



FOREST HISTORY NEWSLETTER



[Back-issue
Link](#)

Fall Issue

From the Editor

By Dave Florence newsletter.editor@fhabc.org

After five years of enjoyable volunteering with FHABC and its newsletter, I'm moving on to new challenges. Thanks to all who worked with me, and please support the new editor, yet to be selected.

For this issue:

Check out the AGM news: *Page 1*

Thanks to Allen Hopwood for many inputs received, with more coming:

- A story about the Rockefellers dabbling in BC forestry *Page 2*

- a feature on Gerry Andrews, including book reviews *Page 8*

- Gerry Burch's piece, written a few years ago, deals with research trials. This completes our backlog of essays from Gerry; more welcome! *Page 4*

- The final International feature by the late Conrad Smith completes the George Nagel series. *Page 6*

We have some smaller "fillers":

-some BC Wildfire history *Page 3*

- a Woss Heritage Park update *Page 12*

- a report on a research question we fielded about BC Forest Fire Lookouts at Squilax Mountain and Tsalkom Mountain. *Page 12*

-upcoming events (such as they are in these Covid-19 times!). *Page 12*

From the Editor	1	Forestry in East Africa	6-7
AGM plans. Sep 25/26.....	1	Gerry Andrews - a great forester	8-11
Puttin' on the Ritz	2	Upcoming events	12
Group and Association news	3	Archive spotlight	12
History of BC Wildfires	3	Woss Heritage Park update	12
Small field research trials	4-5	Research report	12

AGM Weekend Plans—Sep 25/26, 2021

Our 2021 AGM will again be "virtual", to be held on
Saturday. September 25, 10 a.m. until noon.

The remainder of the agenda and how to attend the virtual sessions will be sent out via email to all members as it is fully developed in September.

We plan to augment the AGM meeting with at least one forest history-related session later on Saturday or Sunday.

One event we are hoping to offer during our AGM weekend is a "Listening Party". The plan being developed is for attendees to join us as we celebrate the digitization of oral history interviews previously stored on cassette tapes, by listening in to Gerry Burch and Bruce Devitt discuss the history and future of the forest industry. We'll play highlights from this interview, and have a discussion and question and answer session, following the listening session. Gerry Burch and Bruce Devitt have kindly agreed to join us for the session and will be available for commentary following the listening-party!

Some previous AGM highlights can be read in Newsletter reports:

- 2020 A "Virtual" AGM organized by Prince George members, featuring UNBC archives, a virtual tour at the Central BC Railway and Forestry Museum, and a digital project presentation: *Newsletter 108*
- 2019 Kamloops, featuring a Fire Centre tour and a mountain pine beetle presentation: *Newsletter 104*
- 2017/18 Vancouver, featuring a visit to UBC RBSC, and an evening spent at the Hastings Mill Store Museum: *Newsletter 100*
- 2016 Powell River, featuring a Friday pub session, a Museum tour and a Saturday dinner speaker *Newsletter 98*
- Other locations: 2015, Revelstoke; 2014, Duncan; 2013, Kamloops; 2012, Victoria; 2011, Vernon; 2010, Mission; 2009, Prince George; 2008, Squamish; 2007, Kamloops; 2006, Burnaby Village Museum; 2005, Parksville; 2004 Coquitlam; 1983, Duncan (the first AGM)

Puttin' on the Ritz

John D. Rockefeller & Son Speculate on BC's

Forests and H.R. MacMillan Transforms from a Lumber Broker to a Forest Industrialist.

By Allen Hopwood RPF, who operates Woodlot Licence 082 and Managed Forest 086 near Courtenay.

Part of MF 086 was once owned by the Rockefellers. (Photos Wikipedia Commons unless specified) Read the [full article here](#)

Abstract

"By the beginning of the twentieth century, dwindling United States timber reserves made British Columbia's forests a prime target for American timbermen and speculators."

Allen Hopwood gives us an interesting story about the “*ritzy*” Rockefellers’ involvement with BC’s forest history and H.R. MacMillan’s participation.

He begins with some background on the Rockefeller empire, the Everett Timber and Investment Company, and why the Rockefellers started investing in BC.

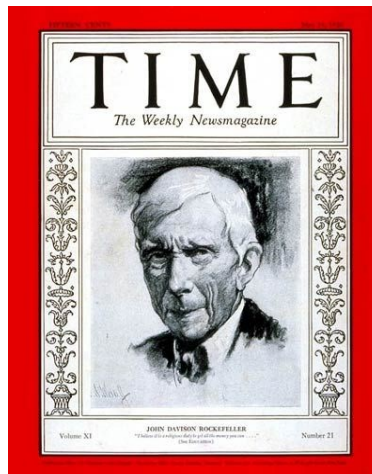
We learn about John D. Rockefeller Senior, John D. Rockefeller Junior, and Fredrick T. Gates.

Rockefeller Sr. believed *"Sons of wealthy parents have not the ghost of a chance compared with boys who come from the country with the determination to do something in this world."*

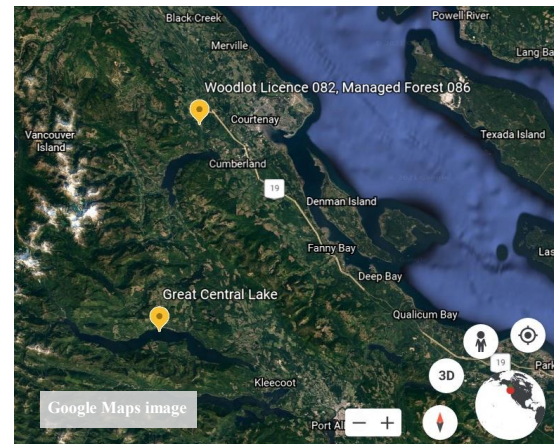
Allen points out that H.R. MacMillan was one of those “*boys*”, and goes on to provide an overview of MacMillan’s career in BC and how his growing businesses interacted with the Rockefeller holdings.

The article concludes with insights into the interface of MacMillan with the Associated Timber Exporters of British Columbia (ASTEXO), and how that impacted the directions of MacMillan’s activities.

