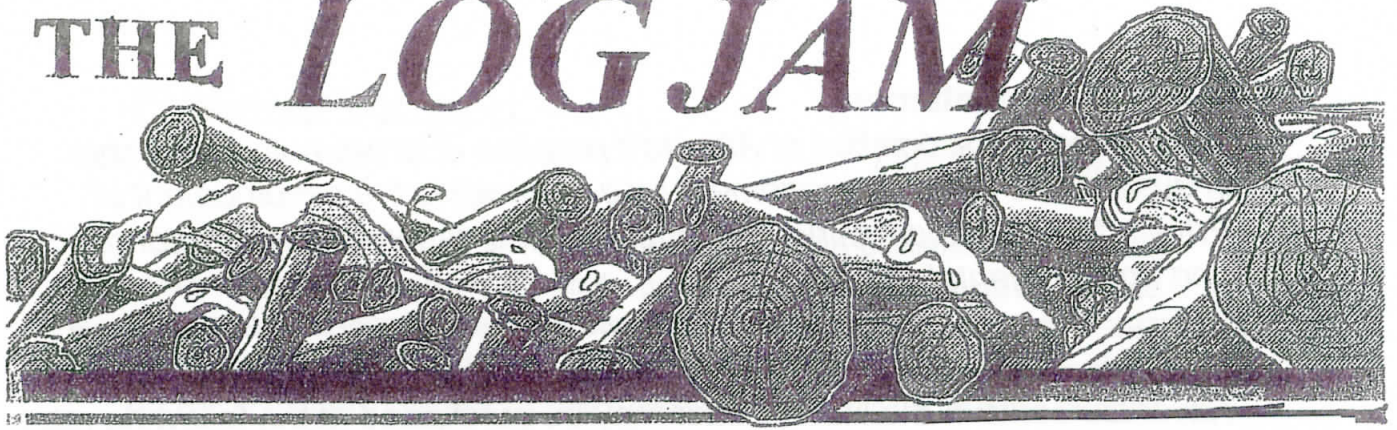


THE LOG JAM



Published by the Woodlot Association of Alberta (WAA)

March, 2017



Laval B.

The month of February is Winter Carnival time in Canada and particularly in the Province of Quebec with the city of Quebec the centre that produces some great ice carvings, but here in Alberta in the village of St. Isidore they also have a traditional Winter Carnival and a very talented ice carver who carved the above scene.

Our Mission Statement

"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

Laval Bergeron

Hello everyone, like we all know already, the Woodlot Association of Alberta has suffered a great loss in January with the passing of Louise Horstman, a long time secretary for the association. I only knew Louise through the association but discovered she was involved in many things. One thing I regret was never hearing her play the organ. If I was to compare Louise's life in the community to a tree life within a woodlot, she would not be the tallest tree or the biggest tree in the stand. She would be the one with a strong root system, stemming far beyond her own woodlot, helping everything and everyone on her path. Louise will be greatly missed.

On another note, we have sent a letter to most, if not all, lumber mills in the province, asking donations to help fund the WAA. So far two mills from Whitecourt have responded generously, Miller Western and Alberta Newsprint Timber. Thank you.

A great thank you to Herman Stegehuis for his initiative to plant maple trees for the 150th anniversary of our great country, Canada. You know, whether it is one tree you plant or 150 or +, let us know, promise, we'll brag about it.

As I am writing this report, different files like taxation, woodlot extensions, check off, Co2 sequestering. are all waiting for the new gov't to come out with it's latest Municipal Gov't Act. It should be coming out soon and hopefully by the time the AGM swings around we will be able to review some of them.

Speaking of the AGM, it will be hosted in Whitecourt, full details further in this issue of the Logjam.

To conclude my report I would like to express my appreciation to your board of directors that is very dedicated to your association. I also invite everyone to join in sharing your woodlot undertakings and aspirations.

What's the Buzz...Moths of the Mountains

Sometimes in life when you're looking for one thing, you'll find something completely different. It turns out the same philosophy also applies when you're examining a genetic trial of pine trees! In late September, I was assisting with *Dothistroma* assessments at a site on Whitecourt Mountain, when we noticed something 'pitchy' was going on in these young Lodgepole pine (*Pinus contorta*).

The large glob of pink-cream coloured pitch (shown right) was hard to miss on the pine's bole as it measured approximately 8cm in width. Forest Health Guru Tom Hutchinson was present and he started peeling into the pitch mass, revealing a larva that was part of the Clear Wing moth family Sesiidae.

As shown below, the larva was cream coloured with a brown head capsule, 2-3cm in length. After further investigation, it is suspected that this larva is an





individual known as *Synanthedon novaroensis*, or the Douglas-Fir Pitch Moth. The larvae in the genus *Synanthedon* are very similar, but the Douglas-Fir Pitch Moth has been known to have a range that includes Whitecourt, Alberta.

So what's the buzz with the Douglas-Fir Pitch Moth? Is it going to cause mortality in this pine stand and be the next epidemic? Luckily no, the damage will probably be limited to what you see in the photo above. The Douglas-Fir Pitch Moth will only be able to kill a small tree after repeated attacks. The adult will lay its eggs in bark crevices in June or July, and the eggs will hatch into larvae within a few weeks. The larva then starts eating into the inner bark and outer sapwood, and creates the pitch mass out of a combination of frass, silk, and the tree's defensive pitch. It takes two years for the Douglas-Fir Pitch Moth to complete its life cycle; the pupal stage takes a month, and then the adult will break out of the pupal case in early summer.

Small, dark, blisters of pitch were also found on a few of the pine trees in the Whitecourt Mountain genetic site on the tree's branch nodes. Peeling back these pitch blisters revealed a different, orange-brown larvae of approximately 15-17mm in length (shown in photo below). This larva was identified as a Pitch Blister Moth, or *Petrova albicapitana*, which is known to be widespread throughout the Province.

