

JANUARY - FEBRUARY 2012

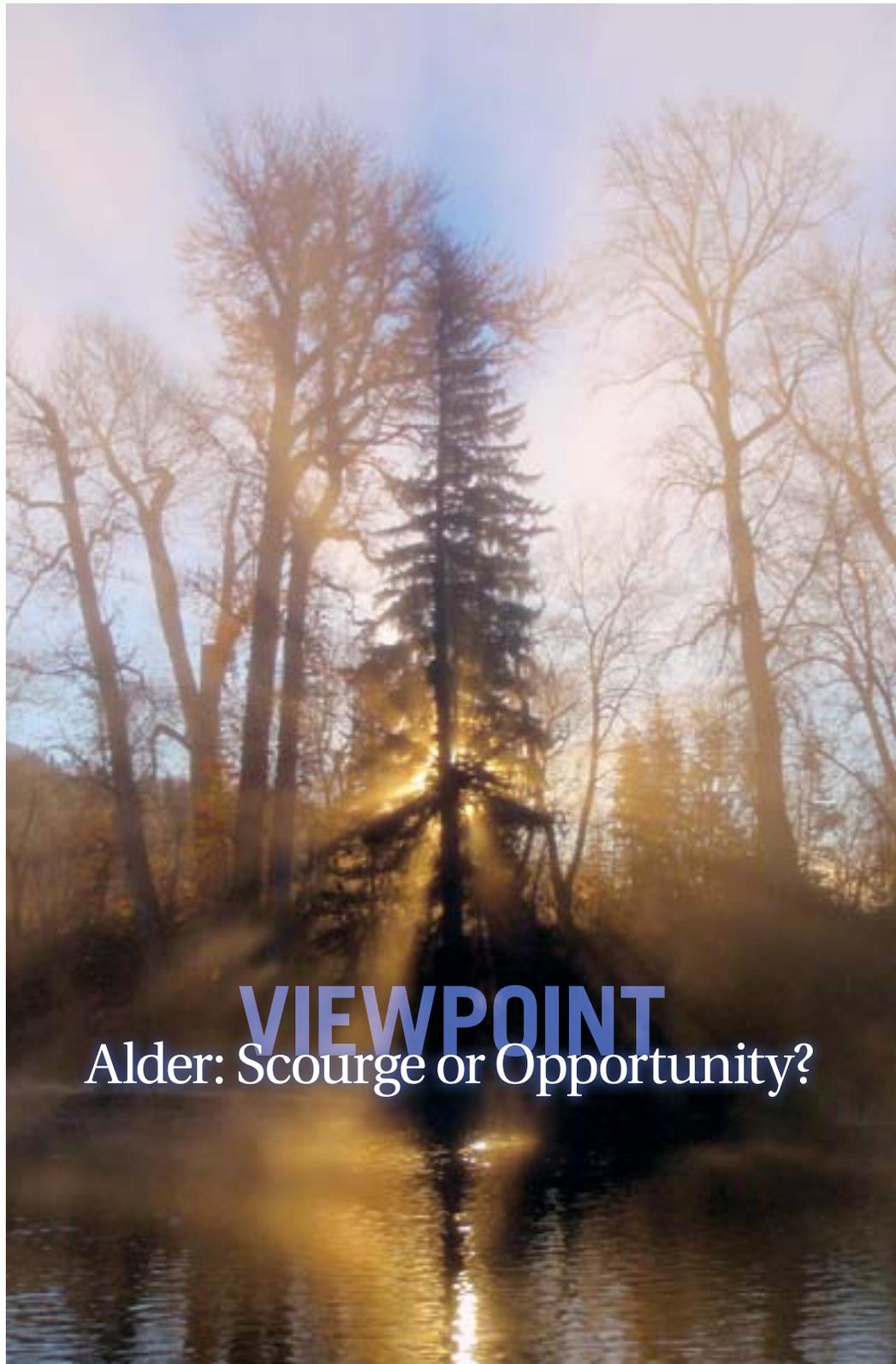
BC Forest PROFESSIONAL

2011 Registration Exam

**Why Won't We
Embrace Alder?**
Hardwood Management
on the Coast

Why I Love Alder

Bill 6—Certification
and Accreditation under
the *Foresters Act*



VIEWPOINT
Alder: Scourge or Opportunity?

Winter – operating safely

Your job's tough enough, but right now it can be brutal — dark days, freezing cold, unforgiving weather that can turn without warning. Too many forest workers are hurt in winter. But you can protect yourself and your crew. You can avoid:

- Slipping and falling on snow and ice for lack of proper footwear, or handholds on equipment.
- Exposure to extreme cold when wearing the wrong clothing.
- A resource road pile-up when a vehicle isn't equipped for winter.

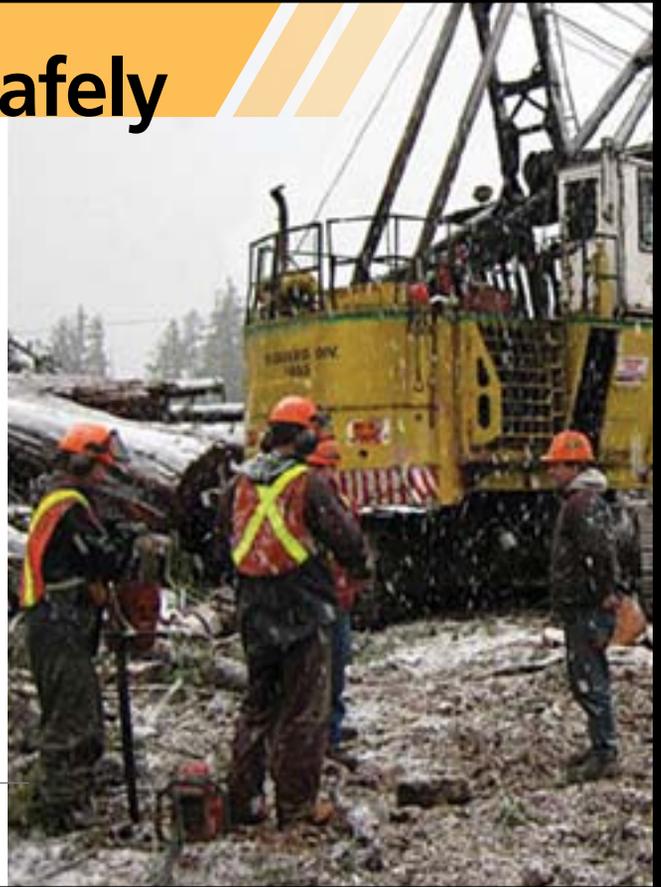
The best way to stay safe is to be ready. Assess the hazards, and prepare for them ahead of time — because extreme winter conditions leave you up to 35 times more likely to be caught in an incident.

You can beat those odds with a *Winter Safe Operating Package* — information and resources to manage winter dangers in the working woods. See and download the package at www.bcforestsafe.org. Or phone 1-877-741-1060 to have it faxed to you free.

Get it today, and work safely all winter.



BC Forest Safety Council
Unsafe is Unacceptable



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Index

January – February 2012

BC FOREST PROFESSIONAL | Volume 19 Issue 1

Viewpoints

- 9 Alder: Scourge or Opportunity?
By BRENDA MARTIN
- 10 The Forest Goes Full Circle—The
Rebirth of Red Alder
By NEIL HUGHES, RPF
- 11 Projecting Future Climatic
Habitats for Red Alder Under
Climate Change
By TONGLI WANG, PHD
- 12 Why Won't We Embrace Alder?
Hardwood Management on the
Coast
By CRAIG WICKLAND, RPF
- 13 Examining the Supply Chain: Red
Alder in Coastal British Columbia
By DAN NADIR, FIT
- 14 Growing Mixtures of Red Alder
and Douglas-Fir
By PHIL COMEAU, PHD
- 16 Why I Love Alder
By COLIN BUSS, RPF
- 18 Beyond Nitrogen: How is Red
Alder Growth Affected by Mineral
Nutrient Supply?
By KEVIN BROWN, PHD, PAG, RPBio

Interest

- 20 The Private Land Life of a Forest
Professional
By ANTHONY BRITNEFF, RPF (RET)



Special Feature

- 22 National Forest Week
- 24 The 2011 Registration Exam:
Building a Forest Professional
Workforce

Departments

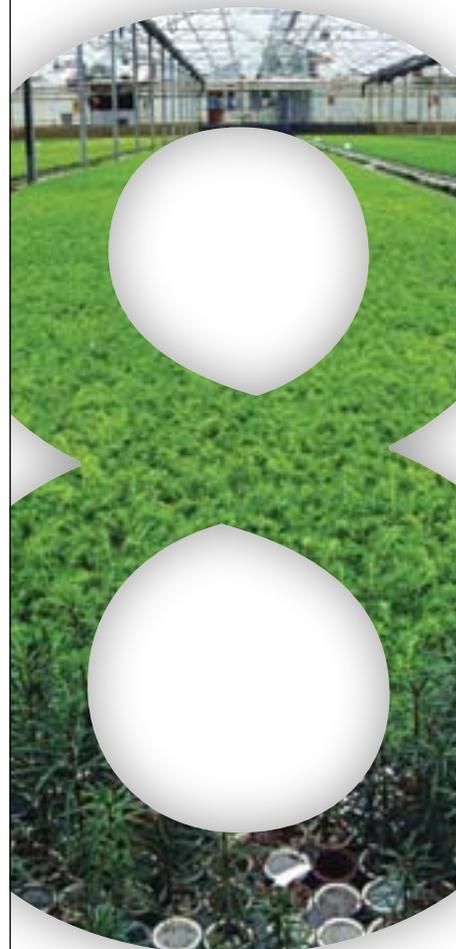
- 4 Letters
- 21 The Legal Perspective
By JEFF WAATAINEN, LLB, MA, BA (HONS)
- 26 Book Review
By CAMERON LIETCH
- 27 Member News
- 30 Moment in Forestry

Association Business

- 6 President's Report
- 7 CEO's Report
- 8 Association News

Plant Wizard Software Update

It's here!



See back cover



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Anthropocentric Views Influencing the Rehabilitation of Mountain Pine Beetle Stands

While I understand the need for managed forests I find it hard to ignore the strong anthropocentric views contained in the article entitled "Rehabilitation of Mountain Pine Beetle Stands: Thinking Critically," published in the September/October 2011 issue of **BC Forest Professional**. It concerns me to know that a large group of professionals see forests as something to be micro-managed for human exploitation. Especially when the management strategies go against all that define healthy forest ecosystems. Pathogens, fire and other natural disturbances are part of intricate systems that work to promote forest health and diversity.

The intent of this letter is not to preach to a group of RPFs about what constitutes a healthy forest but to ask: Do you see value in the natural succession of impacted lodgepole pine stands? Is there not any value in letting fires consume portions of these areas and having them regenerate themselves? It seems to me that timber harvest methods need to be modified to accommodate nature and not the other way around.

Mr. McWilliams and Mr. Blackwell suggest management strategies that seemingly exceed our capabilities as human beings and speak as if forests can be managed like vegetable gardens over very broad temporal and spatial scales. Say it out loud, "I am going to control nature." Sorry, that just doesn't sound possible.

My concern is that Mr. McWilliams, Mr. Blackwell and others following their advice are being over optimistic about what can be achieved through micromanaging such complex systems, and in the face of failure they will lower harvest standards to recover their bottom lines.

ERIC LENNERT
INTEGRATED SCIENCES, UNBC

Adapting MPB Techniques

Thinking critically about how to manage the stands impacted by the Mountain Pine Beetle (MPB) is the only way we are going to salvage the MPB situation. Jeff McWilliams and Bruce Blackwell's article, "Rehabilitation of Mountain Pine Beetle Stands: Thinking Critically," in the September/October 2011 edition of **BC Forest Professional**, eloquently outlines the need for a change in how we manage the effected MPB stands.

"As forest professionals, we need to understand that good decisions cannot be based on only what exists now but need to consider what is expected to happen over the long-term." As the authors emphasize, looking at the long-term is key for the survival of our forests. This does not mean merely looking forward to the next generation, but planning our forests for thousands of years.