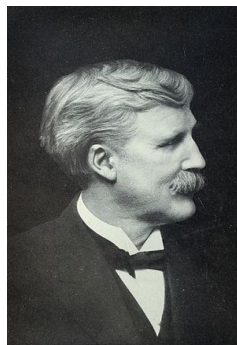
Read the [full article here](#)



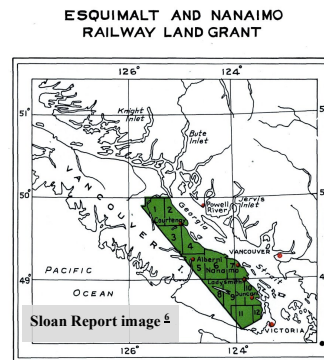
John Davison Rockefeller, Sr.



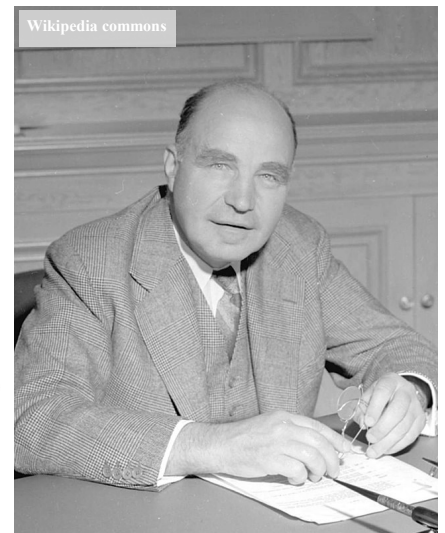
Allen Hopwood's woodlots west of Courtenay. Great Central Lake (near large H.R. timber purchase).



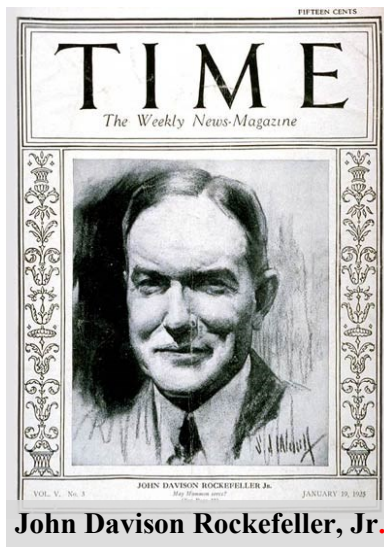
Fredrick T. Gates



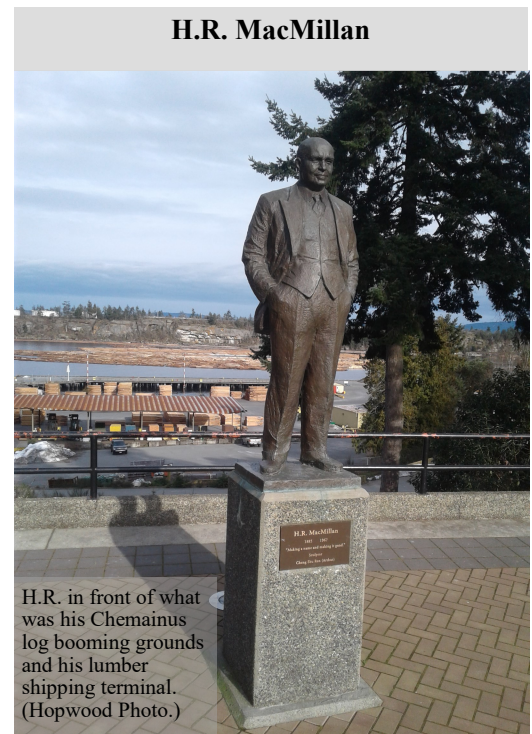
Scale=50 miles to 1 inch



H.R. MacMillan



John Davison Rockefeller, Jr.



H.R. in front of what was his Chemainus log booming grounds and his lumber shipping terminal. (Hopwood Photo.)

Who Knew? The phrase and title of this article was popularized by composer Irving Berlin and singer-dancer Fred Astaire in the 1930 film “*Puttin' on the Ritz*”.

“Come let's mix where Rockefellers walk with sticks or umbrellas in their mitts”. Watch the YouTube video here:



Book and Media Reports

... selected from our

Facebook Group Page

Over 340 members, and growing!

FHABC director Eric Andersen and others shared several links:



We've enjoyed many interesting forestry cross-posts from:

- [From Arrow lakes—log burling](#)
- [Museum at Campbell River](#) some new Forestry posts.
- [Western Vancouver Island Industrial Heritage Society](#)
 - [A Walk in the woods](#)—51 photos with comments at McLean Mill National Historic Site
- [BC Interior Forestry Museum and Forest Discovery Center](#)
- [Undiscovered Coast—northern Vancouver Island](#)
- [BC Forest Discovery Centre \(Duncan\)](#)
- Tour of Logging Camp display ([13 minute Youtube video](#))

[A BC Books Review](#): *If a Tree Falls: The Global Impact of Deforestation* by Nikki Tate

FHABC Newsletter team

Editor: Dave Florence

Committee: John Parminter, Mike Meagher, Dave Lang, Eric Andersen, David Brownstein

Submissions??: Yes, Please!

email us at newsletter.editor@fhabc.org

2020/21 FHABC officers:

President, Richard Dominy
Vice Pres., Eric Andersen
Secretary, Dave Lang
Treasurer, TBA (Pres. acting)

Eight Directors at large:

Katherine Spencer Mark Clark
Sarah Giesbrecht Richard Olak
Mike Meagher Dave Florence
Ira Sutherland Claire Williams

Webmaster: David Brownstein

(Online? [Read here](#) for more about our Directors and Officers)

Interested in helping us deliver our forest history program financially? Donations can be made [here through Canada Helps](#), with a tax receipt arriving immediately.



Printed Newsletters

We email links to both the 8.5"x11" version and the 11"x17" version of the current Newsletter to members, and invite those who want a printed version 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. But most, we hear, simply read the newsletter on their computer screen.

BC Wildfires; past, present, and future

From Editor Dave Florence. Two documents about BC wildfires crossed my computer screen recently, and led me to a few other weblinks about BC wildfire history.

The first document, [A Brief History of Wildfire in British Columbia](#), an essay by Sean Antrim, is published on an artistic website reflecting upon BC wildfires, found at <https://fireseason.org>

Mr. Antrim's essay sections are titled "Early forests, from ice to fire"; "Railroads, colonization, and forest liquidation"; "Sustainable forestry and the war on wildfire"; "Mixed uses and competing interests"; and "Accepting new realities". They cover the historical perspective nicely, and refer to an interesting read, the [Abbott and Chapman 2018 report Addressing the New Normal: 21st Century Disaster Management in British Columbia](#).