The life cycle of the Pitch Blister Moth has many similarities to that of the Douglas-Fir Pitch Moth. The Pitch Blister Moth has a two year life cycle, and the larvae will pupate in their pitch mass. The adult will lay its eggs near the base of a terminal bud, which is where the first pitch-mass will be formed. Months later, the larvae will create a new pitch mass for over-wintering, as well as creating a third and fourth pitch-mass in the spring and June respectively. Pitch masses are up to 20mm in diameter, and are composed of a combination of pitch, frass, and a layer of silk from the larvae. The pitch-blisters they create are smooth and uniform in colour.



The damage done by the Pitch Blister Moth is usually minimal. The larvae's cambial feeding does not usually girdle stems or twigs, but it may weaken the stems or twigs, making them more prone to breakage. If the feeding of the Pitch Blister Moth does girdle the twig, the foliage of the affected shoot will fade, and the branch may break at the point where the pitch-mass was formed. Furthermore, if the tree is constantly attacked, it may lead to physical deformities.

In the Whitecourt Mountain genetic trial site, the trees did not show any signs of serious damage as a result of the Pitch Blister Moth nor the Douglas-Fir Pitch Moth. Their presence is unlikely to result in serious consequences, but it would be worthwhile to monitor the population levels in future years as these genetic sites are important sources of information for years to come.

Allison Brown—Upper Athabasca Region

Woodlot Association of Alberta Annual General Meeting (AGM)

- When :** June 16 and 17, 2017
Where : Whitecourt, Alberta
Location : The basement of the Lutheran Church
Time : Meeting to start at 10am the 16th end 3pm 17th
Registration from 9:30am to 10am
Cost : Is \$60.00 this includes 2-lunches and a banquet
For the banquet only \$25.00

Highlights of the Agenda :

Day one will be mostly a business meeting that will cover :
Presidents message: Financial report for the year 2016:
Review of the changes to the MGA that effect our land taxes:
Several guest speakers : Resolutions : Check-off system:
Leasing crown land for a woodlot : Plans for 2017 & Open forum;
Election of Board Members :

There will be two coffee breaks during the day.

The banquet will be at 6pm and will have a guest speaker.

Day two will consist of completion of any business carried over from day one, then will tour several woodlots, with emphasis on management planning, and the lunch will be a bar-B-Q of salads and hotdogs and hamburgers, at one of the woodlots.

We will meet at the church at 9am

There are numerous hotel/motel rooms available in Whitecourt plus several campgrounds for RV's (*see map*)

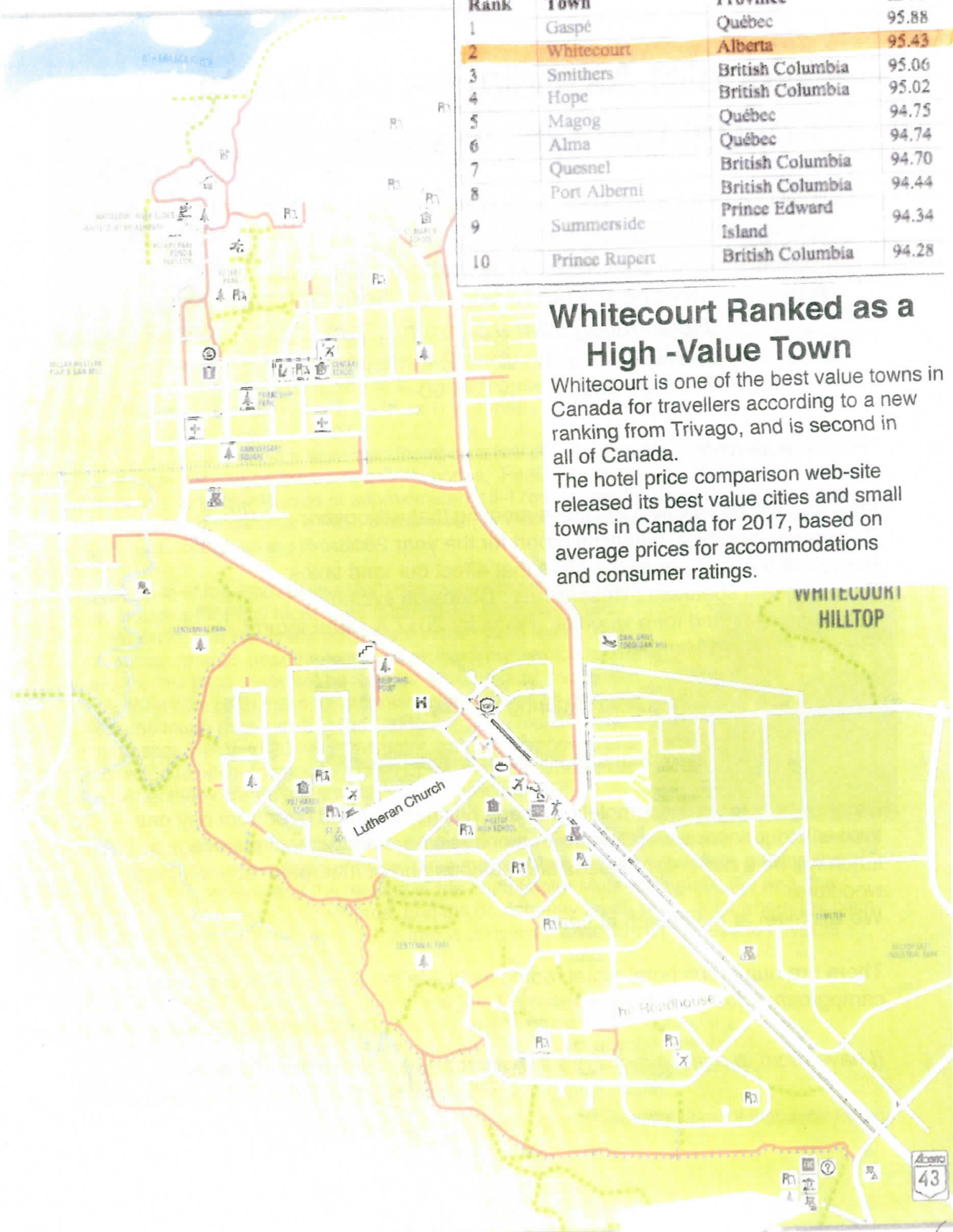
(I have room to park several RV's in my yard - no power/water / or sewer }

