



Published by the Forest History Association of British Columbia

No. 77 Victoria, British Columbia August 2005

**FOREST HISTORY MEETS ECOLOGY:
UNDERSTANDING THE PRESENT FROM THE PAST**

by Audrey Pearson, Ph.D.

**Centre for Applied Conservation Research
Department of Forest Sciences, UBC**

I'm an ecologist. Yet, I always pay careful attention when someone gets talking about forestry in the "old days." And in era of fancy satellites, my main research tools are 1937 air photos and paper forest cover maps. Why? (No, I'm not a Luddite.) Firstly, I simply love hearing stories. More fundamentally, all these sources contain invaluable clues to the forest's past, and so in turn to its present and future.

We now understand the importance of forest structure for biodiversity. However, many of our most productive forests, which are the most structurally diverse, were the first to be extensively logged, especially the riparian forests. But they are written off for biodiversity because they are not "pristine" old growth. However, in many cases, "culls" were left standing, so these forests may have more structural diversity and so more biodiversity value than we think, especially on rich sites with good growth.



Recycled paper

The key is understanding old logging practices and their influences on forest structure. Many of these areas are close to rotation age and will simply be clear-cut again because they are considered to be of low biodiversity value. We can at least document their structural value rather than making assumptions. Residual structure and logging history can be documented from the air photo record. Vets easily stick out in a sea of regeneration.

We don't have a good understanding of regeneration performance for coastal species in variable retention systems, especially over the long term. However, where early logging was "variable retention," where structure was left, we potentially do, especially where the regeneration is now close to rotation age. Forest history information has many potential values to ecology. It's just a matter of putting together all the clues.

We now understand the importance of using natural disturbances as baselines for ecosystem-based management. However, determining natural disturbance patterns at the landscape scale is extremely difficult in modern landscapes that have already been heavily-logged. On early air photos those patterns are essentially intact simply because logging was not yet extensive, especially prior to World War II (only one percent of Haida Gwaii was logged by 1937). Furthermore, it is now possible to turn air photos into spatially-referenced GIS coverages at reasonable costs – so early air photos can readily be used as environmental baselines.

Finally, timber inventory databases are often used to calculate return intervals or rotation periods. It's a simple concept – the rate of disturbance over time is calculated from the area of all forest \leq 140 years old (age class 7). However, young/mature natural forest recorded in the database can actually be early logging, especially along the coast or in riparian zones. Without considering the forest history, calculations can be inaccurate.

The past is crucial for understanding the riparian zone. Before World War II, logging was largely restricted to coastlines and so riparian systems, including stream channels, are intact on the early photos. These are in turn valuable baselines for restoration. Further, the method of logging – gating, dragging logs through the stream, and cherry picking - affects stream recovery, including salmon habitat. Again, knowing the forest history is the key to understanding the current ecological patterns.

The current versus historical extent of old-growth forests, especially high site forests, is another important question where historical information is vital to providing answers. All old-growth forests are not created equal. Were big trees historically rare or were they common, but we logged them all? What was the original extent of western redcedar forests of cultural value and how much is left? Since the original old-growth forest composition is deleted in the GIS timber inventory data base upon logging, the only way to determine original forest composition is from forest cover maps that pre-date logging, plus the original cruise records. We need the data to answer these questions if we want those answers to be ecological, not political.

There are 1930s air photos for most of coastal BC, so we can answer many of the questions I've raised. However, early air photos are not only important here. Globally, the greatest changes in land use have occurred since World War II. Air photos were vital in the war effort, and the military flew photos for many parts of the world, so there are landscape records from that time. We have the potential to document original forest and stream conditions in many areas, including prior to global warming. This opportunity may become more valuable than we now realize.

Old records are most at risk in this digital age. It's easy for a stack of dusty old maps or cruise cards to get tossed. The most valuable air photos pre-date World War II and they are physically deteriorating simply because of their age. In many cases, the negatives have already disintegrated. Further, the people who were there and remember are getting on. We need to document the knowledge these sources contain now before it is lost. Not only are they part of our cultural and natural heritage, but valuable ecological tools as well.

If anyone has old forest cover maps, air photos or other historical information for coastal B.C., please contact me by e-mail at audrey.pearson@ubc.ca



RECENT PUBLICATIONS

Vaillant, John. 2005. *The Golden Spruce - a true story of myth, madness and greed.* Knopf Canada, Toronto, Ontario. ISBN: 0-676-97645-X. \$35.00 272 p.

