

# THE LOGJAM

SEPTEMBER 2022



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# OUR BOARD & MISSION

***The Woodlot Association of Alberta's purpose is to promote leadership in sustainable forest management by encouraging the development of Private forest by increasing awareness of their inherent social, economic, and environmental values.***

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# PRESIDENT'S REPORT

*by Bob Cameron*



I became the President at our June AGM. Thank you to our previous President Laval Bergeron for his many years of service. Eight years to be exact. He had indicated in 2021 he would like to resign but offered to continue for another year when no one else wanted to accept the job. Rather than have him face the same possibility again I offered to take on the role. His wife Monique has also indicated she wouldn't continue as LOGJAM editor so Tara Jamison has offered her services as well as being the Treasurer.

The board is considering offering an electronic version of the LOGJAM to those who can receive it by email to help lower the substantial mailing/printing costs. You'll see the questionnaire about this included.

Last year we surveyed members to get their interest in participating in the Federal Government's 2 Billion Trees program. About 1/3 of you replied. Applying on our own wasn't fruitful but we are now under the Alberta Woodlot Extension Society wings with other organizations. There should be a public announcement shortly. Our survey gave us numbers on area available to plant and locations but there are variable densities from infill planting in riparian buffers to fully stocked to provincial reforestation standards. You'll see an additional question about your interest in participating if you haven't indicated an interest already.

While the Federal government seemed to struggle getting the program off the ground, Mother Nature was hard at work. In response to last year's intense heat in early summer almost every spruce tree in the province produced a huge cone crop this year. The last few weeks of dry heat has seen cones begin to open and spruce seeds are dispersing widely from the cones on tree tops each windy day. A flat surface in my yard yielded 10 per square meter. There are more than enough to disperse yet to account for the winged and wee four-footed seed eaters' consumption. The tiny first year seedlings won't be very obvious next year but in 2024 there'll be lots of seedlings in some surprising places downwind especially where you've scuffed the surface by dragging something behind your quad, side by side or tractor. Once you see the resulting crop you won't be wanting to go that way again.

I'm not lucky enough to have hazelnuts in my poplar understory so I've been out on crown land where they are. Hope those of you who have are able to harvest some before the chipmunks and squirrels do. Thankfully, there are still some really sweet slightly wrinkled saskatoons to eat while searching for hazelnuts along with big bunches of chokecherries to make delicious pancake syrup.

# AGM NEWS

*by Rick Keillor*



The AGM for the past year was held June 10/2022 at the Whitecourt Forest Interpretive Centre. And it was an in-person, face to face meeting! Technology is wonderful, but old fashioned was a welcome change. All current directors, save one, were able to attend, as well as about 25 members.

Regular business was conducted, which will be reported in the AGM minutes to be approved at the next AGM in June 2023. If you didn't, or couldn't attend, you will have to wait a whole year to get the complete details.

President Laval prefaced his report and subsequent dialogue with an excellent lumberjack joke (you will have to ask someone who was there!).

The financial report was not exciting, but yes, we still have some funds (about \$10,000). The new Board will be reviewing the discussion and grappling with the perpetual problem of funding. Paid memberships currently stand at 176. To check on YOUR current membership status, and be sure you are counted in that number, contact director Linda Nagge. If not current, the problem can be solved with a stroke of a pen (on a cheque) and, of course, if you know anyone who has trees, ergo a woodlot, ask them to consider, joining our friendly, and valuable organization. If you are a member of long standing, and have achieved the milestone of 75 years, you can receive a lifetime, and subsequently free, membership. Members Pieter Van der Schoot and Elton Kauffman qualified this year. While on the subject of membership. We should honor the passing of two long time and long serving members- Mr. Joe de Franceschi and Mr. Harry Krawchuk.