Rank	Town	Province	tBVI*
1	Gaspé	Québec	95.88
2	Whitecourt	Alberta	95.43
3	Smithers	British Columbia	95.06
4	Hope	British Columbia	95.02
5	Magog	Québec	94.75
6	Alma	Québec	94.74
7	Quesnel	British Columbia	94.70
8	Port Alberni	British Columbia	94.44
9	Summerside	Prince Edward Island	94.34
10	Prince Rupert	British Columbia	94.28

Whitecourt Ranked as a High-Value Town

Whitecourt is one of the best value towns in Canada for travellers according to a new ranking from Trivago, and is second in all of Canada.

The hotel price comparison web-site released its best value cities and small towns in Canada for 2017, based on average prices for accommodations and consumer ratings.



Tree Canada's - Mountain Pine Beetle ReLeaf - Funding Program



Tree Canada's Alberta Mountain Pine Beetle ReLeaf program provides funding to homeowners, private landowners and municipalities for the replacement of trees and the recovery of forests affected by mountain pine beetle on private or municipal lands in Alberta.

WHO CAN APPLY?

YOU as a landowner can apply if you are replacing trees at a minimum cost of \$200! If you are planning to replace trees on your property for over \$3000, you must demonstrate the following:

- Planting stock and materials comprise at least 50% of requested funding
- A commitment of at least 25% of the total project costs will be covered by you. This includes financial commitments from yourself, other organizations/companies, or in-kind contributions (time and labour can be included as in-kind).

Eligible Project Costs include:

- **Native trees:** including all planting stock native to Canada as appropriate for the planting site. You do not need to replace your lost pine trees with new pine trees.
- **Planting material:** mulch, soil, tree guards or other materials required to establish and maintain healthy trees (stonework is not eligible).
- **Planting costs:** costs associated with the hiring of a tree planting contractor, *if the applicant can demonstrate they require these services* (include supporting details in application).

Submit your online application at treecanada.ca. For questions concerning eligibility and application support, please contact Katherine Witherspoon at 613-567-5545 x 225 or at kwitherspoon@treecanada.ca.

Canada needs the forest sector: FPAC

Dec. 14, 2016 - For the better part of Canada's storied 150-year history, forestry has been a dominant industry providing our country with the most jobs, the most exports and the highest Gross National Product. Today, we are leaner and greener, and still a driving force in the Canadian economy.

Across Canada, the forest sector puts 230,000 men and women to work every day in more than 200 communities, from small rural towns to our largest urban centres. We are a \$65-billion industry and despite trade uncertainty with our friends south of the border, we still expect to hire more skilled workers in the coming years. Furthermore, we are on the leading edge of innovative research and technology that is using wood fibre to develop everything from clean-energy to airplane parts to high-rise wood building structures that will fuel the next chapter of Canada's green economy.

Canada is a recognized world leader in forest stewardship and has more independently certified forests than any other country in the world. This focus on sustainability and environmentally responsible practices has culminated in the industry leading the charge on tackling climate change. In May of this past year, our *30 by 30 Climate Change Challenge* was launched with a pledge to help Canada move to a low-carbon economy by removing 30 megatonnes [MT] of CO2 per year by 2030 – a goal that represents more than 13 per cent of the federal government's emissions target and an initiative that is paramount if Canada is to meet its Paris Agreement commitment.

Finally, and this can't be understated, we are a reliable and trusted trading partner. Our goods and services are of the best quality anywhere in the world and produced using the highest environmental standards on the planet.

Canada's economy, environment and international reputation has grown on trees for 150 years. The decisions and leadership displayed in 2017 will write the script for the next 150.

Classified ads

These ads are FREE to all members, for the - sale of any item - wanting to buy an item or service - offer a service - or - pets/livestock - etc. Maximum of 30 words, no pictures Send ad to the editor

FOR SALE: Tamarack Hiking Sticks, various lengths, \$50.00 each. Check our TerrCreation Facebook page for photos.

<kareterr@gmail.com> or ph, 1-780-305-8604

FOR SALE: 12 X 15 cabin. Walls are 4 X 8 Aspen timbers dovetail corners, Roof is insulated caboose style. One 3' X 4' window and a small one in the hand-built door. Built on 3-18' - 8 x 8's skids. \$15,000. For info or photos Ph. Larry - 780-354-2710 or e-mail larrynotziger@gmail.com

Welding Service By Hand: Agricultural, Commercial, Industrial, Equipment repair Located in Lac Ste. Anne County : serving several outlying areas.

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Up Coming Events

Board of Directors - Teleconference April 24, 2017
May 29, 2017
All calls are at 7pm

There will be a face to face **Board Meeting** on March 18 in Whitecourt

The **Annual General Meeting** will be held on June 16 and 17, 2017 in Whitecourt, AB. in the basement of the Lutheran Church

There are also some events that are hoisted by other organizations that are posted on our web - site, so check it periodically as you may find a course that could be a benefit to your operation.

