter Biography and Abstract

Name: Patrick Bryant, RPF

Affiliation: Forsite Consultants Ltd.

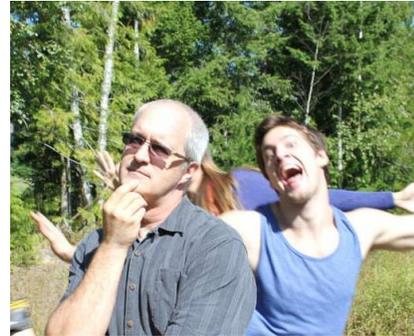
Position: Strategic Planning Forester

Responsibilities: Forest-level analysis; project management

Academic training: BSF from UBC

Previous employment:

North Island (Woss/Campbell River) as Inventory Forester with Western Forest Products and previously as Strategic Planning Forester with Canfor Coastal Ops.



Hmmm...

(getting photo-bombed by my kids)

TSR 101 and Species Impact on TSR

Pat will give the opening act for the 2014 CSC Winter Workshop; aimed to support upcoming presenters by introducing some of the methods and jargon used to assess timber supply.

In a timber production context, we differentiate a Timber Supply Review based strictly on past and current practices from a Timber Supply Scenario Analysis that explores forward-looking assumptions. After reviewing some key aspects of these analyses (process, assumptions and tools), Pat will discuss ways that key assumptions can affect timber harvest flows.

Exercises like these force us to ask some important questions:

- What do we know? Compared to other locales, we have access to some very good inventories, robust stand development models and knowledgeable people. Do we really know how our existing managed stands are doing? Hmmm...
- What do we need? On-going progress to predict climate change, forest health risk and product needs should help us to adapt more appropriate strategies. Can we really predict how our managed stands will develop? Hmmm...
- What do we need to know? Our biggest challenge often involves the lack of information needed to support new assumptions: treatment criteria, windows, response, and cost. How do we build defensible assumptions? Hmmm...

We are all counting on silviculturalists to continue to play a primary role in our future by understanding the issues, exploring new solutions, conducting the trials and diligently tracking the right information. Hmmm?

Presenter Biography and Abstract

Name: Stefan Zeglen, R. P. F.

Affiliation: BC MFLNRO

Position: Forest Pathologist

Responsibilities: Dead trees

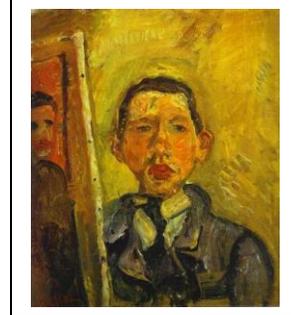
Academic training: B.Sc. (For.), M. S.

Previous employment:

1994 to present – regional forest pathologist, Nanaimo

1989 to 1994 – regional forest pathologist, Smithers

Yup, been watchin’ trees die a long time



Self-Portrait

Name: Jim Brown RPF

Affiliation: BC MFLNRO

Position: Senior Analyst – TSAs,
Forest Analysis and Inventory Branch

Responsibilities: Timber Supply Analysis on TSA’s for
the Provincial Timber Supply
University Review

Academic training: B.Sc Forestry, Lakehead

Previous employment: Forestry Consultant with
Dendron Resource Surveys Ltd



Forest Health and Timber Supply Review: how do pests “move the needle”?

On the coast, given the number of competing values constraining timber supply, losses from insects and diseases generally occur at levels that do not constitute a significant impact on projected timbers supply. In other words, with a few notable exceptions and unlike the Interior of the province, pest damage here does not occur at incidence or severity levels that are sufficient enough to alter tree growth projections and markedly “move the needle” on the final AAC determination. Why does this assumption exist and is it accurate?

We examine the three typical pathways that pest damage gets accounted for in timber supply reviews – as non-recoverable loss estimates, operational adjustment factors (OAF) and landscape-level or catastrophic loss estimates. Each pathway is derived differently and influences timber supply in its own unique fashion. We provide examples of how each method has been incorporated into the TSR process and how pest impact may be better accounted for in the future.

Presenter Biography and Abstract

Name: Gordon Weetman PhD RPF

Affiliation: UBC

Position: Prof. of Silviculture (Ret.)

Responsibilities:

Academic training: Lots



Gordon Weetman was Professor of Silviculture at the University of British Columbia's Faculty of Forestry from 1978 to 1999. In 1997 he occupied the FRBC Chair in Silviculture at UBC. He retired in 1999 and is now Professor Emeritus. He has an office at UBC.