There were two presentations at the AGM. The first was by Megan Andre, Executive Director of Albert Woodlot Extension Society (AWES). They work with municipalities, landowners, and other organizations, to promote forested land and associated values on the landscape. For example, AWES recently acquired some corporate funding to apply to restoration projects on Private lands. They are also trying to access the Federal 2 billion Tree Program to help landowners plant trees on private lands. Many of the interests in the AWES mission correlate with those of WAA. We were happy to accept Megan as a new WAA Board member. Similarly, WAA is providing representation to the AWES Board. Both organizations see this as a process of cross pollination for mutual benefit.

The second presentation was from Toso Bozic, CEO of ATTS Group (a private consultancy), and formerly with GoA, and also with a long history of woodlot and forest extension work. As part of a wide-ranging presentation and lively discussion, he reviewed a report, commissioned in 2011 through AWES, which inventoried the amount

of forested land (deciduous and coniferous) in each rural municipality in Alberta. Forest companies, who are required to report the sources of their wood, take about two million cubic metres of wood from private lands each year. Perhaps this is an inventory that should be redone 10 years later, considering the impacts of continuing forest harvest, aspen dieback, other tree diseases, climate change effects, and agricultural conversion and clearing. Toso also informed us of an increasing Spruce Beetle problem – a pest which results in similar fungus issues as caused by the Mountain Pine Beetle, and how it appears to be spreading southwards. And so much more....!

Byron Grundberg (member of the Woodlot Management Committee along with Denis Quintillio and Gordon Kerr), spoke about the new application template. This is to be used by woodlot owners wanting to register their woodlot using a management plan which is in compliance with regulations governing commercial agricultural enterprises.

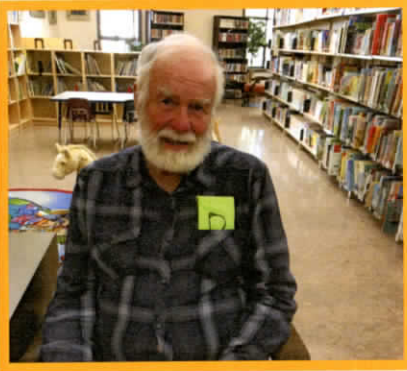
A short executive meeting followed the AGM adjournment. Bob Cameron was nominated for President, while Rick Keillor as nominated as Secretary. Both accepted the honour, so you are stuck with us for the next two years.

Lastly, after the meeting, many attendees drove to the Darwell area, where Denis Quintilio and his wife, Leanne, gave us a tour of their active woodlot, and graciously provided refreshments and good conversation. However, this will have to be reported on by someone else at another time.



# MEET THE BOARD

*As a way to welcome our new members, we've launched this new series where we'll introduce you to our board members, their history, and what led them to joining our association.*



**PRESIDENT**

Bob Cameron

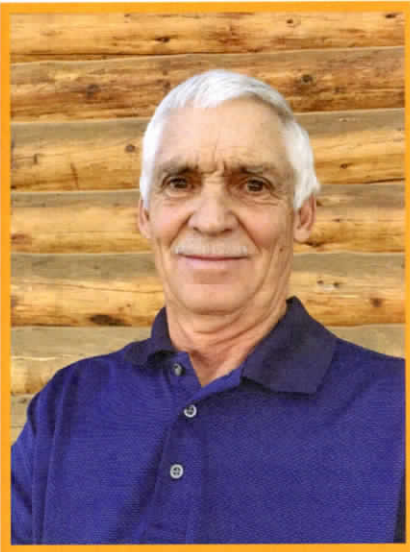


**I was born in Edmonton in 1948. Moving east at the age of three my forest experience began in the Great Lake Forest as the suburbs of Toronto expanded to engulf the fascinating white pine and hardwood forest. Moving to Riverview, New Brunswick in grade 7, the Acadian Forest was right at the edge of our subdivision and I headed to the bush after school and on weekends. Returning to Alberta every summer on the CN train across the breadth of New Brunswick, Quebec and Ontario forests provoked an interest in a career in biological sciences.**