Unlocking the Genetic Code of an Ancient Survivor

Ginkgo biloba is a beautiful tree. Its elegant fan-shaped leaves, which turn a vivid yellow in Autumn, are often borrowed by the world of art and design. In South-East Asia, ginkgo has a long association with Buddhist temples and the trees themselves are regarded with reverence. While small wild populations have been identified in mountain groves in South West China, ginkgo has a global distribution, due to its popularity as a cultivated tree. Its tolerance of pollution makes it particularly popular with city planners. Male trees are preferable for this purpose, however (ginkgo is dioecious with separate male and female trees), because the edible fleshy seeds are notoriously smelly. Ginkgo is also used in traditional medicine, and *Ginkgo biloba* extract is a widely available dietary supplement.

Ginkgo biloba is the archetypal "living fossil" of the plant world, even if this label sometimes causes more confusion than it solves. Fossils tell us that the gross morphology of its leaves has remained stable for more than 200 million years, although a variety of associated reproductive structures have been recognised. The fossil record also tells us that ginkgoes were widespread, and found in fossil assemblages not too different ecologically from the forests they still live in today. What ancient fossils cannot tell us is very much about how ginkgoes are related to the other major plant groups.

Despite producing fleshy seeds, ginkgo is not a flowering plant. It is a gymnosperm: it produces pollen, which fertilises ovules which are not fully enclosed within an ovary. It is also notable for its motile sperm. There are three other living groups of gymnosperms – conifers, cycads and gnetophytes – and past molecular studies have tended to place ginkgo most closely with the cycad. The publication of a draft genome for *Ginkgo biloba* by a team of scientists at BGI, Zhejiang University and the Chinese Academy of Sciences will help to answer questions about the big picture of plant evolution.

The genome of *Ginkgo biloba* is huge. At more than 10 gigabases (the number of nucleotide base pairs, or DNA letters), it is 80 times larger than the genome of *Arabidopsis thaliana*, the flowering plant which is the standard model organism of plant biology. It is also bigger than the notoriously large maize genome, although only half the size of the enormous genome of the Norway Spruce, *Picea abies*.

The overall size of the genome reflects a very high proportion (more than 75%) of repetitive sequences, resulting from both gradual accumulation over deep time, and from two whole genome duplication (WGD) events. The authors suggest that the more ancient of these two WGD events is the same one that has already been recognised in all seed plants, but not seen in ferns. Since this WGD is estimated in this paper at between 515 and 735 million years ago, before plants moved on land, there are (as is so often the case) interesting discrepancies between the fossil and molecular stories. The second WGD is estimated to have taken place between 74 and 147 million year ago, after ginkgoes and conifers had already diverged.

Initial analysis of the 42000 predicted genes in the *Ginkgo biloba* genome showed notable expansion in gene families which are associated with plant defence strategies, preventing attacks from bacteria, fungi and insects. Genes for chemical responses for repelling herbivores, combined with genes for emitting volatile organic compounds which attract predators of browsing insects, are part of a sophisticated armoury which ginkgo has developed over millions of years. It is difficult to say the degree to which much these enriched defence genes are responsible for the longevity of the ginkgo group over evolutionary time, but they may be part of the bigger picture, which this new draft genome will help to reveal.

“Men are not hanged for stealing horses, but that horses may not be stolen”

Lord Halifax (1670's)

A Good Year for Pine Needle Cast

This past summer during our aerial overview surveys around 35,000 hectares of pine needle cast (PNC) was mapped across the province. Most of it was attributed to the fungal pathogen *Lophodermella concolor*. Defoliation, branch kill, and crown dieback are commonly the results of this needle disease¹. Occasionally several years of infection can cause tree mortality. All two-needle pines are susceptible, as well as all ages³.

The disease cycle for *L. concolor* takes one year from needle infection the first summer, to spore production and loss of the infected needles in the following summer¹.

In the summer following infection, the affected needles begin to fade and turn red. Small oval-shaped fruiting bodies form on the needles. The red needles eventually turn a straw color and are 'cast' off the tree.² The fruiting bodies release spores that land on the newly emerging needles, germinate and penetrate the needle surface. The fungus grows inside the newly emerging needles, leaving no outward sign that the needles are infected until the following year³. The newly infected needles remain green until the following spring when they begin to fade and spores are produced that infect the new year's emerging needles.



Needles turning red in spring.

Oval fruiting bodies developing.

Because previously infected needles are cast off, successive years of infection in a tree can result in only the current needles remaining on the tree giving the tree a 'lion's tail' appearance².

Wet summers can escalate this needle disease as moist conditions are more favorable for the survival and germination of the spores. If the disease persists for several years leader dieback, increment loss and even tree mortality can occur. Generally, mature trees are not as severely impacted as younger, shorter trees due to their upper crowns getting more wind, therefore, humidity levels are lower so only their mid to lower crowns are heavily infected and experience needle loss³. In the Rocky Mountain House Forest area we have seen this disease for the past two years and although this spring was very warm and dry the summer was very wet and dreary which has been very good for the survival and spread of this pine needle cast. We will need a warm, dry summer to break the disease cycle.

This is Deer Country

Jurgen Moll

I live right in the middle of "deer country", and I have the audacity to grow a garden and expect the deer to respect it, well they don't.

This past year was a particularly tough one for gardeners in this area, it started out to look like fine early start, so I made my first mistake which was to plant early, wrong. The rain didn't come as planned but when it did arrive things started to grow, but the dry weather seemed to be very good for a number of insects which seemed to enjoy the young plants. So I treated them with my old tried and proven method, that is ordinary wood ash. Well that saved about half of the garden and I felt fairly good, But not so fast you guessed it "the Deer" now they really can do a job on a whole row per evening. So I had to revert to to my old deer control method, which is the electric fence.

There are many ideas and detailed plans on how to protect your garden for them which range from an eight foot high fence, plastic snow fence, wolf sent sprayed around the garden, etc.

