Reconstructing the Historical Forests of British Columbia: One Map at a Time

By Claire Williams and Ira Sutherland. Ira is pursuing a Phd in Forestry at UBC, researching “Ecosystem services recovery in an era of novel forest disturbances”. Claire is a Forestry Archivist at UBC’s Rare Books and Special Collections Library, and a FHABC Director.

Many have wondered: what would the forests of British Columbia have been like a hundred years ago? Imaginations begin to swirl, perhaps, conveying images of contiguous old-growth forests along a pristine coast or a mosaic of forest stands with differing ages throughout a frequently-burned interior.

But, today, the importance of answering this question matters beyond curiosity and nostalgia. Understanding the historical forest conditions of BC is needed for contextualizing challenges facing foresters and society today. For instance, following the mountain pine beetle epidemic, researchers have identified that mature stands of interior lodgepole pine (Pinus contorta) were less common in the interior before a century of fire suppression had begun. In the absence of fire, interior pine stands became older and denser, providing a contiguous cover of old pines, which make the perfect host for mountain pine beetle to reproduce. Had the forests of interior BC not changed from their historical conditions, the mountain pine beetle outbreak would have not been so rapid and severe, eventually impacting 18 million ha of BC forests.

Although these landscape changes are recognized by those mindful of BC’s forest history, they have rarely been mapped and measured across BC’s diverse terrain. (Continued on page 4)
Several dedicated officers of FHABC continued the practice of presenting the organization well at two important meetings during January and February. A flurry of emails before each event assured smooth administration.

The first event was the annual Truck Loggers Association TLA Convention & Trade show held at the Bayshore Hotel in Vancouver BC Jan 16-18.

David Brownstein reported that “Kat Spencer paved the way for us to get non-profit donated table space in the hallway that was later upgraded to a high traffic area booth because of booth cancellations caused by the Lower Mainland snowstorm. On the down side, the weather also prevented Eric Andersen from bringing some poster-board displays that he built. We had hoped to sell copies of the TLA history for them, as a way of facilitating our entry into their event. However, in the end that didn't happen--they are all sold out with no plans yet to print additional copies.

In addition to Newsletters and application forms, the display included a laptop running with 1930s/40s National Film Board footage of Island logging.

Booth staffers talked up archival donations, the newsletter and Facebook group, which interested many of the visitors.

David attended on Thursday and Friday, and Claire came down to help staff the Friday afternoon slot.

David estimated that over the entire event, our small booth reached out to around 30 or 40 people. We managed to recruit one new member, from Lizzie Bay Logging Ltd in Pemberton.

Our second event was the annual Association of BC Forest Professionals convention held in Nanaimo Feb 5-7.

The Inductee Luncheon is a lunch and ceremony held to celebrate the enrolled and transferring member’s achievement of completing the registration process.

As reported last year, Director Kat Spencer again presented the FHABC annual valedictory book awards to the selected ABCFP RPF and RFT inductees of 2019. Recipients were Erin Poulson RPF and Stephanie Help RFT.

The books presented were STORIES OF A WEST COAST LOGGER, by Robert Alan Williams and TOM WRIGHT - RECOLLECTIONS OF A PIONEER, by John Parminter.

Kat reported that “many connections were made at the Friday booth. New members joined and many inductees were intrigued by the fantastic display and stated the history of forestry was a draw for them to join the profession.

The focus of conversations and Kat’s address at the inductees luncheon was to help attendees understand how their experiences and knowledge can help the Forest History Association fill in the gaps of information from early history to modern practices.

A report by Eric Andersen about a visit while nearby to the Nanaimo Community Archives appears on page 16.

Congratulations and thank you to our dedicated board-members for taking the time to do these outreaches for us.
Membership: New or lapsed member?
$20.00 annually, or three years for $50.00

To join, renew or correspond by mail:
Forest History Association of B.C.
427 Walker Avenue
Ladysmith, BC V9G 1V7

Print a membership form from the website, or provide equivalent information on paper, and mail, along with your cheque made payable to “Forest History Association of BC”. No form is needed for renewals if contact information has not changed.

To join, or renew by email & e-transfer:
Email: info@fhabc.org Website: fhabc.org
Email your information to us at info@fhabc.org, and arrange an electronic fund transfer of your dues with Richard at: bc.forest.history.dominy@gmail.com

We require your email address for delivery of the newsletter, notice of meetings, etc.; and we recommend you provide a phone number for short-notice contact.

BC Society Act regulations require that you also provide us with your complete mailing address, including postal code.

Printed Newsletters
We invite members who want a printed version of the newsletter to make their own arrangements. Some prefer the 8.5”x11” version on a home printer; some prefer to take the tabloid 11”x17” version to Staples or other sources of tabloid printing and make it booklet-style. Some choose black and white, some print it in colour. The choice is yours.

More Book and Media Reports
Todd Kristensen posted a link to a two-part series called Pitch and Timber: A History of Human Relationships with Trees in Alberta, hosted by RETROactive; Exploring Alberta’s Past.