The Golden Spruce tells an astonishing true story of a furious man's obsessive mission against an industrial juggernaut, the struggle of the Haida people to save their world, and the mysterious golden tree that binds them all together. On a winter night in 1997, a logger-turned-activist named Grant Hadwin plunged into the frigid waters of the Yakoun River in the Queen Charlotte Islands, towing a chainsaw behind him. When he was done, a unique spruce tree – 50 meters tall and covered with luminous golden needles – was teetering on its massive stump.

The tree was sacred to the Haida on whose land it had stood for over 300 years. It was also beloved by local loggers who singled it out for protection. Since the 1970s, the mist-shrouded archipelago has been a battleground with government officials and logging companies squaring off against the Haida and environmental groups. The loss of the mythic golden spruce united loggers, natives and environmentalists in sorrow and outrage. But while heroic efforts were made to revive the tree, Grant Hadwin, the tree's confessed killer, disappeared under suspicious circumstances.

Excerpted from the Random House/Knopf online catalogue

<http://www.randomhouse.ca/catalog/display.pperl?isbn=9780676976458>

STARTING OUT IN THE FOREST SURVEYS AND INVENTORY DIVISION **by Gerhard Eichel**

I first arrived in Canada over fifty years ago and started my career in the BCFS Surveys and Inventory Division under Mickey Pogue. It wasn't easy in the beginning. Not only was my English far from adequate because I was totally unfamiliar with colloquialisms which no dictionary contains, even though I had enough of a vocabulary to make myself understood. Mickey Pogue introduced the task for which he had hired us as "a picnic every day but remember I didn't say every day a picnic." I also learned that getting laid off is not the same as getting laid. When I asked why the federal government portion of the joint project was so invisible, I got a lesson in peculiar Canadian geography: Ottawa was 3,000 miles from Victoria but Victoria was 30,000 miles from Ottawa.

In addition, I had to get acquainted quickly with using and making measurements in units I had never heard about in metrified Europe. We measured distance in one hundred link chains corrected by degrees Abney, areas were in square feet, acres, and sections, heights and elevations in feet, and places were miles distant. Timber volumes in foot board measure remained a total mystery for years until we expressed it at least in cubic feet. At least I understood DBH and was able to measure it in inches. We were issued CPR and CNR time tables, not to encourage us to leave but to use the elevation given for each station to calibrate the aneroid altimeters daily. More or less reluctantly we converted to the use of Imperial units of measurement – only to revert a few years later when Canada became metric.

To complete my difficulties, I was accepted as a graduate forester who should be more conversant with the task at hand than all the summer help hired from as far away as the prairies and Quebec – and not all of them forestry students. The local UBC students, and graduates who could, got jobs with industry not only for the better pay but also because they got assigned to one location and the chance to visit at home occasionally. BCFS inventory jobs were continuous and could be scattered all over the province. That's why a large proportion of the field crews consisted of immigrants like me. Most had an even harder time communicating in English except for those who had come from Scotland and other parts of the British world and were just as clueless as the rest of us.

In contrast to the "native" Canadians who resented the prospect of spending the summer far from home in the boondocks, most immigrants (including myself) regarded that very prospect as a serendipity. Not only did we get to see the various forest types and sites but also got to know roads and places we would otherwise never see – and get paid for it including full board and all transportation. Many didn't cash their paycheques until they returned at the end of the field season. After my four field seasons (1952 – 1955) there weren't many places left in B.C. that I hadn't at least travelled through. I considered this to be an unexcelled experience, better than what many guys had who got a local job and stayed there.



CELEBRATING MY EIGHTEENTH BIRTHDAY **by Ralph Schmidt**

In March of 1943 I left Cudworth, Saskatchewan to become a logger, earning 81 cents an hour at Cowichan Lake. I worked for Industrial Timber Mills at Camp 6, since renamed Caycuse. The “cold deck” crew where I was working at the time somehow discovered that my birthday was on May 22nd. I am sure that my “good” Cudworth friend Wally Waldbillig told them. In any case, the crew decided to help me celebrate my eighteenth birthday.

We stopped for lunch that day alongside Wardroper Creek. We had finished eating, and the smokers were just about ready to light up their cigarettes when, out of the corner of my eye, I spotted Ronnie sneaking up on me from behind the donkey. I got ready to jump from the log I was sitting on.