McWilliams and Blackwell really stress the importance of long-term management plans to replace existing silviculture techniques which do not address the complexity of the MPB issue. Every MPB stand needs to be managed on an individual basis. Approaches and policies must evolve to ensure the most effective management plans are always in use, not simply the easiest and most cost effective, to guarantee the future of BC forests.

R. Zoë BROWN
ENVIRONMENTAL STUDIES, UNBC

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Watershed Management Requires Strong Field Skills

I commend the work of Dave Wilford and strongly agree with his opinions in the Viewpoints article: “Do Professional Foresters Need a Forestry Background to Practice Forest Watershed Management and Forest Hydrology?” in the March/April 2011 edition of **BC Forest Professional**. As a forestry student at UNBC with a minor in Natural Resource Planning and Operations, I have had the opportunity to take courses in watershed management, integrated resource management and soil sciences. I quickly learned that mastering these fields requires an intricate and developed set of knowledge. By combining skills gained from my field experience as a summer student with local forestry firms and knowledge from my schooling, I have only begun to grasp the vast array of factors that go into managing a forest site.

Using tools such as air photos and GIS to predict characteristics like tree species (for water absorption levels) and slope stability (for sediment erosion levels) can be a useful technique in predicting areas that may be suitable for harvesting. However, to think that one could determine a management plan that includes watershed values by strictly using models is absurd. The number of unpredictable factors that arise in the physical process of managing a watershed is simply too high to attempt to understand a watershed without being there in person and having previous experience. The manager of the area needs to physically walk the ground in order to experience, for themselves, how each management decision will affect the area.

Personally, I believe that foresters, especially watershed managers, need to develop strong field skills before supervising a group of workers or making important management decisions. Upon becoming a supervisor or manager, I feel it is crucial to continue to spend as much time as possible working in the forest to fully understand the aspects of a given site. I am glad to read opinions like Dave Wilford’s, especially because he is a high-ranking member of the Ministry of Forests, Lands and Natural Resource Operations.

DAVID STRAHL
FOREST ECOLOGY, UNBC

Higher Stakes

I read with interest the collection of articles on BC’s resource roads (July/August 2011) and, in particular, the one titled “High Stakes: Taking Responsibility for our Resource Roads.”

I recall a superintendent of forestry and engineering watching the divisional logging manager tear up a stack of Forest Service 242s that had been issued because the logging division had not cleaned ditches or culverts after logging for the past six months.

Why did the divisional logging manager tear up these Forest Service 242s and risk road washouts and landslides? Obviously to save a few cents per cubic metre on road maintenance. Why did the superintendent stand by and implicitly support this action...higher stakes!

BRIAN MURPHY, RPF(RET)
VICTORIA, BC

Working Toward Sustainability in the African Rainforest

Peter Shatens’ article “Saving the African Forest: People vs. Trees” (November/December 2010) discusses a very important topic for forestry in global society. This article notes the major problem facing African forests: deforestation and the resulting impacts on the land and human population. Shatens fails to implicate Canada and the rest of the world as participants in this disaster.

Although Shatens is correct about the role that Africans play on the landscape, it is also important to mention the multi-billion dollar global industry of African hardwood. As environmental protection and regulations increase in the developed world, we look to the global south to purchase the resources we no longer take from our own lands. Climate change is a serious issue worldwide and Africa specifically faces challenges as it is estimated to have a higher temperature increase than the global average. This means that the forestry industry in Africa will face greater challenges every year. As the global market turns to Africa and climate change diminishes products for harvesting, the system becomes unsustainable.

Shatens’ suggestion that Canadians insist on tying foreign aid to proper forest management and buying only certified wood is a great start, but more could be done. Africans need to feel connected to the industry and the movement towards sustainable forest practices. By placing our support in local organizations, Canadians can help reforest Africa by assisting Africans themselves, rather than contributing to outside organizations, which merely reinforces foreign dependence. Articles such as the one written by Shatens are key to discussions around global forestry in Canada as we are living in an increasingly globalized society. It is necessary for BC and Canada to make policies that benefit our own ecosystems and resources without diminishing others around the world—only then can we create a sustainable future for the resource industry.

CAYLYN MCFADDEN
ENVIRONMENTAL STUDIES, UNBC

Put in Your Two Cents

The **BC Forest Professional** letters’ section is intended primarily for feedback on recent articles and for brief statements about current association, professional or forestry issues.

The editor reserves the right to edit and condense letters and encourages readers to keep letters to 300 words. Anonymous letters are not accepted.

Please refer to our website for guidelines to help make sure your submission gets published in **BC Forest Professional**.



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Innovative Thinking: Weed to Commercial Species

When I started my career in forestry, alder was a weed—end of story. We cursed it, killed it or ignored it depending on the situation. Today, alder is a commercial species. How did that happen? It took some innovative thinking on behalf of people who saw the potential in a species with the short rotation of alder.

Innovative thinking is something we need to foster in BC's forestry sector. Academics and researchers are thinking about things in different ways and this is a good trait we should all adopt. Innovative thinking can help with the small stuff—like figuring out new ways of doing everyday tasks—to the big stuff—like turning a former weed into a commercial species.

One of the major challenges we are all facing is climate change and I believe it will take some innovative thinking by all of us to make sure the forests thrive under changing climate conditions. With all the devastation caused by the mountain pine beetle in the Interior, lots of members are questioning what species we should use to replant. Will climate change make it so that pine no longer grows in an environment that was once perfect for it?

I recently attended the Society of American Foresters' (SAF) conference and had the opportunity to speak with people from across North America. It was interesting to learn that they are all dealing with the same issues as the ABCFP. Issues like declining memberships due to aging populations and forestry not being the first choice of students are common to most of us. In order to counteract this situation, some schools have rebranded to offer natural resource or conservation programs. I was impressed with the SAF student chapters in many schools. We can learn from the SAF as they are focusing on showing the students the benefits that can be realized by a membership with the organization.

I'm sure innovative thinking by both schools in BC as well as the ABCFP will

help to bolster our membership numbers and ensure there are enough qualified forest professionals to manage the forests for the future. One thing we are doing right now is trying to appeal to a wider range of students—starting with the conservation students. We are contemplating creating a new form of membership called a Natural Resource Professional (NRP) which would give limited practice rights to qualified conservation grads. It is innovative and contributes to ensuring we have a pool of qualified people to manage the forest.

The forestry sector in BC is facing a number of challenges right now. Some challenges are so large that they are changing the way we've always done things and this is a disconcerting place to be. We can complain about what's happening or we can start looking for different ways to get things done.

A number of years ago the company I work for was facing a challenge that required an innovative solution. My employer and a commercial alder company were working on the same volume-based tenure. In the beginning, we competed with each other to get into the area first but then we realized with a little innovative thinking, both companies could benefit. They were focused on the alder, we were focused on the conifer and we both had to build roads so with a little bit of communication and a willingness to think outside of the box, we had a win-win situation.

Whether we are talking about alder, climate change or recruitment, I invite you to think innovatively to find solutions that will work for everyone. 🐿



CEO's Report

By Sharon Glover, MBA

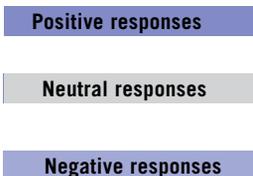
How The ABCFP is Meeting Member Needs

In November, we asked members to tell us how well the ABCFP was meeting their needs in several areas in our annual Organizational Services survey.

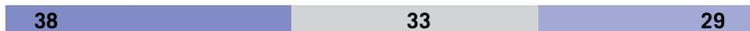
I'd like to thank the 520 members who took the time to complete the survey. Not only did they rate us on these services, they also provided us with approximately 20 pages of comments on everything from fees, to communication vehicles like this magazine to our complaints process.

We have run this survey annually since 2008 (you can find summaries of the results on the Surveys page of our website). Each year we try to improve our services and the way we deliver them to you – we use the survey to measure how well we've succeeded.

For each area, we asked members to rate the ABCFP on a five-point scale with 1 and 2 indicating a negative response (least satisfied) and 4 and 5 indicating a positive response (most satisfied). A score of 3 is deemed to be neutral. Here's how members rated the ABCFP on the following services:



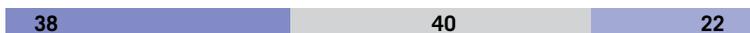
Forest Practices Legislation – the new Practice Reminders notices and the development of the Principles of Stewardship



Standards of Practice – practice guidelines for RFTs, Standards of Practice guidance document for all members



RFT Scope of Practice – clarity and usefulness of the document



The Increment – usefulness of keeping members up-to-date of association activities



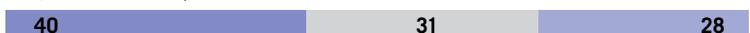
Foresters Act Enforcement – effectiveness of our Act enforcement activities



Bylaw Enforcement – effectiveness of our bylaw enforcement activities



Forest Stewardship – advocacy on issues such as land-based management; response to the zero net deforestation implementation plan; practitioner competence and awareness of issues affecting stewardship (including climate change; online access to resources in carbon accounting and hydrology; coastal Douglas-fir workshop, Healthy Forests, Healthy Communities); mid-term timber supply; species at risk; use of forest professionals; the professional contribution to safety in the forest; water resource importance and information.



Website – effectiveness of the website in keeping members informed



Staff Response – effectiveness of staff responding to member questions



We are generally pleased with the results and will continue to try and improve how we serve members. We recognize that members are not happy with the work the ABCFP has been doing in the areas of *Foresters Act* enforcement and bylaw enforcement. This is an area we will be focusing on in 2012 and we will tell you about our activities in **The Increment**, the magazine and on the website.

If you have any suggestions on how the ABCFP can improve our services for members, please e-mail me: sglover@abcfp.ca.

Official Notice of the AGM

The ABCFP's 64th Annual General Meeting will take place during Everything to Everyone: The Art of Forestry 2012, the ABCFP's annual conference, in Victoria, BC. The AGM will be held on Thursday, February 23, 2012, from 1:30 to 2:30 pm at the Victoria Conference Centre. The AGM, council hot seat and resolution session are free for all members and registration to Everything to Everyone: The Art of Forestry 2012 is not necessary to attend these events.

The preliminary agenda for the AGM is as follows:

1. Adoption of the minutes from the previous annual meeting.
2. Member recognition.
3. Adoption of annual report.
4. Adoption of the audited financial statements.
5. Appointment of auditors.
6. Appointment of one or more returning officers and scrutineers.
7. Reporting of council election results.
8. Ratification of council and staff actions.
9. Business resolutions (if any).
10. Adjournment.

Any matters requiring a vote are restricted to eligible voting members in good standing.

Council Election Update

The council election closed on January 13, 2012. Thank you to all those members who took the time to cast their vote. The results will be announced later this month in **The Increment**.

ABCFP Gets New Lay Councillor

As of October 2011, lay councillor Gordon Prest was replaced by Rod Visser on council. Gordon has spent six years on council and has made enormous contributions particularly in the area of Aboriginal relations. Gordon's wisdom will be missed and we wish him well in his future endeavors.

Rod has an extensive background in Aboriginal relations and community service. He served the North Island as an MLA from 2001 to 2005 and is the current CEO of Middle Point Management—a consulting firm that provides strategic advice and project management to several First Nations. Rod lives in Campbell River and serves on several other boards. Welcome to the ABCFP, Rod!

Lay councillors are appointed by the Board Resourcing Office of the provincial government. Rod's term expires on October 31, 2014.



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Alder: Scourge or Opportunity?

Applying the PRINCIPLES OF STEWARDSHIP

The Stewardship Committee has put together an example of how the Principles of Forest Stewardship* can be applied to the challenges presented by red alder. Although the six principles are intended to be applied with an integrated approach, the following is an example how one could be applied.

Principle (6) - Adaptive Practice states: Stewardship requires the practising professional to develop strategies for dealing with risk and uncertainty in forest management decisions. In order to do this well, it is imperative that the practitioner also incorporate an adaptive approach to professional work in order to accommodate anticipated conditions and plan for action in the face of the uncertainty.