**Three summers in Banff working in restaurants after high school led to an application to Biological Sciences at NAIT. I enrolled in the more outdoor oriented Kelsey Institute, Saskatoon, Renewable Resources Technology program in 1971, specializing in Fish and Wildlife. Luckily, Vance Stewart, the professional forester who ran the program ensured that students specializing had sufficient forest science and practical technical skills. After one summer as a student and three years as a fisheries technician for the federal government in the NWT I began timber cruising and regeneration surveys for the Alberta Forest Service in 1976.**

**I purchased my Debolt area 1/4 section with it's 115-acre woodlot the same year. In 1981, I began harvesting on my woodlot and processing the harvested wood with a Morbark post and pole peeler and a one man Mobile Dimension Sawmill. After the woodlot wood was used, I got Local Timber Permits and began portable custom sawing up to 60 kms from home. Sawing for inventory to sell was not as successful as custom sawing.**

**I became a member about 7 yrs. ago when the Woodlot Extension Society and the Alberta Woodlot Association shared a booth at the Grande Prairie Ag show. Although timber processing paid the bills and provided lumber to build with and firewood to heat my home, non timber values like watershed protection and wildlife habitat are the main benefits I realize from my woodlot. I'm really interested in reaching out to mentor a younger generation to steward private forests into the future. And as you may have noticed in your part of the province, there's more than a few new bandsaw mills about given the high prices at the lumber yard.**



**VICE PRESIDENT**

Larry Nofziger



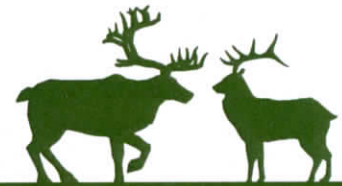
I was born in Oregon in 1949 and grew up there on a mixed farm where my father grew grain, grass for seed, and raised small livestock. Christine and I were married in 1974 and came to Alberta two years later, soon settling on a quarter section which has been our home ever since. A few years later we bought an additional half section, so now our woodlot consists of all that land, 480 acres, 45 km's southwest of Beaverlodge and 14 km's from the BC/AB border. The timber on our woodlot is mainly mature aspen. We have a 48" circular sawmill that hasn't ran in more than a decade, but "back in the day" we cut pipeline skids, 3" planks, and dimensional lumber for the local market.

We joined the WAA in the late 1990's and now I have been serving as Vice President for about 9 years. It won't be long until I'll be requesting a lifetime membership! Our woodlot was a beneficiary of the tree planting program that the WAA administered in 2009 and 2010. Thanks to that program, our driveway now bisects a pine forest instead of a field of hay, and those 13 year old trees are up to 7 meters tall.



**MEMBERSHIP COORDINATOR**

Linda Nagge



I have been the WAA membership coordinator for about 2 years. I was raised in the Peace country and our family currently lives in the Grande Prairie area. My favorite place to be is out in nature! Our woodlot is located near Nampa, in the beautiful Peace River region.



**TREASURER & LOGJAM EDITOR**

Tara Jamison

**I grew up on a cattle farm in the woods southwest of Beaverlodge. My parent's farm is the last bit of private land before crown land to both the west and south, so in addition to their land, we had what seemed like an endless playground. I suppose you could have called my siblings and I, 'free range children' as we were always outside exploring and coming up with creative ways to entertain ourselves, which certainly sparked my love for the outdoors.**

**After high school, I moved to Edmonton to pursue a degree in Biological Sciences from the U of A. I now co-own and manage a Forestry and Environmental consulting company based in Edmonton but work all over the province. As a Wetland Professional, I focus primarily on biophysical site assessments, wetland science and regulatory approvals.**