But I have found what works very good is to string the electric wire back and forth over the plants the deer like best such as, beets, carrots, Swiss chard, peas etc. and hook it up to an electric fencer. The results are that they will touch this wire and receive a shock, and they will not come back for a second one. The deer walk through my yard year round but once they experience the electric fence they walk around the garden, they are fast learners.

What I use is, the wire is plastic with three very small wires wrapped in the plastic, this is very easy to use and can be rolled up and used year after year, The electric fencer is a small unit that runs off a batterie which is charged by a built in solar cell. The posts to hold the wire are plastic one-half inch by three feet long. And a three foot ground rod.

All of this can be bought at your local UFA store and will cost from \$150 to \$250 it is well worth it if you live in "Deer Country" and garden, as it lasts from 7 to 10 years,

Oh - ya, don't forget to turn it off when working in the garden!

What's the BUZZ?

♪ If you go down to the woods today, you're sure of a big surprise.
If you go down to the woods today, you'd better go in disguise. ♪

Or at least pack an EpiPen, because you never know what you'll run across. Last summer surveyors from TimberNorth, out of Athabasca, discovered these weird contraptions out in the woods. I was flummoxed when they asked me if they were some sort of bug trap. With a little bit of sleuthing, I was able to find out that these were most likely solitary bee houses. I still have no idea who set these up, or whether they were for some sort of research, or just to aid with pollination. This is where solitary bees are really important. I had no idea how important until doing a little research after these nesting boxes were brought to my attention.



Most people are familiar with the fact that bees are essential for pollinating many flowering plant species. But I think I would not be incorrect if said most people imagine the task of pollination being conducted by social colonies of bees, like the European varieties used to produce honey. Yet, according to a March 2013 article, by Eva Ferguson of the Calgary Herald, "Researchers have collected and examined data from 600 fields in 20 different countries, including Canada, and found that managed honey bees are not as successful at pollinating crops as wild insects, primarily wild bees."

Photo Gerald Klassen On the Green and Gold Community Garden website, Morris Levine and Hal Hopkins state that in Alberta there are approximately 370 species of native, wild bees. Many of these are solitary or semi-solitary varieties. These bees are working hard to perform critical services for agricultural and, no doubt, other flowering plants important to forest ecosystems. An unfortunate thing, however, is that native bee populations are declining in most areas. So, if you do go out in the woods and notice bee nesting boxes like the ones pictured here, take a moment to appreciate the important work these insects do, and maybe even think about adding a house or two (if you can) at your place.

Tom Hutchison - Edmonton

Footnote :

Nest location and construction varies greatly by species of bee. About 70 percent of solitary native bees nest underground. All ground-nesting bees burrow narrow tunnels ending in small chambers from 15 cm to 1 m in depth.

The other 30 percent of solitary bees build their nests above-ground in hollow tunnels in the soft pithy centres of twigs or canes of some plants, in abandoned wood boring beetle tunnels or in tunnels that some species excavate themselves into wood, especially dead or decaying stumps and snags.

Garlic injection could tackle tree diseases

Injecting trees with a concentrated form of garlic might help save trees in the UK from deadly diseases.

Operating under an experimental government licence, a prototype piece of technology to administer the solution is being trialled on a woodland estate in Northamptonshire.

Widespread use of the injection process is impractical and expensive.

But it could potentially help save trees of historic or sentimental value.

Garlic is one of nature's most powerful antibacterial and antifungal agents.

It contains a compound called allicin, which scientists are interested in harnessing.

The experimental injection device is made up of a pressurised chamber and eight "octopus" tubes.

The pressure punches the solution through the tubes and through special injection units in to the tree's sap system. The needles are positioned in a way to get allicin evenly around the tree.

The moment the active agent starts to encounter the disease, it destroys it. The poison is organic and isn't rejected by the tree.

It is pulled up the trunk out along the branches and in to the leaves by the process of transpiration - the flow of water through a plant.

Tree consultant Jonathan Cocking is involved with the development and deployment of the treatment.

"Over the last four years we have treated 60 trees suffering badly with bleeding canker of horse chestnut. All of the trees were cured.

This result has been broadly backed up by 350 trees we have treated all over the country where we have had a 95% success rate."

If you go back to the tree the day after, and crush a leaf that is in the extremity of the crown, you can often smell the garlic."

The goal is to get a commercial licence by the beginning of next year.

According to Prof Stephen Woodward, a tree expert at Aberdeen University: "The antibacterial properties of allicin are well-known in the laboratory. I have not heard of it being used in trees before, but yes this is interesting. It could work."

However Mr Woodward cautioned about such methods of "biological control". "Despite being plant-based that doesn't mean it can't harm an ecosystem. For example cyanide is plant-based."

Many conservationists also caution against such drastic intervention. Dr Anne Edwards from the John Innes Centre was one of the first to identify ash dieback in a coppice wood in Norfolk.

She said that this treatment would not be effective for ash dieback: "In a woodland setting we really have to let nature take its course. It's very depressing," she explained.

The Woodland Trust also favours a different approach. The organization is investing £1.5m in a seed bank. The idea is to grow trees that are fully traceable and therefore free from foreign disease.

Austin Brady, director of conservation and external affairs, said: "Our native woodland needs to build its resilience to disease and pests. By starting from the beginning of the supply chain we can ensure that millions of trees will have the best possible chance of survival in the long term."

In recognition of the threat posed by current and future tree and plant biosecurity, Defra recently appointed a Chief Plant Health Officer, and has earmarked £4 million for research in to treatments.

Oak trees with acute oak decline - which eventually kills the tree - have improved after being treated. In laboratory conditions allicin kills the pathogen chalarra which is responsible for ash dieback.