From Antrim: "Their report laid out 108 recommendations to prevent and manage acts of god related to forestry practices. A

major theme of these recommendations is collaboration and deferment to First Nations. One of the ways this policy redirection has manifested on the ground over the past few years is a resurgence of Indigenous burning, and with it, a renewed interest in the culture and knowledge has survived."

The Abbott and Chapman report and the government [Action Plan](#) provides insights into the present and future of Wildfire management, from the government perspective, which will include more indigenous input.

This second document shared with me is: [The History of Indigenous Unit Crews in the BC Wildfire Service](#), by Telise Gauthier and Jean Strong, which appears on the [BC Wildfire Service History website page](#). This 4-page essay describes the history of the growth in participation of First Nations people into the Unit Crew Program of the BC Wildfire Service since 1988.

Perhaps the Unit Crew system of the BC Wildfire System will be part of the journey to integrate indigenous culture and knowledge about wildfire prevention and management into the BC wildfire response system.

The Value of Small Field Research “Pilot Trials” (Good or Bad)

By Gerry Burch. *Extracted from our files of unpublished pieces by Gerry. An FHABC founder, Past President and frequent Newsletter contributor, Gerry was honored July 27, 2021 by the Kaatza Historical Society in Lake Cowichan BC with a permanent plaque recognising his contribution to Forestry. A Tree Frog Editorial by W.E. (Bill) Dumont, RPF, describing the event [can be read here](#).*

The period from 1945 to 1950 was very important for foresters in British Columbia. The Second World War had just ended and veterans were returning home to start their lives again. The second Royal Commission on forestry had released its far-reaching report, which recommended a new tenure for B.C., called the Forest Management Licence. This tenure called for a new look to forestry in the province; in summary, allowable cuts had to be established for each forest tenure, forest fires had to be controlled and professional foresters had to be hired. Soon, field foresters began employment with both the BC Forest Service (BCFS) and industry, mainly on the coast. But their responsibilities centered on cruising, planning and fire prevention – occupations for which they were trained and had experience.

But, for the new responsibilities of reforestation, or second-growth tending, most foresters were ill-equipped. There was some urgency for the new foresters to educate themselves by publications, experience, visits to other operations, and/or to carry out small research trials. The latter avenue was non-existent in the minds of most field foresters. Little knowledge of the activities of the federal government’s forest research lab in Victoria, or the small (understaffed and under budgeted) BCFS research section operating (in isolation) in Victoria.

Therefore, these field foresters started asking their superiors for funds to carry out research trials; but these requests were supported only if no company funds were needed. Thus, the term Pilot Trials arose, whereby field foresters, with only local support, or overtime labour by friends, and co-workers, embarked on many schemes with no promise of success. In fact, very few had documented the prime purposes, aims, or adjectives normally reserved for proper research projects.

I must admit, very few were successful. But, they ended up being fantastic learning experiences for these foresters. And, many projects were adopted, either in whole or in part, because of these hair-brained research projects, stimulated by the strong desire to solve reforestation and other problems in the early days of forest management in B.C.

A few examples will illustrate how basic some of these projects were.

One of the major hurdles facing these foresters was the Non-Commercial Cover (NCC) land in this new tenure (now called a Tree Farm Licence). These were non-stocked lands due to lack of natural tree-seeding after a fire, disease, insect attacks or past harvesting openings.



Photo courtesy of the [Tree Frog News](#), showing Gerry at a display of his autobiography *Still Counting the Rings*

Most areas were taken over by brush or deciduous species. Therefore, with no guidance from publications or other experiences, Pilot Trials were started by many foresters:

1. **Jumbo Stock:** It was a common practice for spindly or overly-large seedlings to be culled from the BCFS nurseries when stock was lifted. Foresters would go through these cull piles for jumbo stock to plant in brushy areas. They soon found out that to have a successful plantation, annual “brushing out” was required for maybe two seasons until the seedling became strong enough, and of sufficient height, to overtop the brush.
2. **Scarification:** For areas with alder saplings, foresters proposed a system of bulldozed strips 33 feet apart through these high-site alder patches and then planting three rows of seedlings on each cat track. This project was quite successful, but, expensive.

3. **Use of a post-hole auger:** For areas with a high site index, or where brush had an extensive root system (bracken), or planting of jumbo stock was difficult; a Pilot Trial was devised to use a post-hole auger to drill the holes. This experiment failed because of the heavy machinery, labour costs, and rocky terrain.

4. **Seedling Sources:** The next problem faced by these new field foresters was the unavailability of seedlings. The only nurseries were run by the BCFS; they controlled all the seed, and only grew Douglas-fir two-year-old stock. The seed unavailability problem was solved by the 1959 Douglas-fir crop year when industry joined with the BCFS in a large collection that was separated and stored in new facilities partially financed by TFL licencees. But, some licencees, such as Northwood Pulp & Paper (Doug Little, RPF) and Columbia Cellulose Co. Ltd. (Pem van Heek, RPF) installed their own company nurseries. Soon, companies began collecting cones of other species, which were also separated and stored by the BCFS.

5. **Seeding for reforestation:** The next challenge was to use seed rather than seedlings for reforestation, but trials were needed to determine the amount per acre, what chemical to use, and method of dissemination. Seeding by helicopter was widely used by forest companies in the northwest United States. Thus, a Pilot Trial with the BCFS Research Division's Mike Finnis, RPF and Bob McMillan, RPF, and a representative from the US Fish and Wildlife Service embarked on a large seeding project, which also involved the development of a seed gun to be used by a ground crew. This program failed because of failures in germination, cost, brush, wasteful use of seed, and predation by mice.

6. **Spacing:** After the planting system was selected, spacing was considered. One option was the English system of 6 by 6 feet (also used by the BCFS); another option to save costs was to widen spacing to 9 by 9 feet or more. Trials were established by many RPFs – Rod Panczyszyn, RPF was an early leader.

7. **Browsing:** The topic of browsing by deer and elk arose in these early plantations. The deer problem involved trials with chemicals, mainly by BCFS staff, and many failures occurred. The protective cages were considered too expensive to construct and remove. The problem with elk was complicated because of their size and habits. So, W.E. Binion, Divisional Forester (BCFP ?), embarked on building fences in larger openings where the herds tended to overwinter. This experiment also failed because of costs, and the tendency for the elk to simply break the wire fencing with their weight and destroy the planting.