**As I grew older, I recognized the importance of providing my childhood experience with nature, to my own children. In 2020, my partner and I purchased 480 acres of land near Smith, Alberta, which we named Sandhill Woods in ode to the pair of Sandhill Cranes that has made it their home. Over the past two years we have planted 53,000 seedlings in efforts to bring some of the fields back to forest. So now my daughter and I get to spend our days doing our favourite things, bushwhacking, wildlife watching and encouraging our trees to grow!**



**Sandhill Woods**



### Introduction

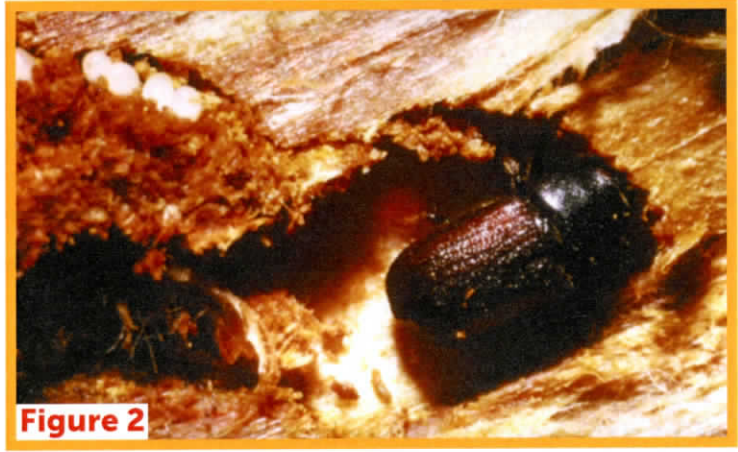
We have all heard and read about the infestations of the mountain pine beetle (*Dendroctonus ponderosae*) that have been killing pine trees during the past several decades in Alberta. Tree mortality losses attributed to this beetle have been on-going since at least 1976. Prior to 1976, this forest pest was unknown in Alberta except for a brief period during 1940 to 1944, when it invaded the Bow Valley in Banff National Park. The epidemic infestations that subsequently developed in both British Columbia and Alberta were aided in part by a combination of events including effects of warmer dryer climatic conditions, and also by the preservation of extensive mature pine forests that were protected through wild fire suppression management over the past 80 years. It's the mature and over-mature pine forests that are most vulnerable for attacking beetles, since they provide the breeding materials essential for beetle population survival and expansion. This beetle will probably now remain endemic in this province.

Besides the mountain pine beetle, there are other close relatives in the genus *Dendroctonus* (means tree killer) that are important forest pests native to Alberta and that have contributed significant tree losses periodically in the past. Summarized here are three species that include the spruce beetle (*D. rufipennis*), Douglas-fir beetle (*D. pseudotsugae*), and the eastern larch beetle (*D. simplex*). Adult beetles of all three species attack living or weakened conifer trees and invade the cortical (inner bark) tissue of the tree stem where they feed and reproduce.

### Spruce Beetle

Primary host trees attractive to the spruce beetle include white and Engelmann spruces, and more rarely black spruce. This beetle is widely distributed across Canada and is considered one of the most destructive insects of mature spruce. Endemic populations are always present and exist in wind-throw trees, logging debris, as well as in injured, diseased, decadent or other severely stressed trees. The abundance of these materials provides favorable breeding sources for rapid population build-up to epidemic levels, allowing excess populations to spill over and attack adjacent live, healthy trees. All known outbreaks in Alberta have occurred following large-scale accumulations of wind-throw, cull logs, felled trees along right-of-way logging operations, and from trees weakened with broken tops resulting from severe storms and high winds. Drought stressed trees are particularly susceptible to spruce beetle attacks.