The solution is made by a company in Wales. "Organic cloves of garlic are crushed," said Mr Cocking, "and a patented method is used to amplify the volume of allicin and improve the quality of it so it is stable for up to one year. Allicin in the natural world only lasts for about 5-10 minutes.

Feds move to ban common neonicotinoid insecticide, say use 'not sustainable'

OTTAWA – The federal government is moving to phase out a common neonicotinoid insecticide after finding that it accumulates in waterways and harms aquatic insects.

Health Canada has announced a 90-day public consultation period on imidacloprid, which is used on everything from cereals, grains, pulses and oilseeds to forestry woodlots and flea infestations on pets.

Neonicotinoids as a class of pesticides have come under heavy scrutiny in recent years for their potential impact on bee populations.

A study by Health Canada found that measurements of imidacloprid in surface water have been found as high as 11.9 parts per billion, while levels above 0.041 parts per billion are considered to be of scientific concern.

The government is proposing to phase out all agricultural usage and most other outdoor uses of imidacloprid over a period of three to five years.

Ontario's provincial government moved to restrict the use of imidacloprid last year, as have some European countries.

"Based on currently available information, the continued high volume use of imidacloprid in agricultural areas is not sustainable," Health Canada said Wednesday.

The Health Canada study of imidacloprid has also prompted the federal department to begin "special reviews" of two other common neonicotinoids, clothianidin and thiamethoxam.

"Health Canada is taking the findings of the re-evaluation of this pesticide seriously, and is taking action to further protect the environment," Health Minister Jane Philpott said in a release.

The advocacy group Environmental Defence, which has been pushing for a ban on neonicotinoids, lauded the government's decision but said the proposed three- to five-year phase-out period is too long.

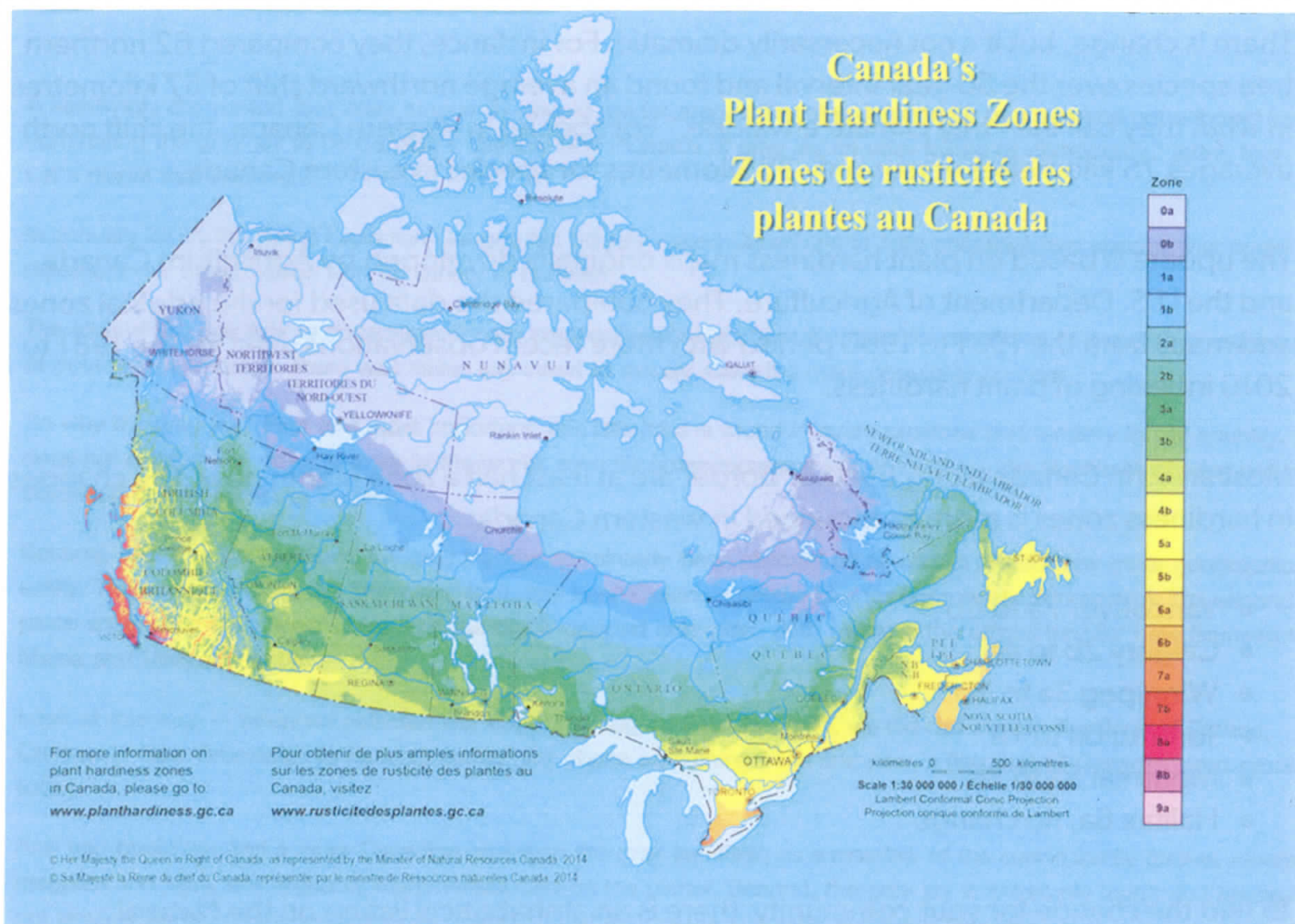
"As neonic pesticides are soluble in water, they run off into local waterways and damage insect populations at previously unknown levels," spokeswoman Maggie MacDonald said in a release.

"These devastating findings are in addition to the mounting scientific evidence on how imidacloprid and other neonic pesticides harm the health of bees in disastrous ways."