Suddenly, Ronnie jumped toward me and grabbed the bottom of my jacket. In a flash, I discarded it and fled. However, the rest of the crew also ran toward me. They were all experienced loggers, in good shape, and caught me almost immediately. They were all grinning and chuckling. I yelled, “Hey, guys, what’s going on?”

Swan Jacobsen, my boss, calmly spoke up: “Ralph, we’re going to help you celebrate your birthday.” First, they removed my jacket and then my shirt. I struggled, but was held by three strong loggers. Then down came my pants and underwear. Cecil Gilchrist, the donkey-puncher, produced a pail of 88 grease, a thick, orange, gooey substance used to lubricate the winches. He liberally applied a generous coating of this grease to my genitals as the entire crew sang “Happy Birthday to You” – and not in tune, either. The occasion was my introduction to a logger’s sense of humour.

I cleaned myself as best I could in the icy creek (it took me a half hour in a hot shower after work to get rid of it all). Then I approached the boss and made my birthday speech. “You guys had a good time wishing me a happy birthday. So, with your permission, I’ll take the afternoon off and enjoy my birthday, too.” Swan had always been friendly to me and treated me well. He flashed a broad smile at me and said “Go ahead, Ralph. You’ve earned it.”

So I took the afternoon off and wandered up Wardroper Creek into the standing timber adjacent to the clearcut. This really was the first “free time” that I was able to enjoy in the forest. I could relax and enjoy nature instead of rushing around pulling cables, setting chokers, hauling tools and equipment, and then running in a panic to find a safe place when the logs started to move.

I was standing in a towering stand of huge Douglas-fir trees. The trees were the tallest that I had seen. They looked to be well over two hundred feet high, and almost perfectly straight with no limbs for over one hundred feet. Some of the diameters were over four feet.

A dense growth of swordfern dominated the ground cover. I didn't know many species of herbs and shrubs, but I did recognize many leaves. It was very quiet. Hardly any sound except for the muffled roar of distant logging equipment and the sound of the whistle punk signals. The only movement was due to a few whisky jacks swooping between these giant stems.

I stayed in the forest for a couple of hours, enjoying every minute of peace and quiet. A half an hour before quitting time, I slowly retraced my steps and rejoined the crew on their way to the crummy.

Why do I remember these details of my eighteenth birthday much more clearly than the sixty-two birthdays I've since gone through? I think I'll let you answer that.



GOINGS ON AT LAKE COWICHAN by John Parminter, with thanks to Barry Volkers

In 1951 the B.C. Forest Service constructed new buildings for its Lake Cowichan Ranger District headquarters on the main street of Lake Cowichan. The ranger district existed from 1945 until 1979, when a reorganization saw the ranger districts amalgamated into fewer, larger forest districts. The buildings, constructed in the familiar "Cape Cod" style, then became B.C. Ambulance Service station A19.

A few years ago the site was sold by the B.C. Buildings Corporation to private owners but an arrangement was worked out whereby the former Forest Service ranger station building would be donated to the Town of Lake Cowichan. The Cowichan Lake Community Economic Adjustment Committee and the Cowichan Valley Rails to Trails initiative worked to relocate the building to Saywell Park, opposite the existing museum. However, this proposal was rejected due to various concerns, such as the flooding hazard.

Finally, on August 24, 2004, the building was moved across the bridge to the corner of Coronation and Wellington. Although it weighs 50 tonnes and is about 30 m tall, no serious problems were encountered during the move. In its new location the former ranger station will serve as an information centre for the Trans-Canada Trail and will be available for other community uses.

On May 21, 2005 the TimberWest Room in the Bell Tower School, at the museum complex of the Kaatza Historical Society at Lake Cowichan, was officially opened. The room was constructed by volunteers and the costs underwritten by TimberWest and other grants. The room now houses many collections, large and small, related to the mills at Youbou and various logging camps. Fletcher Challenge donated material from Caycuse and TimberWest donated files from Gordon River. Interested researchers are invited to use the new facility and the archival material contained therein.

TIMBER CRUISING **by Jack Ker**

The word “cruising,” as in the forester’s use of the term “timber cruising,” is unrelated to the activities of the modern cruise ships that ply our coasts.