Claire Williams, FHABC Director, posted an interesting story about the Powell River Company Pipe Band, later to become the MacMillan, Bloedel, and Powell River Pipe Band, which she read while entering the archival descriptions for the MacMillan Bloedel and Powell River Company sous-fonds in the UBC Rare Books database:

David Brownstein, FHABC Webmaster, shared a link to the Niche-Canada “Nation, Nature, and Nostalgia: Hinterland Who’s Who”; a series of nature vignettes from the 60s-80s.

FHABC Newsletter team:
Editor: Dave Florence  Reviewers: David Morgan , John Parminter, Mike Meagher; Terry Simmons, Eric Andersen, Richard Dominy, David Brownstein
Issue #105 article contributors: Claire Williams and Ira Sutherland; Bob McFarlane; Gerry Burch, Sarah Greisbrecht, Eric Andersen, Kat Spencer, Dave Florence, David Brownstein, Richard Dominy
Submissions??: Yes, Please! email us at newsletter.editor@fhabc.org

FHABC officers:
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Vice Pres., Terry Simmons
Secretary, Mike Meagher
Treasurer, TBA (Pres. acting)
Webmaster:
David Brownstein

Six Directors at large:
Eric Andersen
Sarah Giesbrecht
Claire Williams
Katherine Spencer
David Morgan
Dave Florence

Book and Media Reports
... selected from our Facebook Group Page
Group member Daniel Marshall shared a book report from The Ormsby Review, "Basketry from the Ozette Village Archaeological Site", which had been in the southernmost territory of the Nootka (Nuu-chah-nulth) people of the west coast of Vancouver Island.

FHABC director Sarah Giesbrecht shared a link to a 13 minute silent Cornel Neronovitch Logging and Sawmills film showing logging practices in the Prince George area in the 1950s.

FHABC director Eric Andersen shared several links:
- a comprehensive collection of railroad operations photos (Canadian Forest Products’ Nimkish Valley) from Vancouver Island photographer and railway enthusiast Greg Kenmuir.
- an Ormsby Book review on The Last Whistle: Hillcrest Lumber Company Ltd. 1917-2018 by Cecil Ashley
- material about the passing of "logger-statesman George Percy (Jan. 30, 1918- Nov. 13, 2019); which will be expanded in a newsletter article
- a link to “The Dickens Forestry Collection, which has approximately 3400 images of forestry practices from the Pacific Northwest, with a focus on the Prince George area.

More Book and Media Reports to the left...
Interest to reconstruct BC’s historical forests has prompted a major effort underway at the University of British Columbia to compile and digitize the historical forest inventories of BC from 1918 to 2018. This work is part of the PhD project of Ira Sutherland, supervised by Dr. Jeanine Rhemtulla in the UBC Faculty of Forestry.

A milestone in this project has recently been completed: the team from the UBC Faculty of Forestry in collaboration with the UBC Library have digitized an entire forest cover map series for 1958, which depicts the extent of ‘mature forests’ (>121 years age) and ‘immature forests’ (<121 years age) as well as ‘not satisfactorily restocked’ (NSR) areas (logged over lands that had not yet regenerated a timber crop) across BC. This collection of 149 maps were created through the Forest Inventory Program’s first systematic inventory of BC’s forests. Previous inventories had been published in 1918\(^1\) and 1937\(^2\) but these inventories did not systematically map the province’s entire forested, instead relying to some extent on compiling existing data and in other cases, guesswork. The maps of the 1950s series are now digitized and made available to download on the UBC digital repository, Open Collections at: https://open.library.ubc.ca/collections/ifcsm

About the Project

Beginnings

The first challenge in this compilation effort was to identify available province-wide historical forest inventories. A key moment was in June of 2019 when Ira Sutherland and Dr. Jeanine Rhemtulla visited the UBC’s Rare Books and Special Collections to look at the MacMillan Bloedel fonds. There they were met by Evan Thornberry, Geographic Information Systems Librarian, Sally Taylor, Interim Head of Woodward Library, and Claire Williams, Forestry Archivist. After opening and perusing several boxes of the extensive collection, a set of maps originating from the B.C. Provincial Forest Inventory Program in the 1950s was agreed to be the gold ticket item. MacMillan Bloedel had kept the maps on reference as part of the corporate library and archives, which they donated, along with their historic records to UBC’s Rare Books and Special Collections in the late 1980s.

The next challenge was then to make these dusty maps widely available to the public. A plan was hatched to scan, create item-level metadata, and georeference each of the 149 maps in the Interim Forest Cover Series. The process of georeferencing takes an ordinary digital map and locates it in geographic information space so that it can be further processed and analyzed alongside other spatial data. The map envelopes, which reported the timber volume within each map sheet area, would also be scanned, thus conserving the Inventory Programs 1958 estimate of BC’s standing timber. Many readers of this newsletter will be familiar with the BC Provincial Forest Inventory Program (and anyone who is not might read the wonderful accounts made available through FHABC’s website https://fhabc.org/documents/BCFS-Inventory-history-part-2.pdf).