The spruce beetle can complete its life cycle in one year in warmer locations, but most often it requires two years, and occasionally three years, at most locations in Alberta. Adult females (Figure 1) excavate egg galleries under the bark where they lay eggs



(Figure 2), and the larvae feed and extend a network of galleries laterally away from the parent egg gallery (Figure 3). The extensive feeding activity of larvae in conjunction with the colonization of associated fungi in the bark and sapwood restrict water and nutrient transport in the tree stem and results in the ultimate death of the tree. The foliage of attacked trees may remain green during the year of attack, but by the following July, the foliage will generally fade to a rust color and needles will then fall off shortly after (Figure 4). The important factors that affect beetle generation survival include host resistance (i.e., variable resin quantity produced by the tree), climatic events, especially temperature, deterioration of the inner bark habitat, competition from other insect bark feeders, various natural parasitic and predacious enemies, and especially woodpecker predation.

Outbreaks of the spruce beetle have been reported in southwestern Alberta during 1952 to 1956 (caused 23 percent mortality on 490 ha), and again during 1966 to 1970 (caused an estimated 59,000 cubic metres of beetle-killed timber). Other losses have occurred in northern Alberta (i.e., 64,380 cubic meters in 1975), between 1977 and 1984 (5% to 70% tree mortality over a forest area of 100,000 ha), and 47,500 cubic meters during 1983-84 (Figure 4). More recently, the province has reported infestations and tree mortality each year from 2015 to 2021, during which areas affected have ranged from 1405 ha to 10,465 ha.

Outbreaks of the spruce beetle are usually of short duration, lasting 3 to 5 years and develop in mature and overmature forests. Figure 5 illustrates an example of beetle-killed trees that developed adjacent to a previously harvested cutblock. Subsequent wind-throw along the cut boundary provided the breeding material for the beetle population to build-up and then spread to attack and kill adjacent standing trees.

Several strategies can be deployed in the management of the spruce beetle to mitigate tree losses. Annual aerial and ground surveys can map and record the location of new infestation areas and assess the risks involved. Accumulated fresh wind-throw and excess logging residue materials may be removed and disposed of. Sanitation logging of excess wind-throw may be undertaken and new or ongoing infestations may be salvage logged to reduce beetle population buildup. In some situations, the felling of "trap trees" may be undertaken to help draw beetles into focal areas and help protect residual timber and reduce potential losses, as well as to help mitigate beetle population expansion and spread. Individual tree treatments may also be applied such as cutting and burning to destroy beetle broods.

## Douglas-Fir Beetle

Douglas-fir has a limited distribution in Alberta, extending along the foothills region from Waterton Lakes National Park northward to Jasper National Park and including the Porcupine Hills area. Infestations of the Douglas-fir beetle in Alberta have, in the past, been reported from the Porcupine Hills and in Banff and Jasper National parks. This bark beetle normally breeds in felled, injured or diseased trees. Drought-stressed and fire-weakened or killed trees are also highly attractive, and can allow populations to expand and attack apparent healthy trees that are mostly mature and overmature. When abundant, the Douglas-fir beetle will attack and kill adjacent vigorous trees (Figure 6). Trees successfully attacked can be identified by the characteristic rust colored sawdust in bark crevices, indicating entry points where adult beetles have burrowed in (Figure 7). The adults carry blue-stain fungi (similarly as occurs with the spruce and mountain pine beetles) into the tree when they attack, which contributes to tree decline and mortality. Early population expansion from a breeding source will often be evident as fresh attacks on small groups of standing green trees. As the outbreak develops the small groups may coalesce, resulting in considerable tree mortality (Figure 6). Outbreaks in standing trees have generally lasted from 2 to 4 years, but can be prolonged during periods of drought. Vigorous trees can be resistant to the beetle's attack if resin exudation is sufficient to prevent adult beetles from constructing egg galleries.

An initial infestation of a few killed trees was reported in Jasper National Park in 1980 and intensified after 1986. By 1991, 10 sites were mapped with newly killed trees, and by 1993, the infestation grew to 55 sites of attacked and killed trees. It has been suggested that the reason for the expanded outbreak (1991 to 1993) was likely due to severe winter wind storms in 1989 that contributed dead Douglas-fir breeding materials. In addition, fire-scorched trees resulting from a prescribed burn in 1989 may also have weakened some trees and thus made them susceptible for beetle attacks.