Prior to moving to Vancouver he held the same position at the University of New Brunswick in Fredericton (1971 – 1978). He worked for Pulp and Paper Research Institute of Canada in Montreal as a silviculture research scientist (1955 – 1971). He studied forestry at the University of Toronto (B.Sc.F. 1955) and Yale (M.F. 1958, Ph.D. 1962). He has studied forest fertilization and forest nutrition for many years and has taught silviculture for 30 years at Fredericton and Vancouver.

The Allowable Cut Effect (ACE) on the Coast of BC

Silviculture stand tending actions can accelerate second growth operability, control piece size, species composition, stem quality and lower risk of loss.

These actions can thus help cover age class gaps or increase remaining mature stand harvests or grow more valuable second growth stands on shorter rotations.

These actions are happening on Canada's only 3 large private estates: Timberwest, Island Timberlands and Irving (NB)

Are such tending actions wanted or feasible on high growth rate, low risk, Crown tenures on the coast of BC?

Some case histories and issues are examined.

BUSINESS MEETING AGENDA

FEBRUARY 27, 2014

Coastal Silviculture Committee

Call to order

Additions to the agenda

Adoption of the agenda

1. Financial Statement – January 2013– December 2013
2. Discussion about use of funds –
 - balance to maintain in account
 - increase bursaries
 - fees charged for meetings
3. Discussion on Distribution of Bursaries for 2014
 - UBC
 - BCIT
 - VIU
4. Bursary Presentation to Vancouver Island University recipients
5. Confirmation of Status of Current Directors, and Election of New Directors
6. Adjourn for lunch

Presenter Biography and Abstract

Name: Annette van Niejenhuis RPF
Affiliation: Western Forest Products Inc.
Position: Tree Improvement Forester

Responsibilities: Seed Orchard Development,
Sowing Requests, Silviculture Research,
& Silviculture Investment

Academic training: MScFor, HBSFor (Lakehead)



The effect of basic and incremental silviculture on AAC: Does it make any difference?

Do your prescription decisions and their timely implementation make a difference to timber supply?
What silviculture treatments have been demonstrated to increase allowable cut?

Basic silviculture – the practices that result in establishment of a free-growing stand – can impact long-term timber supply. Results from the Salal Cedar Hemlock Integrated Research Program show how species selection and treatments have huge impact on the mean annual increment of a low nutrient site type. Realized gain trials in western hemlock and Douglas-fir demonstrate the MAI impact of implementing tree improvement development.

Enhanced or incremental silviculture practices result in increased stand yields at rotation. We have good evidence of the value of fertilization in Douglas-fir. When is juvenile spacing or pruning of value to coastal stands?

Increasing the annual increment of our working forests is of significant value to our coastal economy – and our coastal way of life. The right species in the right place, together with timely enhanced silviculture investments, will support the optimal allowable cut.

Presenter Biography and Abstract

Name: Paul Barolet, R.P.F.

Affiliation: FLNRO NICNRD

Position: Stewardship Officer

Responsibilities: Program Coordinator for Stewardship within the District

Academic Training: BSF LU 1993



Previous Employment: In the early spring of worked as a consultant and I was mainly in the field doing everything required to harvest a CP in south eastern BC and the foothills of Alberta. My preferred focus was silviculture prescriptions and harvest layout. In 2001 I headed for the Queen Charlotte Islands (now called Haida Gwaii). I was hired as the small business forester for silviculture prescription development and one of the main program goals was partial cutting. In absence of any Higher Level Plans at the time, partial cutting was done to meet SBFEP goals and FDP commitments only. Looking back almost all partial cut blocks were designed for a second pass in the near future (≤ 20 years) applying classic European Silvicultural Systems. Planting was prescribed on most sites with cedar and lesser amounts of cypress, coastal pine, and Sitka spruce. Hemlock was relied on for natural ingress only. For the retention silvicultural system some second passes were also possible.

After 10 years in B.C. I then found myself moving to Port McNeill in 2006. This opportunity working on the North Island-Central Coast has been tremendous exposing me to numerous TSA and TFL AAC determinations processes, FREP, LBIS, Forest Practice Board Audits, license holder certification, elimination of backlog NSR, and of course RESULTS and FSP's. I am also an active member of Coast Regional Implementation Silviculture Working Group (CRIT SWG) and the local Forest Management Leadership Team (FMLT) working towards resolving FRPA operational issues.

Name: René de Jong
Affiliation: Forest Analysis & Inventory Branch,
 Ministry of FLNRO
Position: Growth and Yield Forester
Responsibilities: Ground sample data compilation and analysis
Academic training: Bachelor of Science in Forestry (UBC)



Biography

René worked for most of his career in the area of forest growth and yield and inventory, which has included six years of stand growth model development with the Canadian Forest Service in Victoria, six years of inventory, silviculture and planning with the MOF district office in Haida Gwaii, six years of site productivity and young stand monitoring with JS Thrower and Associates in Kamloops, and six years back in Victoria with Timberline / TECO. In 2013 he joined FAIB, and has been actively involved in expanding the permanent sample plot data compilations and accessibility, and establishing and analyzing young stand monitoring program data.