Now, many years of work that went into that program have been preserved and given a second (digital) life, where researchers of the future may

(Continued from page 1) Forest History Maps

(Continued on page 6)
This is a condensed image of one of the 149 maps that was scanned and georeferenced as part of this project.

It shows the S/W corner of Vancouver Island, from the Jordan River up to Bamfield (via the inset map). The colour code and index map have been expanded for clarity.

Evan Thornberry went ahead to create a digital geographical index of the map collection, which is now available online so that viewers can quickly point to and retrieve any map of interest. Viewers may access the index here: https://ubc-lib-geo.github.io/spatial-indexes/ifcsm
and all volunteers to help with the 149 maps. While some participants had never used GIS software prior to this project, trial by fire was begun, and after a few late nights and the work of a few very dedicated volunteers, as well as Kevin Hu who remained working with Ira, the maps were all georeferenced! Once the maps were georeferenced Evan Thornberry went ahead to create a digital index of the map collection, which is now available online so that viewers can quickly point to and retrieve any map of interest. Viewers may access the index here: https://ubc-lib.geo.github.io/spatial-indexes/ifcsm

The Project Continues
Considerable work remains before the full story of these maps can be told, but their value is already becoming clear. With ongoing collaboration between students, researchers, and librarians a wealth of historical paper maps and data await the modern researcher with an interest in history and forest dynamics. After all, these old data should be appreciated, safe-guarded, and put to use. They were collected following extraordinary effort including the work of thousands of men and women and at costs running in the hundreds of millions of dollars.

Participate!
Please feel free to reach out to ira.sutherland@ubc.ca with suggestions of where province-wide historical forest inventory data may be available. They have already compiled the years: 1918, 1937, 1958, 1967, 1973, 1984, 1995, 2005, and 2018, but Ira is curious if any more are available, especially for the 1980’s. Likewise, if you were involved in the Provincial Forest Inventory Program and may be able to offer expert advice on the accuracy of the historical forest inventories, please contact Ira as he is looking for experts to solicit feedback to improve the accuracy of the timber volumes and forest cover estimated for the historical forests.

Example of a Forest Inventory Summary− 1958

<table>
<thead>
<tr>
<th>Forest Inventory Summary - British Columbia</th>
<th>Numbers 2</th>
<th>Pages 33</th>
<th>300 CPM 9-5/8</th>
</tr>
</thead>
</table>

These summaries of area and volumes are based on the initial forest inventory of British Columbia. Area figures were obtained by the classification of areas as certain categories in the field,plotting on this information on base maps at a scale of 1/2 inch to 1 mile, and planimetering the resulting forest cover maps. Volumes were obtained from samples established in forest inventory (Source: 2)

The continued forest cover index map is a composite reduction of areas 1/2 inch to 1 inch forest cover maps as which forest stands have been collected into very broad classes. The entire series comprising 18 index maps and summaries, covering the Province, are being distributed in 1959. File all summaries as received to obtain complete set.

VOLUAMES BY SPECIES AND CLIMBER'S LIGHT
(Thousands of cubic feet to a "Close" - 1 foot stump, 1-inch top - standard of utilization, gross volumes reduced for decay loss.)

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Australian Bushfires: Wollemi Pines rescue

By Dave Florence, Newsletter Editor

We in BC know the devastation that wildfires fires can bring. So our hearts go out to all those affected by the massive wildfires burning in Australia.

On Jan 31, 2020, the BBC reported “At least 33 people have been killed - including four firefighters, and countless wildlife; and more than 11 million hectares (110,000 sq km or 27.2 million acres) of bush, forest and parks across Australia has burned.”

An email from FHABC director Terry Simmons and a Facebook post by Lorne Hammond reminded us that one of the many interesting wildfire stories is the rescue of the Wollemi Pines grove in Wollemi National Park, in the Blue Mountains north-west of Sydney, The Guardian Australia reported the story on Jan 15. “Firefighters have saved the only known natural stand of 200 Wollemi pines, so-called ‘dinosaur trees’ that fossil records show existed up to 200m years ago, from the bushfires . . . . They were thought extinct until discovered 26 years ago . . . .”

David Brownstein mentioned on Facebook that botanical gardens around the world are helping keep the species alive. UBC Botanical Garden has specimens, such as this one

Introducing FHABC Director Sarah Giesbrecht

FHABC: What’s your connection to BC Forest History?

I am currently working on the Northern BC Forest History Resources: Access & Outreach Project as a Project Archivist at the Northern BC Archives & Special Collections (NBCA). The impact of natural resource developments on Northern British Columbia’s environment, people, economy, and culture is a strong teaching and research focus at UNBC. It is also one of the NBCA’s largest subject areas for acquisition. Through this project, the NBCA hopes to increase access to our forest history materials and promote their use. We also hope to acquire more materials on forestry in Northern BC. The collections that have been made available thus far have been aggregated in our Forest History in Northern BC subject guide. This is the first time I have worked with forestry-related materials and have learned a great deal about forests, forestry, and the history of the BC forest industry since taking on this project.