My first introduction to the term was when I was a forest ranger assistant for Ranger Jim (J.A.) Mahood in the Chilliwack Ranger District in the 1930s. To “cruise” small patches of Crown timber that had been applied for as a timber sale the ranger might have inspected the area by himself, or with the assistance of one of his assistant rangers - Bob Lennox, who lived at the Forestry Tool Cache at Cultus Lake, or Jack Calder, who lived at Yale.

With the introduction of the Young Men’s Forestry Training Plan (YMFTP) in about 1935, Jim Mahood had two additional young fellows as assistants, so I then got my initiation to timber cruising.

For small blocks of timber, in which most of the timber was visible from the boundaries, it was simply necessary to locate the corner posts and “run” the boundary lines, usually re-blazing the trees along the boundary lines.

For larger timber blocks, the ranger would walk through the property and ocularly estimate the timber volume (in thousands of board feet per acre) and the species distribution in percent. He would then draw up a map of the area, sketching in the boundaries of the merchantable timber, and the area of the merchantable type would be determined from the map, drawn on cross-section paper. The total merchantable timber volume was then determined by multiplying the estimated volume per acre by the number of acres determined from the map.

At first, the estimation of these merchantable timber volumes seemed mystical to me! But I learned to appreciate what a stand of 30 or 50 thousand board feet, which would have been about the average for that area, looked like. A very dense stand of large Douglas-fir could average as high as 100 thousand board feet or more.

Assistant Ranger Bob Lennox sometimes accompanied Jim Mahood on larger timber cruises. He was a smoker, but would call for time out for a smoke. He would sit down on a convenient windfall, roll a cigarette, smoke it, then snuff it out in the mineral soil. He made sure that it was completely out before he moved on; never would he smoke while walking through the woods. Like Jim Mahood (and many others of the B.C. Forest Service staff at that time), Bob had been an employee of the Dominion Forestry Branch which was responsible for the Railway Belt prior to 1930.

In the fall of 1937 a large Crown timber sale was to be cruised in the Chilliwack (Vedder) River Valley. Two assistant foresters from the Vancouver Forest District office were to be the cruisers: Marc Gormely and Doug Greggor. As I was then a ranger assistant for Ranger Jim Mahood, I was designated as Marc Gormely’s compassman.

This was to be my first experience in that capacity. With Marc, Doug, and another compassman, I drove to the north-east corner of Cultus Lake where we located the start of the trail leading to Slesse Creek. Marc was leading the way up a steep portion of this trail when we stopped for a rest. Doug had been following Marc, with the two compassmen behind. As we stopped Doug remarked: "Thank God I don't have to follow those quick steps of Marc all day!" Marc was the shortest of the four of us but he had been walking at a fast pace, regardless of whether the trail led up or down.

When the trail intersected an old timber licence boundary, Marc and I took off up the hill to the south. We were following that old survey boundary using a topographic chain with trailer. Marc would let me precede him until I had reached about the horizontal two-chain distance; he would then stop me to take an Abney level reading on the slope, then hold the chain at that reading on the trailer and get me to tighten the chain and mark the spot.

So we proceeded up the slope until he said "You should be near the corner post now." I was standing on a big windfall. When I jumped down to the ground, there, almost beneath where I had been standing, was the corner post of the timber licence! I imagine that raised my "brownie points" with the B.C. Forest Service.

The timber sale which we then cruised was advertised with a 30-year term. W.F. Gibson & Sons (headed by "Bull of the Woods" Gordon Gibson) bid in that timber sale but did not operate on it for some 25 years. Towards the end of the contract period the company did get around to logging the sale area.



This newsletter is the official organ of the Forest History Association of British Columbia. Please submit newsletter material and send changes of address to the Editor: John Parminter, # 3 – 130 Niagara Street, Victoria, BC V8V 1E9. Phone (250) 384-5642 home or (250) 356-6810 office. E-mail: jvparminter@telus.net

Membership in the association is \$10 yearly, or \$45 for five years. Please send dues to the Treasurer: Edo Nyland, 8793 Forest Park Drive, Sidney, BC V8L 4E8. Phone (250) 656-9276. E-mail: edonon@islandnet.com

The President: Stan Chester, can be reached at 5686 Keith Road, West Vancouver, BC V7W 2N5. Phone (604) 921-9880. E-mail: stanchester@shaw.ca