Health Canada noted Wednesday that incidents of bee kills during the neonicotinoid treatment of corn and soybean crops have fallen 80 per cent since new mitigation measures were imposed in 2014.

However, the department's own 2014 review of neonicotinoid pesticides also found that "scientific research shows long-term effects on pollinators can result from sub-lethal exposure levels. Sub-lethal exposure levels are lower levels of exposure that do not result in immediate mortality."

Plant hardiness zones changing, slowly



As gardeners in a northern climate, we're quite aware of the challenges of growing plants that may be borderline hardy in the region where we live. "Will it grow in my zone?" is the pertinent question about winter hardiness for perennial plants.

Scientists have developed maps of plant hardiness zones for Canada based on seven climate variables (not only the average annual minimum temperature). Now they are beginning to assess how changes in climate affect what can be grown in different regions.

New plant hardiness data compiled by Natural Resources Canada over a 50-year period was presented in the April 2014 issue of *BioScience*, published by Oxford University Press. "Change and Evolution in the Plant Hardiness Zones of Canada," by Daniel W. McKenney and others, describes a northern shift in zones in western Canada, but less dramatic shifts in

southeastern Canada.

There is change, but it's not necessarily dramatic. For instance, they compared 62 northern tree species over the 50-year interval and found an average northward shift of 57 kilometres in what they call the "tree climate envelope." For species in western Canada, the shift north averages 75 kilometres versus only 38 kilometres for species in eastern Canada.

The update is based on plant hardiness maps originally developed by Agriculture Canada and the U.S. Department of Agriculture. They compared the data used for the original zones and maps from the 1931 to 1960 period with more recent observations used for the 1981 to 2010 indexing of plant hardiness.

Most areas in Canada along the U.S. border are at least half a zone higher now. The changes in hardiness zones is more pronounced in western Canada:

- Vancouver 7a to 8b
- Calgary 2b to 4a
- Winnipeg 3a to 3b
- Toronto 6a to 7a
- Montreal 5a to 5b
- Halifax 6a, no change

To find the change for your community, there is an alphabetical listing on the Natural Resources Canada website at <http://www.planthardiness.gc.ca/?m=22&lang=en>.

"Our findings present a complex picture of plant hardiness changes in Canada over the 50-year interval examined," the authors write. However, "these changes signal an increase in the productivity and diversity of plants that can be grown in Canada," they add.

The researchers also conclude that "extreme events, such as the increased incidence and severity of late spring frosts and the ongoing risk of extreme cold events in southeastern Canada, may limit the extent to which these shifts translate into planting success. In the gardening context, extreme events may be tempered by cultural practices (e.g., covering plants during frost, watering during drought, but, in larger agricultural and forestry operations, the selection of less-hardy species and varieties ... still involves considerable risk."

David M. Bird: Gray jay is the perfect choice for our national bird

A seemingly disgruntled (but likely tongue-in-cheek) reader argues that due democratic process was not adhered to in nominating the gray jay to be Canada's national bird ("Choice of gray jay an utter failure of democracy," letter, Nov. 1). Let's dispel that argument.

In January 2015, the Royal Canadian Geographic Society asked Canadians to help choose a bird species that could best represent our broad nation with its variety of habitats.

The idea of the poll was to encourage debate among Canadians about the need for a national bird and to present a list of potential candidates. There was never any intent to merely make it a mere popularity contest.

So why the gray jay? First and most important, this little bird is found in every province and territory in our country. It does not exist in any other country in the world, save for some incursion into the U.S. — the Pacific Northwest and several bordering states, including Alaska.

Second, unlike its competitors, the gray jay has not already been claimed as an official bird for any other geographical entity. The common loon, the first-place bird, has been Ontario's official bird for eons (and Minnesota's). The second-place snowy owl is Quebec's bird, and the black-capped chickadee (fifth place) is the official bird for New Brunswick, Maine and Massachusetts.

Look at this way — when we selected our Canadian flag on Feb. 15, 1965, we did not elevate the flags of Ontario, Quebec or New Brunswick to national status. We chose something fresh and new, a flag that all Canadians are proud to fly today.

And you could not find a more Canadian bird than the gray jay. First, as a member of the corvid family (crows, ravens, magpies and jays), it is arguably the smartest bird on the planet. Second, the gray jay is extremely tough and hardy. Not leaving the country in winter, it has adapted itself not only to surviving our harsh Canadian winters but also breeds as well. This bird can incubate its eggs at -30 C .

Third, gray jays are extremely friendly, readily perching on opened hands, cameras and ski poles without any training.

Fourth, unlike most birds in the world, gray jays are not promiscuous and the mates do not cheat on one another. This is a bird that is friendly, intelligent, hardy and loyal.

For 200 years, the gray jay was known as the Canada jay (we are working on getting the name back), but perhaps many folks in B.C. best know this bird by its First Nations name, the whiskey jack. Nothing to do with the beverage, by the way, but everything to do with an anglicization of a Cree-Ojibway word meaning "mischievous prankster."

Yes, the bird does have the cheeky, cute and opportunistic habit of pilfering food from packsacks, pantries and picnic baskets, but First Nations folks revere the whiskey jack because it is an omen of good fortune and a warning of danger in the forest.

The gray jay is also a safe choice because it is not hunted, killed as a nuisance species or endangered.

So why did we choose a bird that many Canadians have not heard of or do not see in our backyards? The gray jay lives in boreal forest that extends from coast to coast, a habitat, incidentally, that is under siege from development. To make our hopeful national bird, many Canadians will simply have to go to our ski areas and into many of our national and provincial parks.

It also requires cold winter temperatures to keep its food from rotting, so it is an excellent poster child for our boreal forest, our parks and climate change, all rolled into one.

Now we just need the federal government to buy in by announcing the gray jay as our national bird for our 150th birthday party in 2017.