FHABC: What have you been working on lately?

Aside from processing more of our forestry related materials for access, I am working on outreach initiatives to alert researchers and the community to our collections. I have created a number of subject guides such as the Forest History in Northern BC mentioned above, posting photographs and information on social media, facilitating presentations and tours of the archives, and other initiatives such as contributing to this Newsletter. I am also planning activities for the FHABC 2020 AGM in Prince George in the Fall.

FHABC: What will you be doing next?

It is hard to know exactly what I will be doing next. One idea I have is to create an exhibit of some of our materials, specifically, using the collection of “Spruce Dollars” included in one of the fonds that I am currently working on. Those in our collection were created in the late 1950s through to the early 1980s as souvenirs in Prince George and other forest industry towns in Northern BC. I do not know much about them so if any of your readers knows more about these “dollars” please contact me.

FHABC: How can researchers learn more about UNBC forest history?

In addition to the Forest History in Northern BC subject guide, researchers can access our website, library.unbc.ca/archives, for more general information about us and updates on our projects, and our database search.nbca.unbc.ca, to search our collections. We also post news on our Facebook page, UNBC Northern BC Archives & Special Collections, and Instagram, @northernbcarchives. Finally, researchers can contact the archives with questions or comments by email at archives@unbc.ca or contact me directly by email at Sarah.Giesbrecht@unbc.ca.

Specimens, probably from UBC, appear around the province, such as this one in Squamish, posted on Facebook by Eric Andersen.

We have other Canadian connections: The Canadian Interagency Forest Fire Centre (CIFFC) reported on Feb 4 “Canada will have provided 238 firefighting personnel to Australia since the beginning of December to three separate States”. Almost one quarter of these one-month deployments have come from BC. The BC Wildfire Centre posted this photo on Facebook: members of one Canadian Incident Management Team s
Pick any Vancouver neighbourhood. When was it last forest? So much change in such a short duration! Stanley Park, in all its manicured glory, does little to help today’s urbanite truly understand the pre-1850s people or flora, that previously occupied their current address. At the time of local contact in the 1790s, most of the present-day city was perpetually sodden wetland, periodically inundated prairie, or old-growth. That humanized vegetation was punctuated by dwellers of five permanent Indigenous villages, most of which had been in place for at least 4,000 years.

Thanks to some great networking by director Eric Andersen, and a significant donation by an enthusiastic FHABC member, we are now partnering with the Museum of Vancouver to provide content for a new, permanent, forest history exhibit. “That Which Sustains Us”, a 2,000 square foot exhibition, will open in November of 2020. The curatorial collective includes Dr Sharon Fortney, MOV Curator of Indigenous Collections and Engagement, research from the communities of Musqueam, Squamish, and Tsleil-Waututh, and the FHABC. The exhibit will explore the convergence of Native and Newcomer knowledge traditions in the Vancouver area, by examining people’s interactions with forests and their wider environment. It will also challenge visitors to consider how they can respond to the climate emergency by exploring opportunities for implementing green infrastructure in the City of Vancouver.

The core of the FHABC contribution will be a series of original maps. These will depict the 10,000-year transformation of the Fraser River’s mouth, from ice sheet, to promontory in open water, to inhabited forest and wetland, through logging, into today’s urban space. Our focus will be the logging. Unlike the province-wide project described by Claire and Ira (pages 1 & 4-6), there is no existing, standardized set of maps upon which to draw. By definition, almost all of Vancouver’s logging history took place before the creation of the contemporary “state”. Instead, each map sheet must be built from near scratch, using scattered, non-standardized archival sources.

A Klahanie Research colleague and I are using the open source program QGIS to synthesize our archival information. QGIS (previously known as Quantum GIS) is free to download, and supported by a large community of users who produce helpful tutorials, Youtube videos, and discussion fora to commiserate about shared problems. Download it yourself and see what it can do: https://qgis.org/en/site/ Better yet, come out to the next Maptime YVR meeting https://www.meetup.com/MaptimeYVR/

It is an enormous task to synthesize information from nineteenth-century handwritten correspondence, hand-sketch surveyor’s maps, pre-emption records, early photographs, timber leases and the like. The impossibility of creating a perfect, complete set of maps makes it all the more rewarding! We are far from sharing final results, but here are a few select gems from the journey so far...

Burrard Inlet, although highly used by Indigenous communities, remained largely forested. In the years after contact, nobody could have predicted that it would become the future home of a large city. The Inlet appeared to Newcomers as an isolated stretch of coastline of little consequence. For the new arrivals, Vancouver Island offered far more global economic connections. In the 1850s, the closest urban centre to present-day Vancouver was New Westminster, either nine miles away through “almost impenetrable forest,” or a 30-mile water-borne journey from the Fraser River, around Point Grey. While the Fraser River was the highway that connected Victoria with mining activity in the Interior, to the Newcomer’s eyes, Burrard inlet was a nearby dead end, unworthy of much attention.