In this scenario, a silviculture forester examines the risks presented by alder within a recently established plantation and determines that retaining a percentage of alder on the site will provide an ongoing benefit to soil productivity. The forester also recognizes the future benefits that species diversity will have on the stand for wildlife, biodiversity and even merchantability. The practitioner has applied the principle of adaptive practice.

THIS VIEWPOINT TOPIC—ALDER: SCOURGE OR OPPORTUNITY?—tapped into a wellspring of emotion in our writers. There are authors published in this magazine who have dedicated large parts of their career to *alnus rubra*. And they defend this tree's place in BC's forests with both technical knowledge and heartfelt eloquence. I think all our members will find these professionals' passion inspiring—no matter their opinion on red alder.

This is also the issue where we welcome new members into the profession. If you turn to page 25, you will see a listing of the hard working people who successfully passed the 2011 registration exam. All these members have the opportunity to be inducted into the ABCFP at the Inductees' Recognition Luncheon at Everything to Everyone: The Art of Forestry, the ABCFP's annual conference and AGM in February.

We also bring you highlights from our National Forest Week celebrations. This year, as always, we have our "What the Forest Means to You" art contest winners. New this year, we also have our member photo contest winner, honoured on the cover of this issue, and the winners from our inaugural youth essay contest. Last but not least, the North Island Network of Forest Professionals (NFP) wrested the Battle of the NFPs title from last year's winner—the East Kootenay NFP in Cranbrook—and are back on top. Read more about their amazing program on page 23. 🐿️

* Principles of Stewardship of Forests, Forest Lands, Forest Resources and Forest Ecosystems – draft document (June 1, 2011)



The Forest Goes Full Circle – The Rebirth of Red Alder

DESPITE OUR BEST EFFORTS TO REMOVE RED alder from our managed forests over the last 30 years, it has proven to be a resilient tree that has hung on around the fringes of our business. Now, after about a decade of careful lobbying by a small group, foresters are free to grow and manage it on suitable sites with clearly defined objectives.

Thankfully, alder had been the most heavily researched tree in the Pacific Northwest that was not being grown commercially. So in 1997 when the Coast Forest Region red alder planting trial allowed Coast Mountain Hardwoods (CMH) to establish 100 ha a year, there were lots of good resources to work from.

The challenge of being the first forester in BC to be planting and managing alder on Crown land was invigorating while at the same time frustrating. Ignoring the stress of dealing with a system developed for conifers and an industry that did not see the point, we still had to start from scratch. We collected seed, grew seedlings and worked out lifting and cold storage regimes. We determined the best planting time and weather to avoid frost or drought, how to transport and store trees that want to flush in a few days of thawing and how to identify a bark beetle destroying all our efforts after just a few months. However, the invigoration came from a tree that can grow two metres a year on the right site, can be free growing by the third or fourth growing season and costs far less than conifers.

The holy grail for alder silviculture is to capture the site quickly and get the trees on an accelerated growth trajectory by avoiding competition from brush. This is achieved by planting large, healthy stock at densities from roughly 1,100 to 1,400 sph (stems per hectare) on sites that are rich and fresh/moist where brush has either not yet established or, better yet, been controlled by herbicide. Fertilizing with phosphate provides a very positive boost.

To get the best out of alder it is necessary to capture that first 15 years of phenomenal height and diameter growth which gets you well on the way to a merchantable stand in 25 to 30 years. Although juvenile spacing guarantees merchantable sawlogs in a shorter timeframe by allowing proper canopy development, good sites and moderate planting densities can ensure this also. I recall one Weyerhaeuser stand near Chehalis, Washington planted at 1,100sph, never brushed and not spaced which had almost merchantable stems up to 28cm dbh (diameter at breast height) at 17 years.

The Ministry of Forests decision to force Coast Mountain Hardwoods and Northwest Hardwood to replant conifers from 1996 to 2003 on sites



I strongly believe that mixedwood management is the answer in many locations.

just harvested increased the licensees cost burden considerably. Having to remove up to three waves of deciduous regeneration on some sites was a poor use of limited resources and clearly not good management either. The lost opportunity over these years is now being rued as we all question how to get more alder established, and something to consider in relation to adaptation measures that will be needed to combat climate change.

Growing alder on the right site can significantly reduce establishment costs compared to conifer. With the correct growing sites for alder well known, defined targets to manage for and steady and growing markets, why not establish alder at (approximately) \$1,700/ha instead of conifers at \$3,000 or more per hectare. Declaring free growing at five years instead of 12 is a dream come true for most managers.

I strongly believe that mixedwood management is the answer in many locations. (For more information on mixedwood management, please see Craig Wickland's article on page 12.) The majority of alder comes from mixed stands either as individual trees or patches of various sizes. Although I mentioned that alder silviculture is now well researched, something which would help us considerably is understanding the growth dynamics of these mixed stands as they regenerated. Allowing foresters to make good silvicultural and economic decisions about 'conifer blocks' full of good quality alder regeneration is one of the best tools licensees have been given in the last 10 years.

As foresters we are often looking in manuals and 'red books' for answers and prescriptions and we forget to look at the forest and contemplate what it is telling us. If you are on a site series 05 or 07 in the CWHdm, the manual will now tell you alder should be a very serious consideration for planting. But similarly if you are looking at 2-3,000sph of naturals at four years with less than perfect conifer stocking maybe you are looking at a great site for a mixed stand.

So the markets are there, the research is done, we have over 2,000ha of recently established alder growing and we now have the tools available to enable most foresters and licensees on the coast to benefit from the opportunities alder management can provide. Let's get going! 🐼

Neil Hughes, RPF, is the program director for forestry at Ecotrust Canada. He has over 25 years of silviculture experience with 10 years specializing in red alder management. He earned an MSc from Royal Roads University in 2007.



Projecting Future Climatic Habitats for Red Alder Under Climate Change in British Columbia

RED ALDER GROWS ALONG THE ENTIRE COAST OF BRITISH COLUMBIA IN humid to superhumid climates. The main limits to its growth are low winter temperatures and lack of precipitation during the growing season. We think that the geographical range of suitable climate for red alder, also known as its bioclimate envelope, will expand in BC as the climate changes.

We developed projections of alder ranges with a niche-based bioclimate envelope model (BEM). To develop a bioclimate envelope model, we needed the following things:

1. Species present-absent data (where the trees grow and where they don't) to represent the realized climatic niche of the species.
2. High-resolution climate data that reflect the detail climate conditions where the species is present or absent.
3. A powerful modelling approach that can effectively capture the relationship between the species occurrence and climate variables.

Species Present-Absent Data

In developing the BEM for red alder, species-range-wide present-absent data were collected from the ecological plot data from BC Ministry of Minister of Forests, Lands and Natural Resource Operations (through Dr. Elizabeth Campbell) and the Forest Inventory and Analysis (FIA) data from the United States. In total, we collected present/absent data for tree species from over 35,000 plots.

High-Resolution Climate Data

High-resolution climate variables were generated using ClimateWNA (previously ClimateBC) (Wang et al. in press). ClimateWNA provides scale-free climate data for 85 climate variables. Climate variable include things such as growing degree-day, frost-free period, and extreme minimum temperature, etc.

ClimateWNA also generates historical and future climate data in the same model and provides easy access to over 20,000 climate surfaces. The climate variables for 1961-1990 normal period were used to develop the bioclimate envelop model, while the climate data for future periods (2080s) were used to project the future geographic distributions of the bioclimate envelope for this species.

For projecting the bioclimate envelopes for future periods, we chose three climate change scenarios from the IPCC Forth Assessments recommended by Spittlehouse and Murdock (Spittlehouse and Murdock 2010), including the CGCM3 A2 run4, HadCM3 B1 run1 and HadGEM1 A1B run1.

A Powerful Modelling Approach

Random Forests (Breiman 2001), a machine-learning ensemble classifier and one of the most powerful modeling methods, was used to capture the species-climate relationships and to develop the bioclimate envelope model. The mismatch rate estimated with an independent out-



of-bag dataset was only 8.5%, suggesting that the bioclimate envelope representing the realized climatic niche of red alder (Figure 1A) can be accurately predicted by the Random Forest model using climate variables as predictors.

After the model was built, we used the three selected climate change scenarios to project bioclimate envelopes for 2080s. In order to have a general view about the climate change impact, projections for the three climate change scenarios are integrated into a single map (Figure 1B). We found that the bioclimate envelope for red alder would substantially expand northward along the coast and towards the Interior—although the range of the expansion varies among climate change scenarios. In any case, the area suitable for planting red alder in British Columbia may increase substantially in the future due to climate change.

In terms of range expansion for red alder, our projections agree with Hamann and Wang's (2006) projections in general. However, our new projections show more range expansion into the Interior. The BEM developed in the previous study was based on the Biogeoclimatic Ecosystem Classifications (BEC) using discriminant statistical analysis method and the projections were based on a mid-road climate change scenario (CGCM2 A2x) from IPCC Third Assessments. We expect that projections based on the new BEM built using Random Forest with the plot data, together with the three climate change scenarios from IPCC Fourth Assessments will provide more reliable projections.

However, uncertainties about the future climate remain a challenge in both projecting future changes and applications of these projections in forest resource management. We are in process of applying a consensus projecting method to generate consensus maps for BC ecosystems and forest tree species through integration of multiple projections based on a large number of climate change scenarios. 🐦

Tongli Wang, PhD, is a forest geneticist and Associate Director at the Centre for Forest Conservation Genetics at the Department of Forest Sciences, University of British Columbia. He received his Masters and Doctoral degrees at the University of Helsinki, Finland in 1992 and 1996.

Additional resources are listed on our website



Why Won't We Embrace Alder? Hardwood Management on the Coast

BROADLEAF MANAGEMENT HAS BEEN INADEQUATE on BC's coastal forestlands despite the development of a coast hardwood strategy and field-based training sessions. The annual target area (approximately 1,200 ha) for alder management to develop a sustainable standing timber inventory has not been achieved.

Why is this? There still seems to be a conifer bias amongst many tenure holders and professionals. Red alder is still viewed by some as an unwanted competitor that impedes conifer growth. For parts of the forest industry broadleaf (alder) management requires a culture change. We must start viewing alder as an economic asset rather than a competitor—an opportunity rather than a curse. For this a champion is needed in most organizations, a resource that can be relied on to make things happen. We must not let limited resources prevent us from gaining the knowledge and experience necessary to actively manage for broadleaves (alder) on the right sites.

Red alder (*Alnus rubra*) has proven to be a valuable commercial species, is recognized as having significant timber values and has appreciated in value at a greater rate than many other tree species. Red alder can help diversify the coastal fibre supply and accommodate the increasing demands for non-conifer timber products.

From a timber production perspective there are a few primary benefits that result from the active management of red alder:

- mitigation and diversification of mid-term timber supply
- increased species diversity
- short-term management of root disease, and
- high log values.

In addition to the timber supply benefits, active management of red alder can also play a role in the mitigation of climate change. Intensive, short rotation management of red alder may allow us to better transition from current to future climates. The range of red alder may also expand through climate change providing additional

opportunities for active management.

But achievement of these benefits requires a combination of well-defined objectives at the landscape level and flexible planning at the stand level. A variety of management strategies can be applied at the same time across a management unit to achieve timber supply and timber flow objectives. The types of strategies suggested include intensive management regimes, low investment extensive management regimes and mixedwood regimes.

Type One: Intensive Management Regime

In the intensive, short-rotation management regime, red alder is planted at moderately high densities to promote early development and good stem form and then thinned to maintain rapid radial growth. This type of management regime results in relatively high-value sawlogs being produced in rotations of 25 to 35 years and helps to mitigate mid-term timber supply shortfalls. Long-term timber supply may also benefit under this regime as mean annual increment for red alder will often exceed that of conifers under the same site conditions.