8. **Containerized seedlings:** Soon, plantation management in BC settled on developing containerized

seedlings and bullets. Jack Walters, RPF was a pioneer in developing suitable “*plug*” stock and determining whether seedlings could be disseminated by aircraft or had to be planted by hand, which might involve the use of a specially-designed gun. Many of these trials failed, but, they laid the groundwork for the highly successful container system now in operation across Canada and the world.

9. **Thinning:** Attention soon turned to second-growth stands, and although trials in thinning were conducted by foresters, such as Verne Wellburn, RPF, and Bob McMillan, RPF, this production was not welcome at the mills. The cost was considered too high and involved more research into the effect on the ultimate yield per acre.

10. **Pruning:** Trials were begun to determine the problems associated with pruning. Led by Harry Smith, RPF, trials were set up on what diameter, height and age of trees, by what method were the trees pruned (even a portable machine pruner from Europe was involved). But again, this forest action was deemed too expensive and produced only a marginal gain in clear wood.

11. **Genetics:** The use of genetics, pioneered by Alan Orr-Ewing, RPF, led to many trials including selecting “*plus*” trees, (distinctly superior to the average); establishing graft plots, then seed orchards; stimulating pollen production, and growing “*improved container stock*” of all species in BC. These initiatives produced a world-recognized program that is reflected in over 75% of seedlings today in BC being from improved stock, and supported by a strong program by all forest tenures in the province.

The TFL tenure eventually allowed a “*stumpage offset system*” whereby the cost of an approved research trial would reduce the stumpage appraisal amount in the ensuing year by its proportion of the allowable cut (unless minimum stumpage was indicated, in which case, the offset would be 50%). Some of the above trials were accepted for forestry cost offsets, but, many were not, and had to be borne by the companies.

The purpose of this essay is to illustrate that small research trials by field foresters should be supported and financed by their employers, even though it might entail effort and costs that result in failure. But “*what a learning experience for the forestry staff involved*”. They are much better foresters in knowing what might not work, because they tried, and some failed.



PERSONNEL MANAGEMENT IN EAST AFRICA IN THE EARLY 1960S

By Conrad Smith, RFP (Ret, deceased). Early in his career, UBC-trained Conrad Smith was assigned as a Forestry Advisor to the Kenyan and later the Tanganyika Forestry Departments under the Special Commonwealth African Assistance Plan (SCAAP). His recollections of how to work with the local people illustrate the challenges faced by young BC foresters. *This concludes the series of back-filed International submissions collected by George Nagle that began with [Issue 103](#). Fortunately some new articles are coming in to continue this series, which started with the Sri Lanka story by Hugh Marshall in issue 110.*

Our UBC Forestry course did have some failings in preparing us for the harsh world of reality. One notable subject was "Personnel Selection", or how to select people to make you successful.

I had to learn through the hard knocks of experience - my own and others. For example, no one told me that drivers are critical in most third world countries, and having realized their own importance, can often be riskily independent in their driving and other habits.

When first in Kenya, I had a driver named Njaramba who was a true menace. I had to sack him. An experienced colleague Russ Dewe commented to me that Njaramba was considered to be an above-average driver and, by the laws of chance, my next driver would be worse. I retorted that I would be in charge of selecting my next driver.

My selection was Charles, who turned out to be infinitely worse than Njaramba. So, I humbly had to sack Charles. I roughly knew where Njaramba resided and I searched for a day through the local indigenous reserve lands until I located him. When I, without any explanation, offered him his old job back, he jumped at it. We got along very well together thereafter.

The general surplus of (usually untrained) labour also presented special challenges. Another experienced colleague, Gordon Jones wanted to hire a draftsman. He advertised in the national paper for a learner cartographer. On the appointed day for interviews, queues stretched for about a mile from the Forest Department offices. The first lad to be interviewed declared that he was a very good learning photographer! The next twenty applicants were equally inexperienced at mapmaking.

Gordon finally decided to take one at random from the first twenty and get rid of the queue of thousands. The selectee had to be trained, anyway, and this was almost always the case.

The Kenya Forest Department had a category of "Forest Guard". In the settled areas, they were armed with simis, short double-edged swords, which were used much in the way as a machete. However, in the Northern District, because we were up against armed Somali Bandits, called Shifta, our Forest Guards had to be armed with rifles. Trust was critical, as they would be covering your back in a tight situation. Standard procedure, when you needed to hire a couple of recruits into the Forest Guard ranks, was to send a telegram (Yes Virginia, telegrams did exist, but perhaps this shows my age) to the local District Officer saying you wanted to interview some potential Forest



Guards on a given date.

When you pitched up, invariably there were about forty people milling around in the parade square. There were usually two major groups - English speakers (generally Christian) and Swahili speakers (generally Muslim), with a smaller group of indigenous peoples with traditional beliefs. Almost without exception, the latter group provided the most hard-working, able and trustworthy guards.

These indigenous peoples were honest, would work every day of the week and you could give them a rifle and trust them to guard your back. It seemed that the history of British interaction with the main tribal and religious groups had generated bad habits and deadly forms of mutual mistrust. The battle(s) for independence had gone on for a decade, and the first elected government of Kenya was forming under Jomo Kenyatta.

Later, in Tanzania, I had to develop forest classification systems for various areas of the country. Most of the areas had road or cross-country travel access. In one significant un-roaded area, I went on three fifteen-day foot safaris checking out the forest against aerial photographs.

As I needed porters to carry the needed gear. I sent a telegram (Oh, my age) to the local District Officer asking for some candidates to be available for selection. Again, forty or so chaps arrived, milling about in the parade square. Being somewhat more experienced in matters of Personnel by then, I lined them up, single file, went quickly down the line and selected a dozen stalwart men and one wizened up little old man from the assembled group.

My hidden selection criteria were - their feet. If they wore shoes, I would not hire them. These were village or city dwellers who would most likely not stand up to the

rigours of the long march. I would only hire barefoot men. They were from the bush and experienced in bush affairs.

Then I would ask the selected crew to choose their leader. There would be five minutes of arguments and, assuredly, the wizened-up little old man would get pushed out in front as their leader. This was important because he was an "elder" and the rest would follow his command. Also, he was a survivor, and I wanted him immediately in front of me while we were on a route march. I would instruct him to carry my binoculars and lead the way. The rest were to carry the gear of food, tents, photographs and so on, while I carried my double-barrelled .450 rifle.