To underscore Burrard Inlet’s Newcomer-perceived marginal status, note the hierarchy implied by Figure 1’s title, in which the River appears before the Inlet. This Gold Rush-era survey was produced by Captain G.H. Richards and officers of the HMS Plumper, and updated in 1868.

(Continued on page 9)
by D Pender. The map further highlights an important fixation of the time, with prominent labels for “Coal Peninsula”, “Coal Harbour” and, just for good measure, the “Coal Seam” itself. All of these allude to the role of fossil fuels in mid-nineteenth century industrialization. Look much harder, just to the east, for the smaller text, “Hastings Mill” (founded 1865, producing lumber 1867), and then northeast, across Burrard Inlet, for its predecessor “Moodyville Saw Mill” (first established as “Pioneer Mills” in 1863). It is impossible to understate the importance of these mills. They were far from the first sawmills on the mainland, however their smaller, scattered predecessors produced lumber for local consumption, not export.

This 1880s photo (Fig 2) depicts that transition in progress. Here we see a skid road over which oxen hauled cut logs to the shore of False Creek. Former Vancouver archivist Major Matthews informs us that the scene is looking north, at the location known to us today as Fourth Ave and Granville Street. Here, next to a ravine, squatter and bullpuncher (Oxen driver) John Beatty lived with his unnamed Indigenous wife. By the time of this photo, it was the temporary home of CPR Land Commissioner Lauchlan A. Hamilton and his family, who took refuge from the great Vancouver fire, over the horizon on the other side of False Creek. Pictured on and among the felled Douglas firs are, left to right, Hamilton’s sister, Miss Isabelle Hamilton holding his daughter Isobel Hamilton, “perhaps Louie”, John Leask, and A.J. Dana.

Figure 3, depicted ten years later, is a different section of Granville Street, then popularly called North Arm Road, because it connected False Creek with the north arm of the Fraser River. Shown here, looking north, between two walls of trees; telephone poles to the left of the road with stumps to the right, is a horse-drawn Royal Mail coach. Zooming in on this high resolution image further reveals what is possibly a dog lying in front of the horses, and back on the horizon, a hay wagon. In a few short years, the trees lining Granville Street would be logged and milled, destined for distant markets.

The Moodyville and Hastings sawmills were two germs of globalized capitalism on the Inlet, that would grow to connect local trees with distant Pacific markets. These economic relationships would reorient Newcomer perceptions to become more aligned with those of the Inlet’s original inhabitants. Rather than an insignificant cul-de-sac, just off the Fraser River highway, Burrard Inlet was soon perceived by all as a place to generate wealth, and a commercial centre, in and of itself.

This final image, Fig. 4, depicts industrial land clearing after logging, involving a steam-powered donkey-engine and “gin pole,” to pile stumps and other woody debris for burning. Once alight, such piles would burn for days, remaining visible for some distance. Shown is a location to the east of Granville, between Granville and Cambie Streets. Pictured are CPR Civil Engineer H.E.C. Carry and Henry J. Cambie, CPR divisional engineer.

Look forward to further project updates to come. Thank you again to the anonymous FHABC member for funding this work, and we hope to see everybody at the Museum of Vancouver towards the end of 2020.
Working internationally exposes you to a wide range of experiences and situations not normally experienced domestically. This applies both professionally and with day-to-day events. For some people, food and meals are often a point requiring a major readjustment: with others, local social and economic situations can be stressful. Often, how one relates socially with men, and especially the women, can be troublesome until one learns the local social customs. However, with me it’s food; how to eat and handle it is no problem, it’s what I eat. In all my time overseas, I have never had bad food or a meal I disliked; in fact I have sampled widely and enjoyed many memorable ones.

**My First Taste** One year into my initial foreign assignment with Forestal it happened. By then (1962-63) I thought I was pretty well versed in jungle working conditions and the local food. It was the first night of a two-week 30 km working-hike through the trackless Kasalong Forest Reserve located in the Chittagong Hill Tracts on the eastern Bangladesh-India border. We used wild elephant trails for both access and navigation.

We encamped beside the Shishak River. Later, a Chakkma hunting group, the major local jungle tribe, set up camp nearby. They were just starting their trip and for their evening meal prepared a medium-sized snake caught that day and kept alive in a cane basket. After a short bartering session we exchanged a few Three Camel tailor-made cigarettes for a snake appetizer. Texture-wise it reminded me of chicken. I don’t think I could have taken it as the main dish as it was cooked over a bamboo fire and the smoke had strongly flavoured it. Although the meat was tender, I thought it tasted the way old, well-worn running shoe smelled!