Type Two: Low-Investment Extensive Management Regime

Alternatively under an extensive management regime, alder is planted and grown at relatively high densities without thinning. This approach achieves slower radial growth rates which, in essence, extends the rotation length to achieve target sawlog size. This extensive approach does not provide any timber supply benefits in the short term but does provide for some of the other benefits such as high value logs and increased diversification of the timber supply.

Type Three: Mixedwood Regime

The third approach to alder management is a mixedwood regime, where alder is managed in conjunction with conifers on a similar rotation. The focus for mixedwood management to date has been patch mixedwood strategies, where alder and conifers are typically managed in small separate patches as part of a larger opening. The big advantage of the mixedwood strategy is that it allows for the

acceptance of natural regeneration of alder where it is of sufficient density. Mixedwood management is an opportunity to grow alder at low cost and low risk—an opportunity that we should not overlook in our current economic climate.

In 2008, the Silviculture Working Group of the Coast FRPA Implementation Team (CRIT) with the assistance of technical experts in the field of broadleaf management developed the document entitled "Hardwood Management in the Coast Forest Region." This document outlines a strategy for management of broadleaf species, from a reforestation perspective, across the coast area. The intended objective was to actively manage for and grow a standing timber inventory to support an annual harvest of approximately 300,000 m³ (approximately 1,200 ha) across the coast area.

Perhaps more technical support is needed to help professionals with the alder management decision and to better understand the benefits and to overcome the risks associated with establishing alder as a crop, especially as we transition to a changing climate. We must look for opportunities to improve our silviculture programs, reducing risk and cost to achieving free growing, while meeting timber supply and sustainability objectives. Growing alder may help with these.

One thing is sure, to develop a sustainable standing timber inventory of red alder, more work is needed to understand the economics of managing, growing and harvesting alder. We must also strive to develop strong market conditions. Operational foresters are encouraged to consider growing some alder. The opportunities are there, we just need to learn to recognize them and take advantage of them. 🐿️

Craig Wickland, RPF, is the forest stewardship section head for the coast area of the Ministry of Forests, Lands and Natural Resource Operations and has more than 20 years experience in the area of silviculture. He is also the chair of Coast Region FRPA Implementation Team (CRIT) silviculture working group composed of industry and government professionals with expertise in the field of silviculture.



Examining the Supply Chain:

Red Alder in Coastal British Columbia



Hardwoods such as alder represent an opportunity to diversify the type of wood products our forests can supply such as these doors at Nita Lake Lodge.

Photo courtesy of Forest, Innovation and Investment

THE BIAS TOWARD TIMBER-BASED CONIFER objectives is still firmly engrained in the culture of forestry in BC. This is not surprising considering much of the landscape is dominated by conifers. But hardwoods such as alder represent an opportunity to diversify the type of wood products our forests can supply.

As part of an effort to encourage the utilization of deciduous species, the Future Forest Ecosystems Scientific Council (FFESC) funded the project “Using red alder as an adaptation strategy to reduce environmental, social and economic risks of climate change in coastal BC.” Staff from the Forests and Communities in Transition (FACT) initiative at the University of British Columbia investigated the question “What steps need to be taken to develop an integrated hardwood forest sector on the coast?” with a particular focus on alder.

Based on the interview data collected with hardwood supply chain actors and an examination of the existing literature related to the BC coastal hardwood supply chain, there is potential for alder to play a minor, but significant role to the forest industry. It would be best suited as an integrated part of a larger product basket that also includes maple, birch and cottonwood.

To collect this data, FACT used purposive sampling techniques to conduct semi-structured interviews with alder supply chain actors in coastal BC. A series of issues that pertain to the alder supply chain emerged from these interviews, including these themes:

Existing Alder Inventories

As alder’s value has increased over the past decade, many stands that were once considered uneconomical units have become favourable for harvesting. The best of these stands have since been harvested and the amount of alder that is available in economical units has decreased.

Establishment, Harvesting and Transportation of Alder

Whether or not to establish alder stands in favour of other conifer species has increasingly become an issue in recent years. The ecological benefits of red alder are well documented (for example, its resistance to laminated root rot *Phellinus weirii* can help sanitize infected sites) and its ecological attributes can be utilized to meet forest land management objectives. Operationally, there is still a need for information related to establishing stands, including the availability of planting stock from nurseries and the ability to plant alder as a preferred crop species.

With respect to harvesting and transportation, alder also provides some unique challenges compared to its conifer counterparts. Timing is critical. Alder logs should not be left in the cutblock during the summer months as the sap will run and discolor the outside (and most valuable part) of the log. Ideally, logs are cut in the fall or winter and transported for processing (or at minimum put into floating booms) before the summer.

Primary Breakdown, Secondary Manufacturing and Marketing of Alder

The types of products that can be created from red alder are varied and include furniture, flooring, cabinets, veneer, as well as woodenware and toys. High value products include doors, shutters, mouldings and panel stock. Lower value products include plywood core stock, chips for pulp and paper, firewood, and chips for smoke curing.

Currently, the majority of alder logs from the BC coast are being shipped south into Washington and Oregon for processing into manufactured wood products. That said, a small but significant hardwood processing industry exists on the BC coast. However, many of these businesses have been forced to reduce the size of their operations as a result of the recent global economic downturn.

In many ways, the future of the hardwood supply chain in coastal BC depends on these businesses specialized knowledge pertaining to the acquisition, processing, and delivery of hardwood products to the marketplace. This knowledge will be integral to establishing the correct quantity and quality of alder stands at the landscape level, and timing the harvest of such stands accordingly, thus ensuring producers a stable timber supply. 🌲

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Growing Mixtures of

WE NEED TO ACCEPT A COMPONENT OF ALDER IN REGENERATING conifer plantations due to the important ecological role of red alder and its potential contributions to site productivity.

There are many benefits to red alder:

- It can increase soil nitrogen and lead to long-term improvements in nitrogen availability and site productivity.
- It is resistant to laminated root rot and it can reduce or ameliorate its effects on Douglas-fir.
- It is useful for reducing weevil injury to Sitka spruce.
- It is an important component of riparian zone ecosystems.

However, there are also problems. Several studies indicated that red alder can be a strong competitor with Douglas-fir, western redcedar and other species, due to its much more rapid initial height growth and dense canopies that intercept light. These studies suggest that the nutritional benefits alder can provide to Douglas-fir on sites that are nitrogen deficient may not occur where nitrogen supplies are adequate (Miller and Murray 1978, Binkley 1983, Cole and Newton 1986). As a result, red alder can seriously reduce the growth of conifers on moist sites that are not nitrogen deficient (Cole and Newton 1986).

Recent work indicates a substantial variability in the effects of alder in relation to climate, site and soil factors (Comeau et al 2007) on the growth of associated conifers. These studies indicate little effect of alder at densities up to 400 stems per hectare on growth of Douglas-fir or western redcedar to ages 10 to 12, suggesting that alder might be less competitive in BC than has been observed in Oregon. On some sites the presence of between 100 and 300 alder per hectare may be beneficial to Douglas-fir.

However, competition for light may be problematic in the future when alder densities exceed 400 sph (stems per hectare) on fresh and moist sites. Measurements at age eight from an experiment near Maple Ridge (CWHvm1, moist site) have shown increases in soil nitrogen availability and Douglas-fir foliar nitrogen concentrations with increasing alder density (Cortini and Comeau 2008). At this site, growth of both Douglas-fir and western redcedar declined with increasing densities of red alder, and growth reductions exceeded 30% when red alder densities exceeded 500 sph. In contrast, growth of western hemlock was unaffected by red alder at densities of up to 1,100 sph. Nevertheless, field observations and other studies indicate that when western hemlock is overtopped by high densities of alder, its growth can be reduced on many sites.

Figure 1.

This photograph illustrates both the strong competitive effects of red alder when established at 400 stems ha⁻¹ on a moist site and the problem with retention of lower branches and resulting potential wood quality problems when alder are grown at such low densities.



Red Alder and Douglas-Fir



Continued research is needed to help in determining the site specific influences of red alder but interim results suggest that red alder densities should be kept below 100 sph (uniformly spaced trees) when it is being grown with Douglas-fir on moist sites, with higher densities of alder being acceptable on drier sites (ie. 200 or 300 sph or higher on fresh or drier sites or perhaps higher densities on sites where alder are overtopped by the conifers within the first 10 years).

However, when alder is grown at these low densities, it will retain lower branches for many years, leading to branchy trees of poor form with a wide knotty core that will have low or no commercial value (except for firewood). Conifers will likely only serve as trainer trees if they maintain heights of at least 60% of the height of the alder from early ages.

One option for growing higher quality alder is to establish it in patches of adequate density. While alder patches may be any desired size (but large enough so that sufficient interior trees exist to provide quality logs), it might be ideal for conifer patches to be less than 40 m wide so that most trees benefit from nitrogen input that can occur up 20 m from standing alder (Lavery et al. 2004, Comeau et al. 2007). When growing Sitka spruce, conifer strips may need to be narrower and oriented with the long axis going east-west to reduce weevil impacts.

Crop rotations of red alder with conifers are another possibility and may be particularly useful on sites with laminated root disease. Crop rotations could also avoid problems with yield declines observed with multiple rotations of alder on some sites.

In summary, we should not try to extirpate every alder from plantations and results suggest that we can accept 100 stems per hectare or more alder (depending on site) in conifer plantations with little risk of loss in conifer yield and perhaps with yield improvements. The potential to establish and manage patchy (or aggregated) mixtures needs to be explored further. Continuing research is needed to help determine appropriate densities and to provide us with a better understanding of the long-term influences of red alder on stand dynamics and site productivity. 🐦

Phil Comeau, PhD, received his doctorate in forest ecology at UBC in 1986. He is currently a professor of silviculture and stand dynamics at the University of Alberta. His research projects include studies of competition dynamics, vegetation management and mixedwood management options, and effects of overstory canopies on microclimate and growth of conifer regeneration across western Canada.

Additional resources are listed on our website

Figure 2.

On fresh or drier sites, Douglas-fir can often keep up with red alder in terms of height growth. Alder will likely have little competitive effect and may be beneficial if present at reasonable densities on these sites.



Figure 1: Streamside alder on Carmanah Creek

Why I Love Alder

*Ice began to melt
Glaciers let go of the land
Rivers were swollen
A new soil began
Plant seeds blew in on the wind
Some were annuals
And some were shrubs too
Young trees all over the place
And so came alder.*

WHAT IS SO GREAT ABOUT ALDER (RED ALDER, *alnus rubra*)? It enhances soil; it has many unique and valuable uses; it epitomizes the lessons to be learned about coastal forest management.

SOILS

Some say the rich ecosystems were due to the input of nitrogen from salmon carcasses into riparian ecosystems by bears and birds. But rich ecosystems occur both near and away from large streams and along stream reaches unreachable by fish. The richness of riparian ecosystems can also be explained by the ubiquity of riparian alder (Figure 1).

At the end of the last glaciation, most of the lower elevation parent-materials were derived from glacio-marine sediments. That is, sediments transported by the ice sheets, disgorged by rivers into coastal seas and deposited over the submerged land. Though they had the capacity these soils



Figure 2: Glacier retreating and encroaching vegetation and alder in Bute Inlet



Figure 3: Alder with a patch of bark removed showing the edible sap wood

did not carry many nutrients. (Figure 2)

Along with the initial influx of life came people and with them an increase of fires. Fire brought an alternating forest of alder and Douglas-fir.

The rich ecosystems on the coast of BC are due to, I believe, the frequency of alder growth due to fire which produced, through the nitrogen-fixing bacteria on its roots, up

to 320kg of nitrogen per hectare per year (Pojar and MacKinnon, 1994). Nitrogen is the main limiting nutrient in coastal soils.

PRODUCTS

For years, my brother and I cut down alder on our property in rural Lower Fraser Valley and used it for fire wood. It burned quicker and gave off less heat than many of the other,



harder woods, but was easy to cut and split and dried quickly.

Alder wood is light-weight, strong, soft, easy-to-work and stains well; it makes great lumber for furniture; both the structural and cosmetic components.