TSR and Species Management (Paul)

As a Stewardship Officer and timber supply generalist I have observed there are many diverse opinions about the timber supply review process. Perspectives range from those looking at timber supply through the lens of a higher level forest estate model to those who are knee deep in what can appear to be the disconnected reality in the forest. Exploring either view, the key issue remains that the AAC forecasts rely heavily on information submitted by professionals to various Provincial data systems (RESULTS, FTA, HBS) to inform the next timber supply review. The more accurate the data (integrity), the more reliable and achievable the AAC forecast.

Under FRPA, the silviculture surveyor as a professional is now challenged with reporting the forest cover and meeting related policies and professional expectations. Forest cover must be accurately reported in terms of the regeneration layer but also for any retained over-story layers. This over-story includes dispersed trees remaining on the site as part of planned retention, in addition to unplanned standing waste. Consider the role of forest cover reporting from an inventory perspective and the impact to timber supply modelling when mature trees that may contribute to future timber supply are ignored. Without an accurate forest cover submission of the over-story, the timber supply analyst cannot make a sound AAC forecast leading to a concerning divergence between the modelled and real forest.

There are extensive considerations in a timber supply process but obviously the management of species is a primary driver. Whether it is planting high gain genetic stock or relying on natural ingress, there is an AAC impact. However, operations in some of the timber supply areas reveal there are also geographic challenges with less diverse stands (or monocultures), in particular second growth hemlock stands. Generally speaking, more remote stands require the right mix of infrastructure and logging costs for species such as hemlock to be brought to market if at all. When examining the effect of these hemlock leading stands, the operable THLB can be impacted and reduced.

Applying Young Stand Monitoring in TSR – Morice Case Study (Rene)

There has been growing interest on the development of young managed stands, and how they compare to assumptions being made in TSR. In response, grid-based young stand monitoring (YSM) plots have been established and re-measured in young stands over a number of management units in the BC interior. One objective of the YSM program is to track the growth and yield of young stands, and use the results as a check on management assumptions made in TSR.

A case study is presented for the Morice TSA, where a YSM program was established in 2012, prior to commencement of the TSR in 2013. This provided a new opportunity to directly apply the YSM data as a basis for defining managed stand yield tables in TSR, as well as presenting alternate harvest scenarios (e.g., quantifying potential forest health impacts) using un-biased ground measured data.

Presenter Biography and Abstract

Name: Jeff McWilliams, RPF

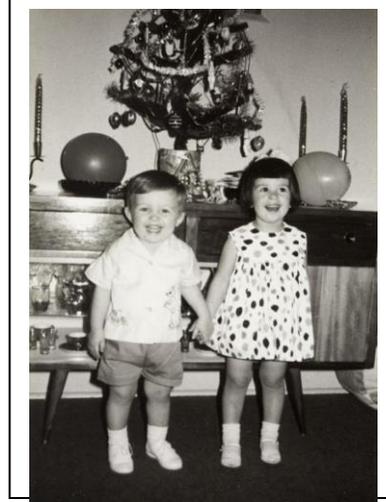
Affiliation: B.A. Blackwell and Associates Ltd.

Position: Senior Associate

Responsibilities: Strategic forestry

Academic training: BSF, UBC Forestry

Previous employment: Interfor; sawmill management, silviculture



Name: Eleanor McWilliams, RPF

Affiliation: Associated Strategic Consulting Experts Inc.

Position: Partner

Responsibilities: Analyst, project manager

Academic training: BSF, UBC Forestry, MSc Forest Biometrics, U of Minnesota

Previous employment: Forestry Canada, JS Thrower and Associates Ltd.

Early Second Growth Harvesting - Good or Bad?

The answer is it depends on ownership, tenure, constraints to harvest, the timber supply situation and long term objectives

On private land, owners commonly manage based on financial rotations which are shorter than biological rotations. Traditionally on BC crown land forest management has been based on maximization of long term sustainable harvests while providing for non-timber values. This meant that most harvesting of second growth stands occurred at or near biological rotation. During the Forest Practices Code era, as management for non-timber values became a requirement, analysis showed that limited harvesting of stands below culmination age could be important in minimizing the AAC impacts of meeting visual and adjacency objectives. Recently, there has been concern that the un-regulated widespread harvesting of stands below biological rotation age will reduce the long term AAC. Depending on our objectives this could be good to bad.

Comparing and contrasting between the coast and interior, we will discuss the pros and the cons of extensive harvesting below culmination age. We will also discuss the increased sensitivity of timber supply analysis to regenerated stand projections.