**Fettuccini au Canard** We had completed two of many days investigating bamboo resources near Luzhou City, Sichuan Province, China for a Sandwell project. For supper this night a colleague and I were eating with clients associates in a restaurant specializing in hotpot cooking. Restaurant staff quickly brought the drinks, a wide selection of foods for our cooking, and we settled in for a relaxing evening. There is a popular modern China saying -“We Chinese eat everything - from airplanes to railway tracks”. And the food selection provided backed up the saying. I was enjoying the dinner and conversation but having difficulty placing food into the steaming central hotpot and retrieving it with my chopsticks. A particularly difficult item was the fettuccini noodles – soft, rubbery and purplish in the dim restaurant outdoor lighting. With my shaking hands, they kept repeatedly falling off my chopsticks and back into the hotpot. Starting to feel hungry and getting agitated, early on in the dinner I decided to retrieve any of my noodles, cooked or uncooked, any time I had a solid hold. I proceeded this way over the evening and went to bed satisfied by the meal and reasonably smug with my chopstick ability. At breakfast next morning my colleague slyly asked me how I liked duck intestines – cooked or uncooked?

**Chips With That, Please** On another Sandwell project a colleague and I examined the opportunity for plantation development in southern Yunnan Province, China, bordering Laos and Myanmar (Burma). On the last night of the trip, our client set up a dinner banquet with local businessmen and senior government officials with potential connections to their project. Dinner was located outside the local city centre in a bamboo restaurant alongside a quiet river and staffed by women from the local matriarchal tribe. They provided a superb meal with a wide variety of small flavourful dishes continually refreshed at the

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table and adequately supported with beverages for the required toasting. At Chinese dinners, bottoms up toasting is a common social rule. However, when foreigners are involved, it sometimes seems as if the main objective is to try and get the “big noses” (westerners) drunk, often by many toasts offered by attractive women. Alternatively, perhaps the main reason is to get the dinner host (government or business) to supply more drinks. At Chinese dinners everyone helps themselves to servings from each common dish, the object being to enjoy the dish taste, flavour and presentation. If you are hungry, you eat rice at the end of the meal, not filling up on the tasty dishes served earlier. Since you don’t order a la carte at these dinners you have to share with everyone. There were two particularly tasty dishes for me. The first was succulent, rich, small, white sausages about three cm long and eight mm thick, garnished with cucumber and fried bananas: the second was deep-fried crispy golden chips, about the size and length of your little finger. Actual contents - dish number one was baked bamboo grubs: number two was deep fried wasps.

They were both delicious. I dearly regretted not being able to order my own portions of both dishes. Unfortunately, from my viewpoint I had to share the dishes with others at our table.

The Best Meal I’ve Eaten In the fall of 1961, as Forestal started inventory fieldwork in the Rankhiang Forest Reserve of the Chittagong Hill Tracts, we made a reconnaissane trip upriver to check ground conditions. During a break in the monsoon weather pattern three of us BC foresters plus a local boatman-guide slipped up the new Karnafuli Reservoir, (behind the newly closed Kaptai dam) and started up the rain-swollen Rankhiang River in a large and cumbersome dugout canoe, powered by an outboard borrowed from the US dam-builders (our own equipment was still in transit). We were fully loaded with crew and gear, but progress was good until we reached the point where the river gradient steepened and began climbing. Here, water conditions changed drastically – the current increased and rapids appeared. Late in the day the dugout powered out in narrow rapids, waves swamped us. Down we went, everyone and all the gear – food, tent, sleeping bags, fuel, guns, clothes and with the engine fully under power. As we all fought to stay above the raging waves the heavy hardwood dugout did an end-over-end against a rock, in our midst. Downstream we ended up below a steep, unclimbable cliff, lucky to be alive. The only things we salvaged in the fading daylight were ourselves, a wool blanket, the dugout, including the water-filled motor. However, the monsoon rain returned with cyclonic intensity. Camp that night was an uncomfortable bank under the soggy blanket, held up by sand-embedded snags. We kept as warm as possible as the rain pelted down and the thunder and lightning played. By morning we had retreated three times up the bank to the foot of a steep talus slope in the face of a 15 foot river rise. Another few feet and we would have faced the task of riding the torrent in the dark. Our shotgun was at the bottom of the river, and we had already seen pug marks of the local leopards and tigers.

At sunup the return trip began, floating...
down the river to yesterday’s start point. The swollen river had calmed significantly. By 11:00 am we reached a bamboo logging camp where the manager, a friend, offered us a meal. By noon, 24 hours since our last meal, my hunger pangs were completely satisfied and had enjoyed what I still consider the most pleasurable spicy and savory meal of my entire life.—a very hot, certified organic chicken/rice curry.

**But chicken curry for breakfast!!**

As we had drowned our motorized transport, and did not feel up to paddling 20+km back to Kaptai, we hired a sampan water taxi at the local ranger station, and creaked our way back to base. There we learned that the storm-flood-hurricane (17 inches of rain overnight) had come close to taking out the new spillway at the dam. This in turn could have released the gigantic new lake to wreak untold damage along the Karnafuli River below and in Chittagong, a city of millions at the mouth of the river.