The price of alder sky-rocketed in the last 15 years primarily because of the increased marketing of the wood by US forest companies

on a good site Douglas-fir will reach the same height as alder in about 50 years. This is only correct when the alder is in a pure stand.

Because open-growing alders abandon speedy height growth early on, by about ten years in the life of a planted Douglas-fir stand, the Douglas-fir is often the same height as the alder. And since the alder is more shade intolerant, it quickly dies-off. By year 30 most

without planting. This was partly because the logging was high-grading and was often followed by fire.

We could simulate this if we left more live trees behind and started broadcast burning again.

Through the extensive use of natural regeneration we could out-compete manufacturers in countries with cheaper costs



Figure 4: Roadside alder in an eight to 12 year old stand on Vancouver Island



Figure 5: Roadside alder in a 20 to 30 year old stand on Vancouver Island



Figure 6: Natural 3rd growth alder in Tree Farm Licence 47

Photo: Colin Buss, RPF

to the furniture-making industry.

Alder bark was used throughout the northwest coastal region of North America as a dye and medicine by First Nations people. It is the preferred wood for smoking salmon. In the spring the inner bark and outer wood are edible (Figure 3).

THE EPITOME OF OUR FAILINGS

An alder tree I planted in an open area in the 1980s had stopped putting on much height growth after about ten years. It demonstrated a phenomenon I have seen since in alder.

Unlike most evergreens, which have height that is hardwired to site, alder height growth is a function of density and shading and secondarily by site. Unless it is growing in a stand with other alder, the tree stops putting on height.

The yield tables for alder and Douglas-fir, which do not take into account the impact of density or shading on alder height, show that

of the live alder are along roads and creeks, all places where the competition is reduced (Figure 4 and 5).

If the high density alder (2,000 or more stems per hectare) is eliminated early in a stand's life (in the first four years) most surviving Douglas-fir will be quite vigorous and make it to free growing and beyond. Therefore, killing alder after four years in a stand with a full stocking of conifers is a waste of time and money.

Regeneration in coastal BC is now predominantly achieved through planting. Most of these investments are poor but are justified on the basis that this is mandatory in order to guarantee regeneration.

But this is not correct or necessary; regeneration occurs without planting.

Given that we now consider alder a crop tree, there was close to 100% natural regeneration of the second growth forest on the south coast after the first pass harvesting

like China. No one can grow our tree species cheaper than us if we do it naturally.

Alder is the leading example to verify the legitimacy of this assertion. The vast majority of the second-growth harvest in coastal BC is from natural regeneration that only cost the price of a match! (Figure 6)

I love alder because it is a natural soil enhancer and the reason we have rich ecosystems (and big trees). It is easy to use as firewood; it produces great lumber, and it can be used for medicine, fish-smoking, dyes and food. Also, the new and increasing value of alder teaches us that we should not presume to know what will be valued in the future and we should rely more on natural regeneration. 🌱

Colin Buss, RPF, is a semi-retired silviculturist with Forsite Consultants in Campbell River. He has worked about 20 years in TimberWest's second growth TFL in the Johnstone Strait Operation. His career has been dominated by the killing of red alder. Colin can be reached at bussster@telus.net.



Beyond Nitrogen:

How is Red Alder Growth Affected by Mineral Nutrient Supply?

TO MANY FOREST PROFESSIONALS IN COASTAL BC, NUTRIENT SUPPLY IS SYNONYMOUS with nitrogen supply. Early research showed that the growth of commercially important conifers in the region was more often limited by nitrogen than by other mineral elements.

Regional forest nutrition research has since emphasized nitrogen.

However, red alder supplies much of its nitrogen requirements by atmospheric nitrogen-fixation. It returns that nitrogen to the site over time, possibly increasing site productivity. This raises some questions:

- Is growth of alder limited by supplies of elements other than nitrogen?
- Are nitrogen-fixation and accumulation limited by supplies of other elements?
- What growth responses result if nutrient deficiencies are eliminated?

Determining what elements limit growth and to what degree is complicated. At least 14 elements can limit plant growth. The amount and combinations of nutrients added, combined with the type of data collected, can affect an experiment's results and alter the perception of what elements limit tree growth.

Studies in the early 1990s indicated that site index of alder on Vancouver Island increased with phosphorus availability, more so than with other elements. Based on that, we initiated experiments (through the Ministry of Forests Research Branch) to clarify how growth of young alder responded to the availability of phosphorus and other elements. We began with seedlings in glasshouses, then progressed to short-term single-tree plot and later to longer-term multi-tree-plot field experiments. Soil and foliar nutrient concentrations were determined so that treatment effects on growth could be better understood.

Phosphorus was applied as triple super phosphate (0-45-0), a commonly used phosphate fertilizer, with or without other elements. In field studies, fertilizer was placed or banded near each tree, generally within a year of planting. Growth increased at application rates up to 30 g of phosphorus per tree for trees fertilized within a year of planting, as did foliar phosphorus concentrations. Growth did not increase with additions of elements other than phosphorus, nor when tree were first fertilized more than two years after planting.

Growth responses to phosphorus additions have been substantial (Figure 1). Through three years, responses were consistent across a range of sites. Through five to six years, phosphorus additions at planting on fresh-moist sites increased heights by 11-14% (0.7-0.9 m) and dbh (diameter at breast height) by 14-17% (1 – 1.1 cm). Individual-tree basal areas increased 27-35% (11-15 cm² per tree).

Phosphorus additions initiated the year following planting on a moderately-dry site near Bowser, 70 km north of Nanaimo, increased tree basal area by 40% (20 cm² per tree) through nine years (Figure 1). However, basal areas of 'crop' trees (the largest 400 trees per ha) did not increase with phosphorus additions. (Treatments at Bowser differed from other sites in that phosphorus was initially added at lower rates and then added again in years 2, 3, 4 and 6; however, effects of phosphorus additions were established by the initial fertilization).

Although deficiencies of phosphorus for alder clearly occur, other elements may be deficient on some sites. Phosphorus additions have also increased foliar nitrogen contents. Does increased phosphorus availability increase long-term site nitrogen availability?

How long the effects of phosphorus additions will persist is unknown. So maintenance and remeasurement of these existing studies are crucial. Density-dependent mortality has not yet begun in our plantations. Will faster-growing phosphorus-fertilized plots begin to self-thin before unfertilized plots? What implications will that have for stand growth?

At our moderately dry site, the effect of phosphorus additions on annual basal area increment may have increased with growing-season precipitation. However, data are available for only six years (Figure 2) and there are presently more questions than answers. Understanding the interaction between moisture and phosphorus availability matters because changing climates may affect growing season moisture availability and growth of alder on some sites.

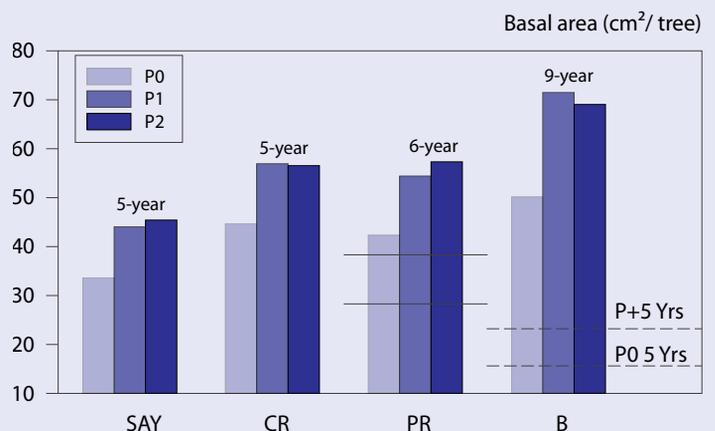


Figure 1 Cumulative individual tree basal areas of alder fertilized with phosphorus. Sayward (SAY), Campbell River (CR), and Powell River (PR) sites were fertilized shortly after planting with 0, 30, or 60g phosphorus per tree; Bowser (B) site was fertilized one growing season following planting, initially at 0, 15 or 30g phosphorus per tree, and subsequently in years two, three, four, and six.

Many of our study sites were classified as 'rich' or 'very rich' but experiments showed that sites were deficient in phosphorus for young alder. Phosphorus additions increased growth when foliar phosphorus and soil extractable phosphorus concentrations were less than about 0.2% and 15 parts per million, respectively. Site classifications for alder may benefit from soil or foliar analysis for phosphorus.

Fertilization of alder at planting has rarely been examined in operational studies, but the results were consistent with these data. Additional trials could define what sites are appropriate for treatment, what other elements might limit growth, and what sources for nutrients are most suitable. This information is important. Supplies of traditional fertilizer sources of phosphorus are limited and phosphorus fertilizer manufacture and overuse has significant environmental impacts.

Alder has a unique suite of ecological and product characteristics and should be better understood and utilized in coastal BC. Phosphorus deficiencies can limit the growth of young red alder and phosphorus additions at planting can increase growth for at least several years thereafter. Many questions remain. Answering those questions demands continued predictable support for silvicultural research. 🌱

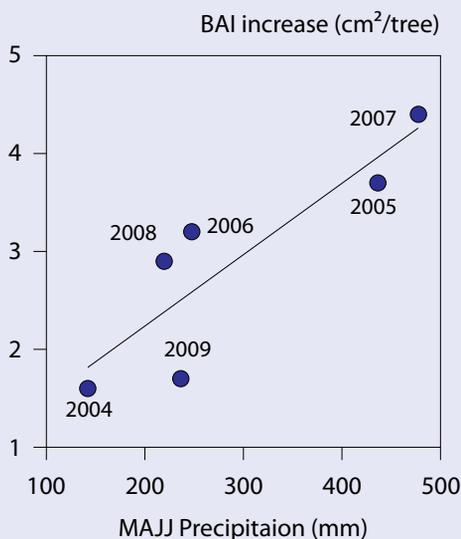


Figure 2. Increase in current basal area increment (BAI) from phosphorus fertilization with early growing-season precipitation (March, April, June, July) at the Bowser site. May precipitation was not correlated with BAI response.

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Additional resources are listed on our website

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The Private Land Life of a Forest Professional

PUBLICLY OWNED RESOURCES CANNOT BE responsibly managed on the public's behalf in the absence of broadly accepted baseline information.

If resource managers and the public they serve all agree on what the baseline is, then prospects for responsible resource management increase dramatically.

With that in mind, what is to be made of recently published and starkly different accounts of how insufficiently stocked British Columbia's publicly owned forests are? And what ought to be done about it?

Perhaps, a good place to start is by examining the article titled, "Not Satisfactorily Restocked (NSR) in BC" (**BC Forest Professional**, September/October 2011) in which the forests ministry fails to provide a province-wide not-stocked area (a.k.a. gross inventory NSR) in response to an earlier article titled "NSR and British Columbia's Reforestation Crisis" (May/June 2011).

First, any forest ministry response to the estimated province-wide, not-stocked area in the order of nine million hectares (May-June, 2011) requires that the ministry talk about the same forested land base, some 55 million hectares for which it is responsible. This is the same land base on which it has reported provincial not-stocked area for decades until it conveniently chose not to begin in 2001. This is also the same land base on which carbon dynamics are modelled and the same land base that has been certified by third parties as being sustainably managed for timber.

To focus ministry NSR estimates on a timber harvesting land base (THLB)—some 23 million hectares that has never been gazetted—instead of the 55 million hectares of forested land—changes the question. Most land within the THLB is productive forestland but all productive forestland, all sites included, is not within the THLB. We need to know the province-wide not stocked area for all Crown forestland in timber supply areas and

tree farm licences—not just for the THLB.

Some NSR areas outside the THLB, if reforested, would be important for wildlife habitat and critical to species survival, including riparian forests, which ensure salmon survival. Others, once reforested, would regulate water flows and temperatures at higher elevations, or would serve to re-connect forested ecosystems. All are vital for adaptation to climate change, for carbon accounting and for forest certification.

If any of these NSR areas fail to regenerate naturally to the detriment of salmon, wildlife, soil and water, then the replanting of them would present a genuine carbon financing opportunity to explore with Pacific Carbon Trust and a zero-net-deforestation opportunity to negotiate with the oil and gas industry.