The mob would want to head out the next morning, but I would insist on getting started right away. Against all kinds of grumbling, we would get a mile into the bush and pitch our first camp. The crew were close enough to the fleshpots that they all took off for the indigenous reserve lands, bid their women folk goodbye, picked up gear that they had forgotten in the initial rush of trying to get off. They would be back for a 06:00 start to our safari. If I had agreed to leave the next day, they would still have been rounding up their gear by noon.

I had a wonderful time. Fifteen days without a word of English spoken, only Swahili. Every hour, on the hour, until 18:00, I would call a halt and inspect my photographs and make notes on the prints as to what kind of forest we had been going through.

One became attuned to the crew. Once, while going pad, pad, pad down the trail, I noticed that the little old wizened-up man's right foot was up in the air. I also noticed that my right foot was up in the air, I sensed that, behind me, there were thirteen right feet up in the air.

Across the trail was a branch. On the branch was a pencil-thin, foot-long, snake. It was banded white, orange, black and red (a banded Krait). Time went into that slow-motion cadence used by scary film directors. The little old man very carefully reached out with his panga (a short and better-balanced version of a machete). With a slow and deliberate aim, he took the snake immediately behind the head. The snake fell to the ground. The little old man carefully put the front of his panga under the snake and flung it into the bushes. His bare right foot hit the ground, my right foot hit the ground and thirteen bare right feet behind me hit the ground and we were on our way again without a word being said. Obviously a good choice of leader.

On the second of my three foot safaris, on the fourteenth day, we were headed down a valley and I could see on my photographs that we were within reach of the indigenous reserve. I could feel the pace pick up a bit in anticipation of the fleshpots ahead. I had no desire to go into the indigenous farming areas as there was no forest left there. So, I decided that we would divert at right angles to the run of the valley and go up over a ridge and down towards the adjacent valley, which was where we could come out

to our starting point.

The crew were adamant that there was no way over the ridge. However, I could see on the photos that there was a way and further, that there were three huts in a clearing right on the top of the ridge. Also, I could see that a half-hour further on, was a gully with clean water. As the Boss and paymaster, my wishes ruled.

Up and over the ridge we went and down to the gully, where I set up my camp. For myself. The crew requested permission to backtrack to the huts we had passed as they knew there would be local beer available there. I was agreeable, so I spent the night totally alone.. Well, not quite. At dusk, the fireflies came out - in a patch probably thirty feet in diameter. In their thousands, they provided light enough that I could read my photos.

What a way to end a long safari, with a well-chosen crew.



From ABCFP Spring 2020

Conrad was born in Nelson, BC. He attended the University of British Columbia and graduated in 1961 with a BSF. Conrad began his working life with the BC Forest Service and soon moved to international consulting, which continued until his retirement.

Since 1963, Conrad worked on projects in 18 countries: Scotland, Kenya, Uganda, Tanzania, Sudan, Zimbabwe, Somalia, Gambia, Iran, Ecuador, Brazil, Peru, Chile, Belize, Dominica, Indonesia, Papua New Guinea, and Myanmar. He worked for several consulting firms: C D Shultz, Charnell and Associates, SNC Cellulose, and General Woods and Veneers.



Conrad Smith RFP (Ret)
Life Member # 537
Dec 15, 1937– Jan 5, 2020

Conrad also worked for a number of governmental and international organizations: External Aid Department for Canadian Foreign Affairs, Canadian International Development Agency, Food and Agriculture Organization of the United Nations, Asian Development Bank, Commonwealth Secretariat – Commonwealth Fund for Technical Cooperation, Government of Zimbabwe, U.S.Aid, and Government of Papua New Guinea. Conrad met and married his wife of 54 years, Pamela, in Nairobi. In the early 90's Conrad and Pamela settled on Pender Island and they divided their time between Pender Island and Thailand.

Book Reviews and Commentary—Canada's Greatest Forester?

By Allen Hopwood, RPF, Courtenay BC, who has written several articles for us recently. At our request, Allen looked at two books about **Gerry Andrews** that we suggested for review. While doing so, he became curious about Andrews' reception upon his return to the Forest Service in 1946 in the era of C.D. Orchard, F.D. Mulholland and I.S. Mahood, and shares with us some personal conclusions about the relationship between those four significant foresters. The books:

- **A Man & His Century: Gerald Smedley Andrews, Teacher, Forester, Surveyor, Engineer, Author, Artist, Surveyor General of British Columbia** by Mary E. Andrews & Doreen J. Hunter. 2003. Koinonia Christian Books. 56p. ISBN 0-9734349-0-2.
- **Furrows in the Sky: The Adventures of Gerry Andrews** by Jay Sherwood. 2012. RBC Museum. 239p. ISBN 978-0-7726-6522-5.

Although not written by professional biographers, these two books are extremely valuable pieces of history. They tell of a remarkable man and the surveying technology he helped develop and apply, which facilitated the transformation of BC's infrastructure and forest management programme and assisted in winning a world war. They tell of a man's century of life which coincided with the 20th Century: a remarkable, likable man and an amazing era for BC.

A Man and His Century was written by his daughter as well as the wife of one of his co-workers. Naturally, it is the more intimate of the two biographies. It is a nice, brief presentation of Andrews' life and times, public and private. This book makes up for its brevity with graphic and personal illustrations, including drawings by Andrews himself.

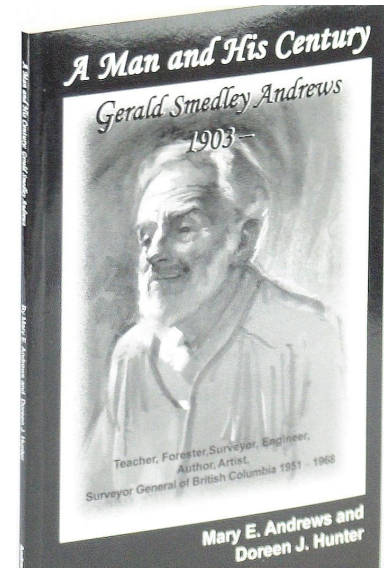
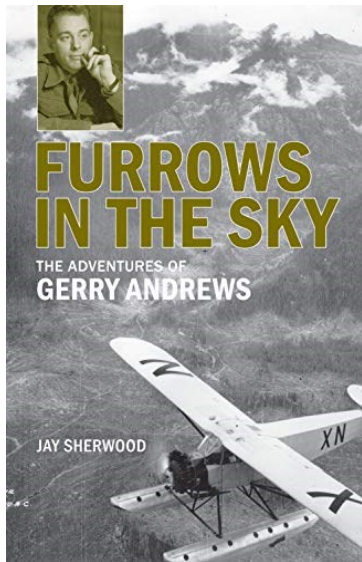
*Furrows in the Sky*¹ is a more complete rendition which benefits from thorough research as well as full cooperation from family, associates/friends (they were usually one and the same with Andrews), and Andrews himself. The illustrations are excellent. This book was written by Jay Sherwood, a retired school teacher and former surveyor, who previously produced three photo journals covering the legendary Frank Swannell's career and edited a memoir from the Bedaux Expedition. The Royal BC Museum deserves much credit for sponsoring Sherwood's biography.