Not only we tired BC foresters were lucky to be alive on that day.

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**Rankhiang Gorge at low water**

(Continued from page 11) “International Food”

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**Forest Management and Silvicultural Planning in 1950's!**

By Gerry Burch  Fascinating insights of forest management by an industry leader. Third of a four-part series of writing by Gerry Burch, whose bio can be found in the UBC Library Gerry Burch fond.

Very little forestry planning concerning the management of forest stands in B.C. occurred until the new tenure-Forest Management Licences (now, Tree Farm Licences) was adopted in the early '50's.

This tenure brought about the hiring of foresters in the companies, and demanded the submission of Management Plans, including the preparation of an allowable cut for the new areas. This was the start of forest planning, for which most foresters were ill-prepared. The main ingredients of the AAC formula - volume of mature timber, condition of logged lands, and the growth increment of the second-growth lands - were either not known, or were so ancient, that planning for increased inventories (and knowledge) was absolutely essential.

Once new inventory figures were available, and new AAC's produced, the foresters were amazed that the contribution of the second-growth stands in these calculations was very small. Therefore, any project to increase allowable cuts was placed solely on standards to increase the volume available for harvesting; such as changing the scaling standard (changing from board foot calculations to cubic, and then metric); **increasing the area of loggable stands** (adding in stands on higher slopes, those with marginal economic stands, and those on lower site classes); **changing the utilization standards for top diameter** (eventually set at 4 inches in the interior and 6 inches on the coast), **stump height** (set at no higher than 12 inches on the high side), **no “bucking out breaks”**, nor **“long butting”**; and determining **minimal length of a commercial log** (eventually set at 16 feet on the coast). But, all of these determinations were very important because they increased the AAC’s by about 33%!

No attention was placed on any management practice for the logged areas (immature stands), except to ensure sufficient stocking per acre. And even here, it involved much debate to obtain permission to vary the previous Forest Service edict that all planting should be at “6 feet by 6 feet spacing”.

So, it was a surprise that around the 1970's and on, foresters began recognizing that the contribution of second-growth lands to the AAC was becoming almost equal to the old-growth contribution, and that management of these lands could be instrumental in increasing the AAC, BUT, only in those TFL’s with sufficient mature stands to last until the second-growth reached rotation age. But, what should be done?

After numerous trips to the managed forests (all on private lands) in the USA, where companies were already harvesting younger stands, and were practicing some management practices on their holdings, B.C. foresters began to examine practices that could be adopted in Canada such as pre-commercial thinning, commercial thinning, pruning, fertilization, and finally, use of genetics. Some experiments were being tried in B.C. on
With all of these decisions on their mind, B.C. foresters were slowly adopting a priority list of acceptable second-growth management regimes, as follows:

---Pre-commercial thinning (or spacing)-the target number of stems to be left after spacing varied by company, but it was between 300 to 450 stems per acre-it was determined that for efficiency, and least cost, this practice should be carried out only when stand diameters were small enough to be cut with an axe, or machete, and not necessarily by the use of power saws. Thus, the second-growth trees should not be over 15-20 years on the coast (where most of this practice was carried out).

Eventually, a serious disagreement arose between the Forest Service staff and TFL foresters as to whether this practice would increase merchantable yield in a standard 90-year rotation or not. This was never to be resolved until further studies were carried out. Today, because of the reduced rotation age of second-growth areas being logged, and lack of incentives, no (or very few) stands are being spaced today.

Commercial Thinning Many trials were conducted in the 1970-90 era on stands of rotation age or more, but the lack of demand, and price, by sawmills which were designed for larger logs, made such operations uneconomic, particularly if new roads to such stands, and other costs, must be borne by the thinning project. And, although the fact that such logs were defect free, and well suited to a sawmill designed for small logs, the age-old complaint of wide rings per inch was raised by many as a reason for either lower log values, or arguments against this practice. Field foresters also felt that much of the material produced should be considered outside of the AAC because the harvested understorey trees would probably have died before the rotation age was reached, and therefore, their volume would not be in the inventory. Because of the reduction in harvest age, particularly on the coast, very little commercial thinning is being carried out in B.C. managed forests today. Because of the trend towards the utilization of bio-wood from current stands, I still think this is a viable management practice for our second-growth stands, as is being done in stands adjacent to communities to fire-proof them.

Pruning This is a practice that has produced much debate and many studies. The consensus today is that, contrary to practices in New Zealand, Chile, and some southern U.S. states, pruning, partly because the cost has to be carried until harvest in future decades (say, 20 years), interest rates have “killed” all interest in pruning. And, for this reason, studies to reduce costs have shown that the only pruning system worth considering is either “clubbing”, and/or with hand (and pole) saws, usually at the time of other practices, such as spacing or fertilizing. This mandates that the maximal economic pruning height is about 12-15 feet. The fact that the Forest Service did not allow this practice as a “forestry offset cost” soon killed this practice.