Second, to play politics with the definition of NSR also obfuscates the issue. Gross and net NSR have very different definitions. Not stocked (a.k.a. gross inventory NSR) has a time-honoured definition in ministry annual and periodic reports based on stand density or stocking. It is a derived description of not-stocked Crown productive forestland, all sites included, at a given point in time. It includes NSR and non-commercial brush on all sites including low-productivity sites. Where it is on the forested land base and who is responsible for reforestation are immaterial.

Third, to argue that the forests ministry is unable to identify the area of gross inventory NSR area because it does not yet know how much MPB-killed forest will be harvested is disingenuous. BC's forest inventory has always allowed for the classification of dead potential standing timber volume.

The true reasons that the forests ministry cannot provide the actual province-wide not-stocked area are clear. The ministry has not done the surveys. And its inventory data are embarrassingly out of date. Therefore, if the forests ministry were to produce a province-wide not-stocked area, it would bear little resemblance to reality.

NSR is a recognized indicator of sustainability. So, until the forests ministry has a current inventory from which it is able to derive and aggregate the province-wide not-stocked area (a.k.a. gross inventory NSR) comparable to the not-stocked area published in ministry annual and periodic reports until 2001/02, it should be repeatedly challenged to do so.

In the absence of this not-stocked area, the public can expect more spin than substance from the forests ministry on the critical issue of just how extensive a NSR problem we have on our hands. This, in turn, means that we will be less able to rely on third-party certifiers to provide a credible assessment of whether or not forest management in BC is sustainable. It also means that the task before federal and provincial agencies seeking to understand forest carbon dynamics will lack a complete picture of the challenge before them.

Ultimately, the moral consequences of this self-deception may be lost opportunities on some not-stocked forestlands for genuine mitigation and adaptation projects to offset atmospheric carbon and deforestation, and, possibly, decertification of some interior forestlands.

That said, all that remains is for the government to restore thorough, consistent annual and periodic reporting of forest descriptive statistics on what still remains a publicly owned resource. To do this the government will need to restore funding and staffing to its inventory program. And only with a current, reliable inventory enriched by continuous monitoring of forest health responses to climate change will the forests ministry once again speak with authority on British Columbia's not-stocked forestlands. 🐼

Anthony Britneff, RPF(Ret), held senior professional positions in silviculture and forest health with the BC Forest Service. He also worked for 10 years in operational field inventory and for eight years on inventory reporting including the preparation of gross inventory NSR statistics for legislatively approved annual and periodic reports.

Bill 6—Certification and Accreditation under the *Foresters Act*

ON OCTOBER 4, 2011, the *Forests, Lands and Natural Resource Operations Statutes Amendment Act*, 2011 (Bill 6) was introduced into the BC Legislature and it became law after receiving Royal Assent on November 14, 2011. Bill 6 will—indeed already has—become known for the amendments it will make to the *Foresters Act* allowing changes to the boundaries of woodlot licenses, including the removal of private lands from a woodlot license. This mirrors similar amendments made to the *Foresters Act* in 2004 with respect to private lands included in TFLs.

While some may bemoan the diminished obligation of woodlot license holders to contribute private land to their woodlots, this horse left the barn in 2004. It just doesn't make any sense to permit TFL holders to remove giant amounts of private lands from their TFLs, while still requiring woodlot operators to retain their relatively tiny private land holdings within the confines of their woodlot licenses.

Below the din of controversy over woodlots and private lands, Bill 6 made substantial amendments to the *Foresters Act*, as well as a few related amendments to the *Foresters Act*. Indeed, the main feature of Bill 6 is probably the creation of a statutory framework for mandatory certification programs. Previously, the ABCFP council had the authority to create voluntary certification schemes for technical occupations related to the practice of professional forestry. As well, there was no statutory 'certificate of accreditation' or statutory designation or title given to a certificate holder. Now that Bill 6 has passed into law, council's authority with respect to certification is no longer limited to voluntary schemes.

As part of the new certification and accreditation programs that the *Foresters Act* will facilitate, the *Foresters Act* now includes two new professional designations: the Accredited Timber Cruiser or ATC, and the Accredited Timber Evaluator or ATE. However, Bill 6 said nothing about what work or circumstances will require employment of an ATC or ATE—any such requirements will come from other sources.

For example, Bill 6 amended section 106 of the *Foresters Act* with respect to cruise-based stumpage, and added a new section 106(3) that gave the Minister the authority to require a licensee to submit information for cruise-based stumpage "in a manner" required by the Minister. Just as the stumpage appraisal manuals made under the authority of section 105(1) of the *Foresters Act* are treated as subordinate legislation in the nature of regulations, the new section 106(3) may similarly give the Minister's requirements for the submission of cruise information—presumably those requirements in the Cruise Manual—the force of law. This will allow the Minister to include requirements in the Cruise Manual (or some other document) to use an ATC or ATE for the submission of information for cruise-based stumpage.

So, the Ministry will rely upon the ABCFP's certification programs for ATCs or ATEs to ensure that the Ministry receives reliable information for cruise-based stumpage. Now that Bill 6 has passed, council has the statutory authority to grant certificates of accreditation, and to establish, monitor and enforce mandatory standards of education and qualifications for certification. This includes the authority to establish policies and procedures for certification, and qualifications for certification based upon subjects of study, examinations and experience.

There are two other notable amendments to the contemplated in Bill 6, and both relate to powers that council must currently exercise through bylaw, but that Bill 6 has now authorized through simple resolution of council. Now that Bill 6 has passed, council has the authority to establish quality assurance programs and to set membership fees by council resolution. Previously, quality assurance and membership fees are matters that council must address through bylaws.

The significant difference between council resolution and bylaw is that bylaws require ratification through a vote of the membership and the passage of resolutions does not. Accordingly, membership scrutiny of quality assurance and membership fees will now have to take place through the council election process. This could make for more interesting council elections given that the government is apparently set to place further program responsibilities upon the ABCFP in terms of accreditation and certification. 🐾

Jeff Waatainen is a past adjunct professor of law at UBC, has practised law in the forest sector for over fifteen years, and currently works as a sole practitioner out of his own firm of Westhaven Forestry Law in Nanaimo.



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Over 870 Kids Show What The Forest Means to Them Through Art

MORE THAN 870 CHILDREN PICKED UP THEIR CRAYONS AND PAINTS and sketched their ideas of what the forest means to them and their communities. Nine children emerged as winners and runners up of the National Forest Week contest held by the ABCFP and the Truck Loggers Association (TLA).

Each category had a winner and two runners up. Each winner received a \$50 gift card to Chapters and all the kids received certificates of achievement. Thank you to everyone who took the time to submit a drawing. Picking the winner was very difficult—so many of the submissions were outstanding.

Art and Forestry

Age Category 4-5 years



Winner: Braeden McLachlan, age 5, Lac La Biche, Alberta
 Runner Up: Cleo Furney, age 5, Port McNeill
 Runner Up: Arianna Gill, age 5, Kelowna



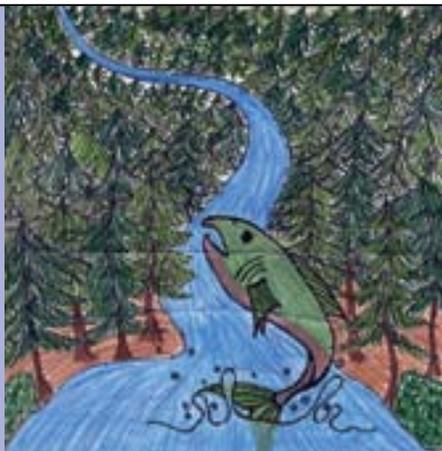
Age Category 6-8 years



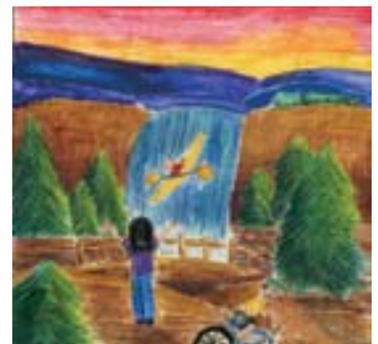
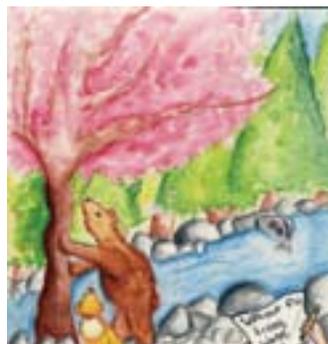
Winner: Grace Miao, age 8, Richmond
 Runner Up: Felix Barron, age 8, Nelson
 Runner Up: Austin Dubland, age 8, Armstrong



Age Category 9-12 years



Winner: Emily Richardson, age 12, Revelstoke
 Runner Up: Anna Xin, age 11, Coquitlam
 Runner Up: Jane Katili, age 12, Coquitlam



Battle of the NFPs



Photo: Ron Mellinga

Barb Drennan, RFT, takes Sunset Elementary's grade five students tree planting during their forest tour. Over 200 North Island intermediate-level students participated in a full-day forest tour this year.

National Forest Week Battle of the Network Forest Professionals

We are pleased to announce that the North Island NFP in Port McNeill won the 2011 Battle of the NFPs. They were able to wrest the title from last year's winner—the East Kootenay NFP in Cranbrook. Prior to last year, the North Island NFP won the battle for three years in a row. Through their tireless work, they triumphed again.

From North Island NFP – Winners of the 2011 Battle of the Network Forest Professionals

A big thank you to all those who helped out with this year's National Forest Week activities. It was another great showing of collaboration between Western Forest Products; Ministry of Forests, Lands and Natural Resource Operations; Strategic Forest Management; Regional District of Mount Waddington; and Mill & Timber.

This year, 13 North Island schools (public, First Nations and private) eagerly participated in our traditional National Forest Week (NFW) activities.

Over 60 Grade 10 students received Careers in Forestry presentations, which included the opportunity to discuss forestry with a couple of passionate forest professionals, watch the video "This Is My Office," and receive handouts/brochures. As part of their visit, the presenters were happy to discover that several of the students were contemplating a career in the forest sector. Receiving such a positive response, the presenters have offered to return next term, and visit the remaining Grade 10 students.

Over 500 primary-level students received Forests for People presentations, which included a visit from Smokey Bear and handouts, including a Smokey Bear pencil/bookmark and entry form into the ABCFP's NFW Art Contest. As usual, all of the students were thrilled to spend some time with Smokey and hugs and smiles were abundant.

Over 100 intermediate-level students participated in a full-day forestry tour and another 100 students participated in another tour on October 13th. The forest tour included a hike along the Beaver Lake Trail, an opportunity to plant trees, a mini-logger's sports competition and a

salmon BBQ lunch. With this year's tours, home-schooled children also participated and the response from these families was very positive.

In addition to the above, this year's NFW activities also included a couple of new events organized by Western Forest Products and Mill & Timber. Western Forest Products staff treated Woss students to their own forest tour, as well as the regular primary presentation and visit from Smokey Bear. This was especially nice for the Woss students, as in previous years, the older students had to travel an additional 45 minutes each way, to attend the regular forest tours. Mill & Timber treated Grade 7 students from the Gwa'sala-'Nakwaxda'xw school to a boat tour of their forestry operations in Seymour Inlet.

Member Photo Contest Winners

We received 43 entries in our inaugural National Forest Week photo contest. Many of them were beautifully composed images. We definitely have some artists in the membership.

We are pleased to announce that the winning photo was submitted by Gordon Haley, RFT, of Terrace. The two runners up are Kelly Kitsch, RFT, of Mission and John Deal, RPF, RPBio of Campbell River.

All three members will receive a prize pack of ABCFP logoware and Gordon Haley's photo is featured on the front cover of this issue of **BC Forest Professional**.