Andrews' engaging and committed personality comes across in both biographies. He was a demanding leader who was loyal to his staff. He took unfeigned interest in his subordinates and was respectful to his superiors. As a civil servant he was dedicated to the public good. Throughout his life he made lasting friendships with people from all walks of life: "...Gerry's interest in people and his ability to converse with almost anyone was one of the character traits that endeared him to so many."

My criticisms are minor: both books tiptoe around controversy and they could use some maps to show the complexity and scope of the surveys for which Andrews was responsible.

Over a long, productive life (1903-2005), Gerry Andrews practiced four professions: school teacher, forester, surveyor and engineer.

He was a great forester, possibly Canada's greatest. The



only other Canadian forester of comparison is H.R. MacMillan. After you have read this review and both books, I bet that you will agree with me. Oddly, Andrews has received neither honour nor recognition from the forestry profession.

Born in Winnipeg, Andrews attended High School in Calgary and experienced the lure of the mountains. His science teacher suggested forestry as a career which would combine "*intellectual challenge with life in the outdoors.*" To earn enough money to study forestry he first took the shorter educational path to become a school teacher. After four years of teaching in tiny schools in BC's hinterlands (with summer packhorse trips thrown in), Andrews studied forest engineering at the University of Toronto (1926-30). After graduating he was given his first outdoor intellectual challenge: field survey party chief with the BC Forest Branch's Surveys Division, headed by the now renowned F.D. Mulholland.

A year later, Andrews was put in charge of a 20-man crew which was to survey the forest resources of two valleys near Kamloops. Andrews wanted to incorporate photogrammetry into the survey using "*borrowed*" RCAF air photos. Initially F.D. was skeptical. He told Andrews that the only way to map the forest was "*to get out and see it.*" But he respected Andrews enough to allow him to plot his photos in his spare time and use them to prove the worth of this new applied science. Once F.D. saw the efficacy and cost-savings he became a devotee of Andrews and the technology.

The Great Depression forced the Forest Branch (it did not

become the Forest Service until 1945) to give some of its staff, including Andrews, "*indefinite leave without pay*" (1933). Somehow he got a \$500 bursary from the Imperial Forestry Institute at Oxford where he briefly studied photogrammetry before attending the Forestry School at Tharandt, Germany whose curriculum in photogrammetry was "*state of the art.*" Just as his finances ran out in early 1934, he was able to resume his career with the Forest Branch where he applied his cutting-edge knowledge in aerial surveying. He also convinced the Forest Branch (i.e., F.D.) to buy an "*air camera*" and proceeded to survey various parts of the Province and to adapt and improve techniques (he was called a "*demanding perfectionist*"). He later became a BC Land Surveyor, articling under Frank Swannell.

When WWII broke out Andrews reported to the Royal Engineers Air Survey Training Centre, but it took the British and Canadian Armies until 1943 to put him where he belonged – he was made commander of the Canadian Army's Aerial Survey Liaison Section. He arranged the production of a special aerial camera and developed greatly improved airphoto technology and equipment.

His unit was chosen to prepare detailed hydrography of the approaches to the Normandy beaches for the D-Day invasion. This required adaptation of the "*classic*" technique of correlating the velocity of waves approaching the beach with the depth of the water below. One hundred hydrographic profiles were produced for 20 miles of beach (all from U.S. airphotos which he said were taken by obsolete cameras and techniques).²

For his war efforts, Andrews was elected to the Royal Geographic Society and appointed to the Most Excellent Order of the British Empire. He was demobilized as a Lieutenant Colonel. But before his discharge he was sent on a 4-month mission to study military surveying procedures and to examine civilian survey and mapping set-ups throughout the world (15 countries). He not only learned; he provided expert advice along the way. His report detailed methods, equipment, training, and efficiency. By the end of this mission, he was undoubtedly the world's foremost expert in photogrammetry and aerial photography (theory and practice).

On leave in Victoria in the fall of 1945 Andrews visited the Forest Service and was told that he would have to resume his career in the junior position which he had held six years before. He would get neither an increase in pay nor credit for his time in the army. And to this blatant insult was added rejection: Andrews would not be resuming his work in aerial surveying.

Fortunately the Deputy Minister of Lands was familiar with his capabilities and offered him the position of (BC's first) Air Surveys Engineer in 1946. Reluctant to leave the Forest Service but frustrated by outdated policies,

Andrews accepted a transfer to the new position, later writing, "*By accelerating the basic mapping of BC and the wide use of air photo intelligence, I was able to contribute far more to forestry and other resource developments than would have been possible had I followed an orthodox career in the BC Forest Service.*" Amen.

For the next 22 years, he played a leading role in the herculean task of mapping every square mile of BC and many regions of Canada.

In 1951, he was appointed Surveyor General of BC and served as Provincial Boundary Commissioner. Over his 17-year tenure, he set up an integrated control system enabling a single datum for BC's various levels of mapping, thereby providing the basis for today's Geographic Information Systems. For more details, see his article, *The Makings of a Surveyor General*, in *The Link* (Journal of the Corporation of Land Surveyors of BC), Vol. 13, No. 2, July 1989.³

From 1946 to 1970 BC was transformed by a myriad of private and public infrastructure projects in a wide range of sectors and locations. Most of these projects required special surveys managed by Andrews. Here are the assignments which he rated as highlights: Right of Way surveys of the Hart and Alaska highways; Crown Land Alienations; Provincial boundaries on the east and north; triangulation control of petroleum exploration and tenures; standard topographic mapping and detail surveys of hydro power schemes at Hudson Hope; the 1948 Fraser River flood survey; the Wenner-Gren project in the Peace River; and the 1965 Hope-Princeton Highway slide.