Thus, the gray jay/Canada jay/whiskey jack/mesangeai du Canada needs the help of all Canadians by sending emails, tweets and Facebook messages to Environment Minister Katherine McKenna, and by speaking with your local MPs.

David M. Bird of North Saanich is a McGill University emeritus professor of wildlife and leader of Team Gray Jay.

Reminder

Just a reminder that the **fire season** starts on **MARCH 1 to October 31** when a fire permit is required, continue to use caution when in your woodlot either working or recreating ; by:

*Carrying some fire fighting tools ie, axe, shovel, water bag, etc. * **Keep the exhaust clean on quad or other motorized equipment.** * **Check the spark arrester on power-saw.** * **Don't smoke , or sit down when having a smoke , make sure the butt is out cold.** * **Carry a cell phone to ask for help if you have a fire.** * **Get a fire permit for any burning** * **good Luck**

Biocontrol Summary for 2016

Biological control releases made over the last 4 years are beginning to reap the benefits. At three of the releases in the south (Castle & Porcupine Hills), all of the target plants (hound's-tongue) within the release plot have been eradicated and the insects have moved to nearby plants. Collections of insects were made from these sites this past summer and released at other infestations.

The two scentless chamomile release sites (Whitcourt & Wandering River) are now showing significant declines in target plant cover. The Whitcourt site is nearly eradicated and a collection was made this year and released northeast of Peace River. Alberta Newsprint Company in the Whitcourt area has also begun using biocontrol for invasive plant infestations on their sites.

Releases on common toadflax of the stem-mining weevil have yet to show sign of establishment, however the 2015 release of a stem-galler at Athabasca showed survival with the presence of nine galls this year. On the horizon are biocontrol agents for common tansy and oxeye daisy, as testing continues in Europe.

Marian Jones—Rocky Mtn. House Forest Area

Our Woodlot

Kathy and Adolf Base)

The story of our woodlot begins in 1975 when we purchased 188 acres of recreational property on the Pembina River northwest of Drayton Valley. The property lies within a U-shaped loop of the river and consists of portions of four different quarter sections varying in size from 27 to 91 acres. The largest portion had been homesteaded in the 1940s but only a few acres of bush were cleared. The homestead had been abandoned by the time the oil industry appeared in 1961 and drilled a dry well on the property. With improved access via a lease road a new owner cleared more bush for a short-lived cattle operation. When we showed up in 1975 a bridge on the lease road had collapsed, restricting access to the property to foot traffic or canoe from upstream. We viewed the lack of access as an attraction, as our priorities, solitude and silence, were features seldom found among the lawnmowers and speedboats of lakeside cottages.

In 1977 we began the 30-year project of building the finished winterized cabin that overlooks the river - a proper pine board floor did not get laid until 2009. All the framing members for the basic structure were pre-cut at home and then hauled to the site with an oilfield swamp buggy which managed the creek crossing without difficulty. The details of our building adventures belong in another story but we can note here that those details involve thieving bears, improvised transport buggies powered by not always happy children, helpful friends, unhelpful beaver, sleds, canoes and many, many mosquitoes.

With the shell of the cabin in place we could, camera in hand, start the process of acquainting ourselves with the flora and fauna of our property. Over the years we have found most of the flowers and fungi typical of the boreal forest. The discovery of a permanent source of pie material in the form of a blueberry patch was a definite plus. As to wildlife, the bears no longer frequent the property but we count moose, wolves, cougars and otters as occasional transient visitors. Among the regulars we have deer, elk, coyotes, porcupine, skunks and other "varmints". The variety of bird life has been a particular pleasure. We have seen most of the regional birds listed in Alberta field guides, including relatively rare ones such as the black-backed three-toed woodpecker. During the last half-decade

we have been able watch the nesting behaviour of a goshawk family that has chosen to reside within fifty yards of the cabin.

In 1997 our property lost its secluded character. The creek crossing was re-built to give access to a previously capped gas well downstream from us. The invasion of ATVs that followed brought uninvited visitors to our door and regular acts of vandalism, including theft. Even a new fence at the mouth of the U erected in 2007 proved an inadequate barrier in at least one instance. The new crossing also brought the gas industry to our land with an offer to drill a gas well which we declined. The directionally drilled well then led to a protracted, but ultimately successful, fight to get adequate sound abatement installed on the well compressor station. That too is another story.

During this time we also found ourselves facing an unreasonably escalating tax assessment as we no longer had an agricultural classification. Our search for tax relief led us in 2008 to the woodlot option for the largest of our four land parcels. That parcel consisted mostly of a mature stand of aspen poplar and an open grassland meadow left over from the cattle operation. With the aid of a woodlot management plan prepared by Toso Botic (Woodlot Extension Program) we selected understorey planting of white spruce for the aspen stand and lodgepole pine for the meadow. In the summer of 2009 the FIAA program administered by the WAA allowed us to plant 4,050 white spruce seedlings in the aspen stand and 2,430 lodgepole pine in the meadow. The following year we added another 2,520 white spruce to the aspen stand. The pines have thrived nicely, with almost no losses due to ungulate grazing, whereas the white spruce are, as expected, growing more slowly and experiencing more die-off. Current management activity is mostly brushwork to keep the aspen from invading the pine plantation. Keeping the access trails in good shape is also an on-going chore.

Many memories have accumulated in the forty plus years that we have spent on this property but the most satisfying are those that involve the family. With our children we have shared forest walks, camp fires, river swimming, canoeing and cross-country skiing. That we have been able to share these same activities with four grandchildren is an additional bit of good fortune that has come our way.

Photo's of - Kathy and Adolf Buse - Woodlot



The Pine Plantation (Jan . 2017)



All ears - on the north boundary trail of the woodlot



View from the blueberry patch
on south boundary of woodlot



Winter visit to the cabin