Inaugural Essay Contest Winners

We are pleased to announce that Bronwyn Balaz-Munn, age 16, of Coquitlam won the top prize in in the ABCFP's first essay contest held during National Forest Week. Her essay, titled "Trees of My Childhood" explained the nourishing role forests played in her suburban childhood. Valerie Flokstra, age 15, of Chilliwack, and Kelton Rohrick, age 13, of Invermere were the two runners up.

You can see all the winning photos and essays on our website by clicking on About Us, News & Events, National Forest Week. 🐾

The 2011 Registration Exam: Building a Forest Professional Workforce

CONGRATULATIONS TO EVERYONE WHO WROTE AND PASSED THE 2011 registration exams.

The sit-down exams were held on Friday October 7, 2011, in 27 locations throughout BC. A total of 81 people wrote the sit-down registration exams – 27 RFT candidates and 54 RPF candidates. A further 44 RPF candidates wrote the RPF take-home exam in January and February of 2011.

Each year, coordinating of the entire multiple exam locations is a big task. Three very dedicated ABCFP staff makes it happen by coordinating all the aspects required to set up exams in many different locations across the province. At each location we are very fortunate to have excellent volunteer invigilators, who do a wonderful job of ensuring the exam is written according to the ABCFP exam rules.

After the exams are written, the invigilators then collect the exams and ensure that they are promptly delivered to the ABCFP office for marking. The exams are then marked by a dedicated group of volunteers from the board of examiners (BOE). The BOE understands that exam writing is stressful for most people. With that in mind, they make a special effort to ensure that every exam is fairly assessed.

This year we have two excellent valedictorians who achieved the highest marks on their respective examinations. The highest mark on the 2011 RFT registration exam was earned by Robin Ester Strong, TFT, of Lillooet who scored 90%. The top mark on the RPF registration exam was 90% and was scored by Marley Dana Chewter, RPF, of Fort St. James. Congratulations to this year's valedictorians.

The names of the 2011 successful examinees are available on page 25. Congratulations to these successful exam writers. These new RPFs and RFTs will be welcomed into the profession at the Inductees' Recognition Luncheon at Everything to Everyone: The Art of Forestry, the ABCFP's annual conference and 64th AGM. This year, the conference is being held in Victoria from February 22-24, 2012.

Registration Exam Statistics

2011 RFT Exam

A total of 27 candidates wrote the RFT registration exams in October and 23 of those candidates passed the exam for an average pass rate of 85%. The pass rate for the 19 candidates, who wrote the RFT exam in the new format was 100%. The pass rate for the 8 people who wrote only the part B exam was 50%. No candidate wrote Part A only or Parts A and B. This year no one applied for or wrote the RFT special exam that is available in November for those candidates who cannot make the October exam date due to circumstances beyond their control.

RFT Registration Exam Results				
RFT	# of Writers	Average	2011 Pass	2010 Pass
Part A Only	0	n/a	n/a	60%
Part B Only	8	54%	50%	53%
Both A and B	0	n/a	n/a	59%
New Format	19	75%	100%	n/a
Overall	27		85%	57%

2011 RPF Exam

This year the take home exam has become a mandatory requirement for all Foresters-in-Training. Applicants must achieve a mark of at least 60% on each of these exams in order to pass. The overall pass rate for both the RPF exams (take-home and sit-down) in 2011 was 76%. Of the 98 sit-down and take-home exams that were marked, 74 passed and 24 failed. The pass rate for the 44 candidates who wrote the take-home exam in January-February 2011 was 66% (29 candidates passed and 15 failed). The pass rate for the 54 candidates who wrote the sit-down exam in October 2011 was 83% (45 candidates passed and 9 failed). This year no one applied for or wrote the RPF special exam that is available in November for those candidates who cannot make the October exam date due to circumstances beyond their control.

On behalf of the ABCFP and the profession, I would like to express our gratitude, and a huge thank you for a job well done to all of the volunteers who have worked so hard to ensure that the exam process is conducted in a fair and efficient manner.

RPF Registration Exam Results				
RPF	# of Writers	Average	2011 Pass	2010 Pass
SIT-DOWN EXAM	54	65.4%	83%	83%
TAKE-HOME EXAM	44	64.6%	66%	75%
OVERALL	98		76%	78%

2011 RFT Exam Successful Examinees

Paul Erik Rasmus Andersen, TFT*
Ryan Christopher Marcel Arsenault, TFT*
Stefan Oliver Borge, TFT*
Jared Christian Bremner, RFT
Alexander Dean Burkinshaw, RFT
Wesley Don Cutting, RFT
Johnson Kelly Ginger, RFT
Kinya Hibi, RFT
Jonas Calvin Joe, RFT
Ryan Parker Jones, RFT
Jeremy Stephen Lafontaine, RFT
Shawn Miller, RFT
Tyler Bevan Owen, RFT
Michael Pigott, RFT
Alexandre Saumure, RFT
Tyler Donald Clayton Schon, RFT
Krzysztof Stec, RFT
Karl Robert Steinicke, RFT
Robin Strong, TFT*
Dean Toll, RFT
Lukasz Wichrowski, RFT
Jordan Kyler Winch, RFT
Ira Wyton, RFT

2011 RPF Exam Successful Examinees

Reece John Allingham, RPF
Brettan Tyler Barnard, RPF
Marley Dana Chewter, RPF
Francesco Cortini, RPF
Aaron James Eddy, RPF
Nicola D. Farrer, RPF
Wesley Warren Fietz, FIT*
Krysta Giles-Hansen, RPF
Erin Irene Havard, RPF
Laurie James Hirtle, RPF
Chad Lawrence David Iverson, RPF
Andrew Peter Kenyon, RPF
Lisa Katherine Lenarduzzi, FIT*
Melinda Jade Morben, RPF
Tove Marie Pashkowski, RPF
Andrew Peacosh, RPF
Michael Andre Rossiter, FIT*
Karen Schening, RPF
Warren Bill Sidwell, RPF
Katherine Leigh Stalker, RPF

Note: This list represents candidates who have completed all registration exam requirements and will be inducted at the next annual forestry conference.

*Has work experience remaining to complete. Section 7.0. of the Registration Policy, allows a candidate to write within 6 months of completing articling/work experience requirement as at the date of the exam. Must meet this requirement before he/she may apply for RPF/RFT status.

False Alarm: Global Warming – Facts Versus Fears

By Paul MacRae

Publisher: Spring Bay Press (May 2010)

382 page

ISBN-10: 0986486205 / 13:978-0986486203

PAUL MACRAE'S BOOK ABOUT ANTHROPOGENIC (HUMAN-CAUSED) global warming (AGW), *False Alarm*, raises some serious and valid questions about the AGW hypothesis at a time when it is increasingly being questioned. The author spent two and a half years researching historical, geological, scientific, psychological and other disciplines associated with the AGW hypothesis. The AGW alarmists basically state that human's increased use of fossil fuels, and the subsequent release of CO₂ into the atmosphere, is the main driver of increased global temperatures for most of the slight warming trend seen since the Little Ice Age, and that if these carbon emissions are left unchecked catastrophic consequences will result.

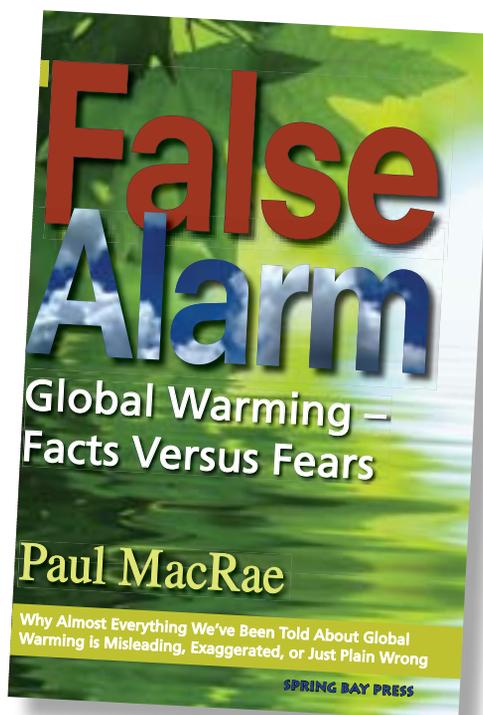
MacRae is not a proponent of the AGW hypothesis, and using his journalism background and well-honed research skills, he has logically developed and presented information supporting his belief that humans are not the main cause of global warming. MacRae believes that political, psychological and economic factors are driving climate alarmist's fears more than pure science.

MacRae shows evidence that the earth's temperature and CO₂ concentrations are continually changing and we are now in an interglacial period. Although CO₂ levels have been rising since the turn of the century, the earth has gone through periods of global temperature increases and decreases. He further says that, since the mid-90s, average global temperatures have not risen and have, in fact, fallen slightly

MacRae also addresses the Intergovernmental Panel on Climate Change (IPCC), the main proponent of AGW hypothesis, who, according to MacRae, is driven by political ideology, rather than scientific principles, which

taint's the science associated with global warming research. For example, MacRae says, the IPCC's mission is to find human-caused global warming and not to dwell on natural

causes and what the relative impact of each might be. As well, the IPCC implies that there is consensus among scientists about AGW. MacRae shows that there is no consensus, and that, in fact, scientific data about global warming is often suppressed, falsified (climategate), and dissenting views are discouraged by the IPCC and climate alarmists. He uses the example of how individuals with dissenting views, such as Bjorn Lomborg and Rex Murphy, were dealt with.



MacRae also reviews the AGW bible, *An Inconvenient Truth* by Al Gore, and identifies several 'convenient' errors that he feels play to a political agenda, such as the idea that CO₂ has driven temperatures upward; that there is 100 percent scientific consensus on human-causing global warming; that polar bears are becoming endangered; and that 40,000 species are going extinct every year.

As well, he looks at the psychological and philosophical aspects of AGW hypothesis and suggests that it is based less on science and more on ideology, belief and moral conviction, which he compares to religious beliefs. In MacRae's opinion, religion and science should be kept separate, and in the case of AGW hypothesis this has not happened. From a scientific point of view, says MacRae, this has resulted in eight basic scientific principles not being adhered to. He also discusses how 'groupthink' has affected how scientists exercise their critical powers and willingness to openly express their doubts. *False Alarm* also touches on the economics of the AGW hypothesis including the inequitable (five billion dollars annually in the USA alone) funding research into human causes of global warming, the economic and environmental impacts of reducing CO₂ emissions, personal gains and the benefits of increased CO₂.

MacRae does not tell the reader what to believe, but offers reasonable explanations and arguments as to why the AGW hypothesis should not be accepted as gospel. As I was reading this book I thought, "Why aren't the media and politicians investigating the climate alarmist's claims when there is so much evidence to the contrary?" The book eventually answers the question—they are up against a multi-billion dollar Goliath and it is easier to ride the Goliath bandwagon and feed off the gravy train than question it.

False Alarm does tend to be a bit long on some issues, there is no index and there aren't many visual aids to guide the reader along. However, it does provide a large source of verifiable references which allows the reader to confirm MacRae's assertions and make up their own mind.

I would recommend this book and think it will appeal to a wide cross-section of people, be they average citizens, professionals, media or, especially, politicians and government officials who may be making bad environmental policies based on the current widely-held perceptions about AGW alarmists claims. 🐼

RANKING: 3.5 OUT OF 5 CONES



Discipline Case Study

Discipline Case: 2011-05

Subject Members: Registered Professional Foresters

Referred to: Complaints Resolution Committee

Date of Decision: July 2011

Allegations

This case resulted from a complaint from one ABCFP member about the conduct of another ABCFP member. The allegations are that the member subject to the complaint engaged in conduct unbecoming a member and may have contravened the following bylaws:

- 1) Bylaw 11.3.3 - To have regard for existing legislation, regulation, policy and common law; and to seek to balance the health and sustainability of forests, forest lands, forest resources, and forest ecosystems with the needs of those who derive benefits from, rely on, have ownership of, have rights to, and interact with them.
- 2) Bylaw 11.3.7 - To practice only in those fields where training and ability make the member professionally competent.
- 3) Bylaw 11.3.9 - To express a professional opinion only when it is founded on adequate knowledge and experience.
- 4) Bylaw 11.4.1 - To inspire confidence in the profession by maintaining high standards in conduct and daily work.
- 5) Bylaw 11.4.4 - Not to misrepresent facts.
- 6) Bylaw 11.4.7 - To state clearly on whose behalf professional statements or opinions are made.
- 7) Bylaw 11.5.3 - To obtain a clear understanding of the client's or employer's objectives.
- 8) Bylaw 11.6.1 - To abstain from undignified public communication with another member.
- 9) Bylaw 11.6.2 - Not to unfairly criticize the work of other members or attempt to injure the professional reputation or business of another member.