After retirement from the BC Government he became an historian and served the BC Historical Federation.

So what do the two biographies politely avoid about Andrews' return to the Forest Service in 1946? Why would the Forest Service purposely and rudely reject not only the expertise of the world's authority in a field vital to surveying, mapping and inventorying the Province's forests, but also his proven ability to lead and manage?

The answer cannot be strictly attributed to ignorance; rather, it seems to lie with two of BC's iconic foresters: C.D. Orchard and F.D. Mulholland, who were anything but compatible.

C.D. Orchard joined the BC Forest Branch in 1920 and held increasingly responsible positions in surveys, protection and research until his appointment as Chief Forester in 1941 and Deputy Minister and Chief Forester in 1945. He retired in 1958.⁴ Orchard was the designer of BC's dubious form of sustained yield and the still controversial forest tenure

(Continued on page 10)

(Continued from page 9)

system built around it.⁵ He steered the forest industry through two Royal Commissions and introduced Tree Farm Licences (originally called Forest Management Licences) and Timber Supply Areas (formerly called Public Sustained Yield Units). He managed to avoid implication in the bribery scandal associated with the award of some early licences. However, he is blamed by many for the concentration of cutting rights, demise of competitive log markets, and marginalization of small-scale logging and sawmilling companies.⁶

In 1967 the Canadian Institute of Forestry presented Orchard with its first Canadian Forestry Achievement Award for "*dedicated and dynamic administrative leadership.*"

F.D. Mulholland also joined the Forest Branch in 1920. From 1925 to 1938 he was in charge of forest surveys and inventory. He was never shy about offering his many ideas for improving forestry practice and administration. In 1937 he authored *The Forest Resources of British Columbia* which not only documented the province's forest inventory but also raised concerns about unsustainable harvesting: "*a shocking lack of restocking or new growth in cut-over lands,*" and particularly poor practice on private lands. In the same year he arranged for himself ("*largely at his own expense*") a forestry tour of Europe. The report and tour produced strong demand for speeches, each of which he concluded by proposing improvement to the Forest Branch's policies. This got him into hot water with his Minister and Deputy Minister who first muzzled him, then reported that he "*was on extended leave,*" likely a "*euphemism for having been fired*" (or else he "*resigned out of frustration*").

Just after Mulholland left the Forest Branch in December 1938, a group of foresters convened a "*retirement party*" for him. Orchard neither attended nor sent regrets.

Mulholland then worked on land use surveys for the Department of Lands until 1944 when he became Chief Forester for Canadian Western Lumber Co. (later Crown Zellerbach of Canada).

Mulholland strived for years to bring about the formation of the Association of British Columbia (Professional) Foresters and was its first President (1947). Orchard was its second.

Lest there be any thought given to the possibility of some manager other than Orchard being responsible for humiliating Andrews and adopting anti-photogrammetry policy after WWII, note that Orchard "*almost single-handedly determined the Forest Service's role throughout his tenure.*"⁷

Ian Mahood, who served under Andrews in the Aerial Survey Liaison Section, emphatically stated that jealousy of Andrews' "*great abilities combined with the fact that he was a protégé of Mulholland*" put him on Orchard's black list and resulted in the "*petty action*" after the war.

Mahood called FD "*the father of air survey in British Columbia*" for his "*development of air photographic mapping*" and stubborn insistence on getting it funded and implemented. Mahood elaborated:

While air photography and mapping were pre-war intelligence tools, the science was underdeveloped and not adaptable to mass production technology under battlefield conditions. It was British Columbians who pioneered and expanded military technology for use in sight and sound of the guns and bombs. It was a British Columbian (Andrews) who led the First Canadian Air Survey Company. That we could establish the objective of "a map a day the day needed" and make it work was a singular achievement, much of it shaped by the forest survey technology pioneered in BC.

On the home front, F.D. Mulholland, forester and wounded veteran of World War I, who had fought to establish air survey technology, could smile with pride. In the face of appalling odds caused by the disinterest of Chief Forester Manning and the obstruction of C.D. Orchard, F.D. had obtained an allocation of money for the development of air survey technology. He was well pleased with his boys from the Forest Surveys Division of the BC Forest Service. If Mulholland had been lazy or uncaring, and not so endowed with perseverance, the bureaucracy of Government would have defeated him and many Canadian names would have been added to the casualty lists. Wars have unsung heroes; F.D. Mulholland is one.

Later, it must have galled Orchard when:

- The Forest Service's Base Maps Section (18 staff members) was transferred to Andrews' department in 1948.
- "*The Forest Service remained the major government user of (Andrews') aerial photography....*"
- Funding for much of the aerial photography produced by Andrews' department came from the Forest Service's budgets.

Gerry Andrews, a forester, spent many years in the BC Forest Service and pretty well everything he did in his career had some bearing on forestry practice. He received an Honourary Doctorate in Engineering from the University of Victoria (1988), the Order of BC (1990), and the Order of Canada (1991). Engineers and Geoscientists BC and the Professional Land Surveyors of

BC have honoured him with numerous awards and even got a mountain named after him. There is a noticeable lack of recognition from the CIF, ABCFP and UBC. I did not have the good fortune of knowing Gerry Andrews, but I encountered him at the Association of BC Professional Foresters' Recognition Breakfast during the 1982 Annual General Meeting in Victoria. The Association sponsored these get-togethers for Life and Honourary Members as well as Distinguished Foresters and Past Presidents. I took away a lasting impression, reinforced by looking up his résumé. When coffee was served, Andrews mischievously pulled out an old red sock containing a mickey of over proof rum and poured everyone a tot. I learned from Sherwood that he had a tradition of bringing a libation in his famous red wool sock on his annual visits to his field crews.

Has any other Canadian forester contributed more to the practice of forestry, his province and country?

SOURCES

Breadon, Robert E. 2017. A History of the British Columbia Provincial Forest Inventory Program Part Two, The Pogue Era: 1940-1960.

Burch, Gerry & Parminter, John. 2008. Frederick Davison Mulholland P. Eng., B.C.R.F.: The Father of Sustained Yield Forestry in British Columbia.

Griffin, Robert & Hammond, Lorne. 2014. Stewards of the People's Forests: A Short History of the British Columbia Forest Service.