Fertilization Trials on this forestry practice have produced confusing results. “Sometimes it works, and sometimes, it doesn’t!” The same formula-
George E. Percy on the Logger’s Need for Autonomy

By Eric Andersen, who is a Director, former Newsletter editor, active article contributor, lead on the Facebook Group BC Forest History, and Squamish district councillor

George Edward Percy (January 30, 1918 – November 13, 2019) was, as his family has described him, “a builder of businesses … and more. He wore responsibilities comfortably, was a respected leader, and a trusted advisor – sought out by many. A deep thinker and concise communicator, there was never any doubt about where he stood.” (1)

George Percy was great communicator for the logging industry. His observations and advice delivered in various speeches and articles now several decades ago are worthwhile to revisit and consider.

Son of G.D. Percy, Merrill & Ring Lumber Co. camp superintendent at Duncan Bay and then at Squamish, he started in the industry in the early 1930s as a teenager. He left Squamish in 1940 for Campbell River, where he was to start a family. After stints at Elk River Timber and other Vancouver Island camps he became camp superintendent for Alaska Pine from 1945 at Jones Lake and then at Jordan River. He was appointed head of log production at Alaska Pine’s head office in 1951.

George Percy left Alaska Pine in 1956 to form his own contracting company. By the late 1970s the Percy Logging group was one of the largest operators on the coast, with operations at Knight Inlet, Powell Lake and elsewhere.

In recounting the start and the early course of his career in the industry, he would claim it gave him insight.

In the middle 1940s, he would recall, “two changes started to appear which were of great interest, particularly to those of us in the industry who were young and eager.

One was the great technological improvements which began to take a lot of the bullwork out of logging.

The second was sustained yield forest-management which, with its formalized planning for the whole industry and its promise of improvements such as professional guidance and cubic scale etc., appealed to us.”

A theme recurring in George Percy’s reflections on the industry’s development was the logging sector’s loss of and need for autonomy.

“For the future let us remember that the toughest part of logging takes place in the woods with enough problems there without adding others.

One thing I’m sure of and that is whether we have representatives for management and labour or not, logger must talk to logger about logging problems and the sooner mill men and mill problems are put out of our picture the better.” (2)

What needs to be understood, he observed, was “the significant, basic, fundamental fact that in the case of the mills the machines set the pace for the men and in the woods the men set the pace of the machines – a hell of a big difference!” (3)

In his President’s Address to the 1978 Pacific Logging Congress, Percy spoke on structural changes he had witnessed, “In my opinion, logging has been left as too much of a subsidiary of the total industry, considering its true importance and the nature of its problems. Over the last decade or two, most of the woods oriented people have disappeared from the top management echelon of the timber industry and have been replaced by men of other backgrounds. This has left a vacuum in true understanding of logging needs and, in some cases, a lack of interest which sooner or later will have to be corrected. …

Decisions which affect logging must be made for logging’s sake, and the ebbs and flows of funding in the logging sector must be guided in the best interests of that sector. To these ends, because of the lack of true understanding and interest, a greater degree of autonomy than has been evident in the recent past seems to be necessary. …

The business of logging, out of economic necessity, must be free wheeling with a built-in hustle. This required a framework of good planning, co-ordination and timing to a degree that many people just don’t understand. This framework is destroyed when there is a ‘tail wagging the dog’ effect from outside influences. For example, the realities of silviculture, land management, the environment, etc., should be our tools, not our masters, and the other resource users must be our affiliates, not our enemies. Otherwise, we have the result that key people become discouraged. Discouragement is very costly, and the next step, which is apathy, is deadly.” (4)

“In my view, over the past three to four decades, the logger and his image
have been increasingly victims of a changing society and a changing industrial structure. …

In any case, I think it’s time that the logging sector be given more autonomy, responsibility and broader authority to run its own affairs. I also think it needs to be insulated to the greatest degree possible from the highs and lows of corporate thinking – particularly from fish-eyed controllers seeking to reduce inventories to impractical and dangerous levels – there are some huge monuments to such tampering.

I think too, although I can’t find anyone to agree with me, that labour negotiations in logging should be divorced completely from the mills. For too long the woods have been the battleground in the struggle between the unions and the corporations, with the logger coming out on the short end, particularly with respect to his stability of employment and his earning level.

I’m pretty sure that if any or all of these changes are made a big step will have been made to improve the lot and the image of the logger.”

Percy, George E. [– Obituary], November 2019

Looking to the Future”, Truck Logger February 1955.

Improving the Logger’s Image”, The Forestry Chronicle April 1980

“President’s Address”, Pacific Logging Congress, Vancouver B.C., 1978
By Eric Andersen:

"North Vancouver forest management consultants ENFOR (Mike Greig and Richard Kyle) are fans and supporters of Forest History. Check out their page on "Skid Roads in North Vancouver", the result of some curiosity and research into the past of their consulting office neighbourhood.

Every forest industry company website should have such a page, and please link to us!"