The complainant develops unique field sampling designs and products for his clients. He considers these designs and products to be his intellectual property. He has a history of maintaining written agreements protecting his intellectual property over the years. He has been assured that his unique designs and products are indeed his intellectual property.

He submits that the subject member acted unprofessionally by failing to contact him for two weeks about concerns with an intellectual property agreement and that the subject member lied about the fate of the agreement. He alleges that the subject member failed to recognize his legal rights to intellectual property.

Decision

The registrar reviewed the complaint with the Complaints Resolution Committee (CRC), who recommended to the registrar that the complaint not proceed to an investigation on the basis that the evidence presented did not support the allegations that there was professional misconduct on the part of the subject

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member, or that any of our bylaws were breached. Additionally, the evidence did not support the allegations that the subject member lied or that there was any intellectual property stolen or any contravention of the legal requirements regarding the protection of intellectual property. The registrar concurred with this recommendation

There is no doubt that members must respect the intellectual property rights of other members. In this case there is a professional disagreement between the members about how this should have taken place. Our expectation is that members will engage in processes to resolve professional disagreements such as this. We encouraged the members involved to engage the services of a neutral person to help reach a resolution to this disagreement. This complaint is now closed.

In Memorium

It is very important to many members to receive word of the passing of a colleague. Members have the opportunity to publish their memories by sending photos and obituaries to **BC Forest Professional**. The association sends condolences to the family and friends of the following members:

Victor Heath

RPF(RET) #433
1918 - 2011

Born in Lloydminster, Alberta, Victor passed away at Lions Gate Hospital in North Vancouver on September 20, 2011. Predeceased by his wife Barbara, he is survived by son, Charles (Fran), daughter, Bevin (Rich), grandsons; Aaron (Darcey), Tim (Brenda), Mike and Dan and great grandsons; Ronin, Kairo and Zac.

Victor set an example for family, friends and colleagues with his integrity, curiosity and passion. Respected as a teacher, forester, and international consultant, he enriched the lives of those he met. His family will remember him as the teasing Poppa with a twinkle in his eye and the gentleman with a rose. Canada's first National Tree Day occurred the day after he died, a fitting reminder of the importance of trees and the significance of the natural world in our lives. Victor taught us all to see the forest for the trees.

Donations in Victor's memory may be made to First United Church in Vancouver

First published in The Prince George Citizen on September 30, 2011.



James Ralph Johnston

RPF(RET) #30, LIFE MEMBER
1917 - 2011

James Ralph Johnston died at the age of 94 of age-related causes on August 18, 2011. Ralph is survived by his wife Caroline and former wife Joan, sister Joy, daughters Lynne and Trish, step-children Douglas, Judy, Jay, Nancy, Susan, David and Stephen, grandchildren Allison, Jordon, Courtenay, Simon and Kurt, and great grandchildren Grace, Joy, Addison, Zion and Eden, as well as many other extended family members and friends. He was pre-deceased by his sister Doreen, second wife Rhoda and daughter Sheila.

Ralph was born on January 30, 1917, and started life on a ranch in the Invermere Valley, where he was home-schooled by his mother until he was nine. In 1926, the family moved to Invermere, where he attended regular classes, and graduated from high school in 1935. He then made his way to UBC, where he studied forest engineering. He received his degree in 1941, and was immediately employed by the BC Forest Service.



Ralph enlisted in 1942 and spent the war years as a navigation instructor. He returned to the Forest Service and began his rise through the ranks, eventually serving as district forester in Prince Rupert, Nelson, and Kamloops. He retired from his last posting in 1979.

A consummate outdoorsman and avid hunter, Ralph delighted in sharing his love of nature and his vast knowledge of the natural world with his family. In his retirement years, besides hunting, he enjoyed travelling, camping, square dancing, gardening and prospecting.

Ralph's Christian beliefs were evident in his every-day living. He will be greatly missed by his family and friends.

Submitted by Anthony Robinson, RPF(Ret)

William Richard (Bill) Batten

RPF(RET) #405, LIFE MEMBER
1922 - 2011

Bill passed away at Durand Manor, Golden on Thursday, October 20, 2011 at the age of 89 years. Bill was born in Vancouver on July 5, 1922 and had been a resident of Golden since the early 1960s.



Bill served his country overseas during World War II and was awarded the Military Cross by King George for distinguished and gallant service. He worked as a professional forester for the majority of his life. He was the manager/vice president of Kicking Horse Forest Products Golden, woodlands manager for Evans Forest Products and worked in Latin America, Africa and across Canada as an forestry consultant. Bill in partnership with his wife Fanita and son Tom operated woodlot 456 from 1989 to 2003, when Tom assumed responsibility for the woodlot.

Bill loved spending time outdoors and enjoyed walking in the forest usually with his dog at his side. He also enjoyed gardening, many sports; including tennis, swimming, cross country skiing and trail riding in the Blaeberry and was an avid reader. He was a long-time member of the Royal Canadian Legion, Branch #122, Golden.

Bill was predeceased by his only sister Dora Marshall in 1974. He is survived by his loving wife of 34 years, Fanita of Golden; four children: Leslie (Homme) Van der Meer of Armstrong, Tom Batten of Golden, Barbara (Carl) Sandberg of Victoria and Margarita (Corey) Drage of Airdrie; six grandchildren: Dirk (Jodi) Van der Meer of Armstrong, Blair (Nikki) Van der Meer of Abbotsford, Will (Katie) Batten of Golden, Robbie (Raelene) Batten of Golden and Lucas and Andrew Drage of Airdrie; five great grandchildren: Aleen and Chloe of Armstrong, Julian and Avry of Abbotsford and Sylas of Golden; one niece Sandra (Dave) Taylor, two nephews: Donald Marshall and Laurie Marshall as well as several cousins and a host of good friends.

The family would like to thank the Durand Manor staff, nurses and care aide for their excellent care, kindness and compassion during Bill's residency and especially in his final days. Also to the Golden Hospital staff, and the community physicians for their dedicated care over the years and finally to Bill's extended family and many friends who took the time to visit him.

Submitted by Denise English, RPF

M. Bruce Clark

RPF(RET) #171, LIFE MEMBER
1923 - 2011



Murray Bruce Clark died August 22, 2011. Bruce was born in Nova Scotia in 1923 and attended UBC after serving in the Canadian Navy in World War II. He graduated with a BSF in 1950 and immediately joined the BC Forest Service as a junior forest researcher. Bruce transferred to Kamloops in 1954 where he served as the district and then region research forester for 31 years, retiring in 1985. Over the course of his career Bruce worked on many projects including cutting methods in Engelmann spruce sub-alpine fir stands, investigating the potential of direct seeding, improving planting methods, pre-commercial thinning of fire origin lodgepole pine, tree pest impacts, growth and yield, and grass seeding of clearcuts. He published a number of papers describing the results of his work but his principle role was as an intermediary between the field staff, forest researchers in Victoria and UBC and the wider research community. At this he was most successful. He worked hard to establish a rapport with field staff, delivering practical solutions and advice based on his detailed knowledge of silviculture and forestry, and was well-respected by industry and government foresters of the time. He also mentored many young summer students who learned how to work in the forest under his direction.

I first met Bruce in the early 1970s when I was recruited to work in the newly formed Cariboo District, which included parts of the Kamloops and Prince George Districts. Although I was taking over part of his "beat" Bruce was most welcoming and always a source of sage advice. When Bruce retired, I took over his role in Kamloops and inherited his meticulous notes, files and photographs.

Bruce was a keen curler and lawn bowler and won many trophies and medals over the years. In retirement he served his community, especially the Kamloops Lawn Bowling Club, and was awarded a life membership in that organization. Bruce was predeceased by his wife Lois and is survived by four children and five grandchildren.

Submitted by Alan Vyse, RPF

W. Bert (Bern) Gayle

RPF(RET) #155
1924 - 2011



Bert Gayle passed away on July 23, 2011 at the age of 87 with his family by his side. Bert was born on June 21, 1924 in Salmon Arm, BC and grew up in Powell River, BC. On his 18th birthday he joined the RCAF. After earning his pilot wings and a commission in 1943 he became a flying instructor. A year later, just after D-Day, he was transferred overseas. Based in England he flew Wellington and Lancaster bombers until the end of the war. Upon returning to BC, Bert attended UBC where he earned his forestry degree and later became a Registered Professional Forester.

Bert worked in the forest industry for 43 years. He began with the BC Forest Service and then moved to the Powell River Company (later Macmillan Bloedel Ltd.). Bert's final 25 working years were spent with Canadian Forest Products Ltd. where he retired in 1989 as vice president and director. Throughout his career he was active in forest related organizations, serving as president of the Northern Interior Lumberman's Association, vice president of the Junior Forest Wardens of BC, director of the Council of Forest Industries of BC, and a founding director of the BC Forest Alliance. In 1990 he was the recipient of the 'Tree of Life Award' presented by the Canadian Institute of Forestry.

Away from the office and into retirement, Bert enjoyed swimming and tennis, and was an avid boater, gardener, cross-country skier, wine-maker and a world traveler. He was active with the Gyro Club of Vancouver, Branch #610 Royal Canadian Legion in West Vancouver, and was proud of his service with the Air Cadets of West Vancouver.

Bert will be greatly missed by Betty, his wife of 63 years, his family — son Warren and daughter Nancy — and his many friends and colleagues.

Submitted by Doug Rickson, RPF

ABC FP Membership Statistics

Association of BC Forest Professionals – November 2011

NEW ASSOCIATE MEMBER

Michael John Drinkwater, FIT, ATC

NEW RFTS AND NEW RPFs

For a list of new RFTs and RPFs, please see Registration Exam Special Feature on page 25.

REINSTATEMENTS

Doug Konkin, RPF

THE FOLLOWING PEOPLE ARE NOT ENTITLED TO PRACTICE PROFESSIONAL FORESTRY IN BC:

REMOVALS

James William Hunter

RESIGNATIONS

John J. Perras

Robert Allison Weeks

A Moment in Forestry

Submit your moment in forestry to Brenda Martin at: editor@abcfp.ca



A day in the field with my “assistant.” Submitted by Daniella Oake, RPF



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Rick Monchak, RPF, TimberWest

FOREST PRACTICES BOARD ON NSR

Al Gorely, RPF, Forest Practices Board

SHOULD YOU BE EVERYTHING TO EVERYONE?

DEFINING PROFESSIONAL SCOPE OF PRACTICE

Jacques Corstanje, RPF, BC Timber Sales

THE ART OF ADVOCACY

Trevor Swan, RPF, BC Oil & Gas Commission
Ken Zielke, RPF, Symmetree Consulting Group Ltd.

GLOBAL PERSPECTIVES: CERTIFICATION AND THE ART OF PROCUREMENT

Rod Bealing, Private Forest Landowners Association
Darrell Errico, RPF, Nemus Consulting

KEYNOTE SPEAKER: THE LEAP

Chris Turner, author of *The Leap: How to Survive and Thrive in a Sustainable Economy*

BIG INDUSTRY'S NEW FORESTRY

Kerry McGourlick, RPF, Western Forest Products
Ric Slaco, RPF, International Forest Products Ltd.
Bill Waugh, RPF, Island Timberlands

WHEN EVERYTHING TO EVERYONE IS

NOT ENOUGH: NON-STATUTORY EXPECTATIONS

Bob Craven, RPF, International Forest Products Ltd.

THE ART OF MANAGING PEOPLE

Sarah Hood, BComm, MALT, CHRP, Capital Regional District

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