Knapp, F. Malcolm. 1971. The Founding of the Association of British Columbia Professional Foresters.

Mahood, Ian & Drushka, Ken. 1990. Three Men & a Forester.

Moss, Alan. 1971. A History of Forest Policy & Administration in British Columbia.

Orchard, C.D. 1959 (December). Preposterous Prognosis. Forestry Chronicle.

Schmidt, Ralph L. 2016. A History of the British Columbia Provincial Forest Inventory Program Part One, 1912-1940.

NOTES

1 The title came from a 1942 article Andrews wrote in *The Geographical Journal* describing a typical day of aerial photography in BC: "*The routine goes on, ploughing photographic furrows up and down the sky....*"

2 Mahood described post D-Day efforts: "*Shortly after D Day, our survey company with its significant component*

of British Columbians, landed on Normandy Beach and moved in close support of the advance eastward to cross the Rhine. In battlefield conditions, using mobile generators to power instruments, photo processing, drafting and printing equipment, we supplied almost instant photographs and maps to forward field commanders. Nothing like this had been done before and our success was tremendous. In about sixteen months of unremitting toil – from late 1943 until the wind-down of hostilities – the First Canadian Air Survey Company made 428 maps, all dealing with the advance across Normandy Beach through France, Belgium and Holland, then over the Rhine into Germany. In addition, we made maps for deviations from the path of Canadian troops. We did work for Americans in France, and for the British and Canadians who cleared the Germans from the Walchern Islands to replace the long, slow movement of supplies overland from Normandy and Cherbourg."

3 According to Mahood (not prone to unwarranted praise), Surveyor General Andrews "*modernized and reshaped land survey procedures... and became known as one of the world's greatest innovators of modern technology in the science of surveying. His record of professional and military service to his home province is not widely known. In retirement he continues to contribute to his profession Like most ...foresters, he has a deep love of (BC).*"

4 I found no biography of Orchard. His memoirs are in the BC Archives. His biography would make a fascinating and extremely worthwhile contribution to BC's forest history. A FHABC project?

5 Mulholland is called "*The Father of Sustained Yield Forestry in British Columbia*" by his biographers who say he should be recognized as the originator and spokesman for promoting and pioneering its development in BC. But Orchard and others also "*espouse(d) the merits of sustained yield forestry and deserve credit for implementing the concept in ensuing years.*" F.D. was not a fan of Orchard's approach to sustained yield.

6 Orchard believed that small-scale sawmillers and loggers needed big corporations/licensees "*to carry them*" and that anybody who thought small-scale operators could survive any longer on their own was "*suffering from a peculiar brand of psychopathic nostalgia.*"

7 Orchard is not named in either biography. The RBCM expedited the publication of Sherwood's book so as to coincide with the centennial of the BC Forest Service. Surprisingly, there is no mention of Andrews in the RBCM's history of the BC Forest Service written by Griffin & Hammond, published in 2014.





Membership: New or lapsed member?

\$20.00 annually, or three years for \$50.00

To join, or renew Membership by email and e-transfer:

- 1 Print a membership form from the website, complete, scan and email it to us at info@fhabc.org
- 2 Send an electronic fund transfer of your dues (\$20/year, or \$50 for 3 years) to treasurer@fhabc.org

To join, renew, or correspond by mail: *Print a membership form from the Forest History Association of B.C. website, complete, scan and mail, 427 Walker Avenue Ladysmith, BC V9G 1V7 along with your cheque made payable to "Forest History Association of BC".*

Research responses now recorded

From time to time FHABC receives questions from museums, archives or individual researchers. Various volunteers help prepare an answer. We use email to contact members we know have knowledge and interest in the topic, and sometimes use our Facebook group to continue the conversation.

When resources permit, we summarize the results and present them to our members and readers in various ways:

- a summary file on our website, linked to [the index](#);
- an abstract in our newsletter linked to our summary file;
- a posting on our Facebook group.

One topic handled in this way recently was a query from the Chase & District Museum & Archives Society in July 2021 regarding BC Forest Fire Lookouts at Squilax Mountain and Tsalkom Mountain.

We received responses from John Parminter and Eric Andersen; the summary by Dave Florence can be [read here](#).

In issue #108 we described the [Woss Heritage Park developments](#).

The project manager at Regional District Mount Waddington reports that this year WFP donated additional pieces to join the steam locomotive, and they plan to paint them. Interpretive signage will follow. Thanks to "low-light" Mike Bonkowski for this and so many photos recording railroad history on Vancouver Island. Check his photos out on [Facebook](#) and [Flickr](#).



Page 12 #111 Sept 2021

Upcoming Events

Sep 19-25 [BC Forest Week](#) and [National Forest Week](#)

Sep 25-26 - FHABC Virtual AGM weekend. AGM 10-12 Saturday - see page 1

Sep 22 10th annual [National Tree Day](#) (Tree Canada charity)

Oct 6-7 CIF-IFC [2021 NATIONAL CONFERENCE & 113TH ANNUAL GENERAL MEETING](#) "Rooted in Resilience". (Hosted in collaboration with the CIF-IFC Cariboo Section.)

Oct 7, 14, 21 & 28 BC Museum Association [2021 Virtual Conference](#), co-hosted by the City of Surrey.

Jan 12 – 14, 2022 [TLA Convention](#)

Archives Spotlight

By Claire Williams [Forestry Archivist](#), UBC RBSC

In honor of the upcoming Listening Party at the Annual General Meeting (*see page 1*), we're spotlighting the Bruce Devitt fonds. This fonds consists of records related to Bruce Devitt's activities in the field of forestry in British Columbia as well as his public service in managing critical environmental issues in the Pacific Northwest. The fonds includes news clippings, research papers, letters, transparencies for presentations, meeting minutes, and photographs documenting forestry practices in British Columbia. You can view the full finding aid for the fonds here: <https://rbscarchives.library.ubc.ca/bruce-devitt-fonds>

Want to explore more forest history at the archives? Rare Books and Special Collections Library at UBC Vancouver Campus will be re-opening when covid regulations permit. Check out a range of forest-history related materials listed on our Research Guide here: <https://guides.library.ubc.ca/foresthstoryandarchives/home>

Next Issue: Dec 2021

- Items chosen by the new editor

- - Your Story?

• Contact us at

newsletter.editor@fhabc.org

Website: fhabc.org