Douglas-fir beetles develop through one generation each year. Both adults and larvae overwinter under the bark of the tree stem. This allows early emergence and initial flight of adults during April to June. Adults that mature from the overwintering larvae emerge in July and August, providing two beetle flights each year. Egg gallery construction, egg laying and subsequent larval gallery development are similar to that described for the spruce beetle. In British Columbia, it is noted that outbreaks are often associated with weather-related events such as drought as well as recent wind-throw. Temperature effects also have a controlling influence on the development of cold tolerance of beetles as a strategy that affects overwinter survival of both adults and larvae.

Prescriptions for managing the Douglas-fir beetle and its tree-caused losses, if required, are generally similar to those applied for the spruce beetle.



Figure 3



Figure 4



Figure 5



**Figure 6**



**Figure 7**

## **Eastern Larch Beetle**

The eastern larch beetle is native to North America; its distribution ranges throughout the boreal forest wherever its main host, eastern larch or tamarack occurs. It may also attack exotic larches such as Siberian larch. Historically this beetle has been considered a secondary pest, preferring to attack weakened, dying or recently killed trees, such as those injured or stressed due to flooding, drought, wind-throw, insect defoliation, fire or old age. However, these conditions can allow beetle populations to increase significantly, allowing excess to disperse to attack adjacent healthy trees. Earliest reported tree damage in Alberta occurred in 1914. Subsequent infestations and tree mortality were reported in 1946, and annually from 1965 to 1969, all in central and northern Alberta. More recently, the province reported infestations annually from 2015 to 2021, affecting aerial-mapped areas ranging from 900 ha to over 10,000 ha. The Forest areas that reported tree mortality were Grande Prairie, Whitecourt, Lac la Biche and Rocky Mountain House. The infestations during the 1960's were probably triggered by trees weakened from defoliation caused by the larch sawfly. Recent outbreaks have most likely been triggered by climate-related events that have led to drought and/or flood conditions.

The adult larch beetle is smaller (about 4.3 mm long) than the spruce beetle (5.5 mm long) and Douglas-fir beetle (5.7 mm long). Its life cycle is essentially one year. Adults emerge from overwintering sites under bark during May and June. They then attack trees and produce egg galleries and larval galleries under the bark, similar to that described for the spruce beetle. A portion of the adults may re-emerge from the tree and re-attack new trees, producing a second brood. Both larvae and adults may overwinter under the bark of attacked trees. Outbreaks usually last for one to three years and populations may decline after two to four years.

Because tamarack has not been considered a highly valued commercial tree species, there has been less focus on research of the larch beetle, compared to other *Dendroctonus* species. However, recent outbreaks in the province may prompt increased attention to examine its biology and ecological relationships with its tamarack host. Strategies to help mitigate tree losses from larch beetle infestations are unknown or have not been reported.

# MEMBERS

## *My Woodlot*

We would like to resurrect a past series that ran in the LOGJAM called 'My Woodlot'.  
Please tell us about your woodlot and experiences.

Submit to us at: [tara.jamision@carsonintegrated.com](mailto:tara.jamision@carsonintegrated.com)



### **Renew Your Membership**

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1 - 800 - 871 - 5680  
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# SURVEY

**1. How would you feel about receiving electronic newsletters?**

**2. What is the most effective and/or meaningful communication method to contact you with?**

**3. If you have not provided this previously, please provide the area of land you have available for tree planting.**

**4. What are your suggestions on how the Board could serve members better?**

## **If Submitting by Mail:**

Woodlot Association Office  
P.O. Box 303  
Beaverlodge AB  
T0H 0C0

## **To Take This Survey Online, Visit:**

<https://bit.ly/3FoVWoy>



THIS EDITION OF

# THE LOGJAM

IS NOW OVER; TIME TO GET OUTSIDE!

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