



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

Winter 2022/2023 Edition

Ron Miksha, ABLB editor

**"The bee's life is like a magic well:
the more you draw from it,
the more it fills with water."**

- Karl Von Frisch

Well, it's certainly winter. This morning we bottomed out at -24 in our corner of southwest Calgary. A keeper of bees always feels a tinge of concern for those bees that huddle in a tightly bound nest. But if the colonies were properly fed, properly relieved of mites, and properly wrapped, they will probably be fine.

A keeper of bees may do well to copy the bees' habits. Work to exhaustion when there is work to be done; rest in a warm space, clustered among friends when ice crystals fill the air and nose sap freezes into icicles.

The quote above, from [Karl von Frisch](#) (the man who decoded the bees' language), gives us an idea of one way to spend these chilly days away from the bees. Dig into the well of knowledge. This issue, **ABee Landing Board** offers the first in a series of articles about the history of bees and beekeeping, with a special focus on Alberta. We are pleased to welcome beekeeper Dr. Will Pratt, a historian with Parks Canada. Will begins his series with an interesting story on beekeeping during the last world war – and how some beekeepers were only in it for the sugar.

Most of our regular contributors found time to send in fascinating pieces to help you dig ever deeper into that well of bee knowledge. We are so fortunate to have such diverse and smart beekeepers in [our bee club](#)!

Want to help this newsletter? We would enjoy your favourite tall tales and tips and tricks. Please send your stories and pictures by [email to ABee Landing Board](#).

Winter, come she will.



The picture above is from a short video taken by commercial beekeeper [Neil Bertram](#). This is a snow cave that Neil is shovelling into to see if the hives buried beneath are alive. They are.

His colonies, wintering on the open range, were completely snow-covered for several months when an early snowfall sealed them under this blanket.

As beekeepers, we worry a lot. One favourite winter-time fret is the issue of snow on beehives. All of us who have weathered a blizzard by digging a snow cave for our own survival know that snow is a great insulator. Tucked under that mound, away from howling wind, a beehive likewise stays comfortable. Each colony creates about 10 watts of heat – enough to slowly melt nearby snow, leaving the cave seen in the picture above.

What about oxygen? And CO₂ build-up? Will the bees suffocate? Surprisingly, a hive requires very little fresh air in winter, so it's not a problem outdoors. During a chinook, check to see that an entrance (uppers are recommended here) is free of ice. Don't knock on the hive or open it in sub-zero temps and don't brush the insulating snow off the top. Curb your enthusiasm and wait for mild weather before harassing the bees.



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

Country Blossoms by Glenda Livingston

Glenda Livingston has taught various parts of the beginner beekeeping course for the Calgary and District Beekeepers. Glenda and her husband operate a market garden (and many honey bee hives) on the dry-country prairies east of Calgary.

Saving Bees... and we're not talking honey bees

In October, I had the pleasure to attend the 5th Annual Forum of the [Alberta Native Bee Council](#). As this was my first meeting with the group, I had no preconceptions about their work. The level of ongoing research and knowledge within this organization is impressive. As a honey beekeeper of many years, I was humbled by how much I don't know about native bees. Concerns about the impact of honey bees on native plant-pollinator relationships is real and concerning.



Native bee working clover

At the forum, five prairie research scientists detailed the complex ecological pressures facing native bee species. From habitat loss due to competition, decline of native plant populations, climate change, and monoculture in agriculture, it clearly is a challenge to support wild bees. Tackling this challenge is what the Alberta Native Bee Council is focused on. At the forum, I was thrilled to find our own honey beekeeper friend, Ron Miksha, as one of the presenting scientists!

Despite the trends of declining native wild bees, I left the event with hope...

There are key practical actions that we can do to help reverse the trend. On our small vegetable farm and apiary east of Calgary, we are focusing on what we grow and how we grow it in a way that we can also attract and retain native bees.

Here are some take-aways from the Alberta Native Bee Forum:

- Native bees pollinate many of our crops and trees
- Native Bees include Cavity Nesters and Ground Nesters
- Cavity Nesters make nests naturally in trees and hollow-stemmed plants. They can also be attracted to nest in human-made 'Bee Hotels'.
- Ground Nesting Bees dig holes or reuse pre-existing holes and animal nests.
- Ground nesting bees comprise about 75% of all wild bees.
- Bumble bees use pre-existing holes that are safe from the weather and predators. They nest in tree cavities, rodent holes, under plant debris and occasionally in human-made nests.
- In the world of pollinators, some bees are specialists while others are generalists.
- Many native bees are specialists. They are particularly vulnerable to changes in their habitat and loss of their particular food species. They are also impacted by competition from honey bees.
- Honey bees are not a native species. Being generalist foragers, they can utilize a wide range of flowers. Their large populations can outcompete native bee species.

Points for Action:

- Leave some areas of undisturbed, bare soil. Areas with sand nicely provide environments for ground nesting bees in your yard.
- Leave hollow-stemmed plants to overwinter as they may be housing a wild bee nest site.
- Allow decomposing logs and stumps to be available for nesting sites.



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

- Provide 'Bee Hotels' for solitary bees and 'Bumble Bee boxes'.
- Provide a variety of flowering plants that have: different times of blooming, flowers of different shapes, colours and sizes to allow for the variety of species of wild bees.
- Plant native species in clumps to provide a sufficient resource for foraging bees.
- Consider growing native plants such as: Wild Red Raspberry, Saskatoon, Shrubby Cinquefoil, Prairie Goldenrod, Wild Bergamot, Willow, and Chokecherry.

*An extensive list can be found on the [Alberta Native Bee Council website](#).

Resources for Native Bees:

www.albertanativebeecouncil.ca Suppliers of native plant seeds and plants can be found under their 'Resources' section.

<https://calgarybeekeepers.com/beekeeping-resources/horticulture-bees-trees-flowers-can-help-bees-2> This is on your bee club's website.



Bumble bee carrying pollen, approaching apple blossoms

Christmas gift idea for your favourite beekeeper

Christmas Day is the 212th birthday of Reverend L.L. Langstroth, the fellow who discovered "bee space" and wrote the classic *Hive and the Honey Bee*. [You can get a nice copy of his book for under \\$10!](#)


Alberta Bee Clubs

Here are links to some of Alberta's clubs:

- [Calgary District Beekeeping Association](#)
- [Edmonton District Beekeeping Association](#)
- [Grande Prairie Beekeepers Club](#)
- [Red Deer & Area Beekeepers Association](#)

Edmonton District Beekeeping

EDBA MEMBERSHIPS:

Monthly meetings for Edmonton-area beekeepers. If you are interested in becoming a member or renewing your membership, please contact the EDBA treasurer at: EDBAtreasurer@gmail.com. The cost is \$25/yr. Cash, Cheque, or e-Transfer accepted. 

Edmonton and District Beekeepers Association, update December 2022

The EDBA meeting on December 1st at West Edmonton Mall featured two of the key speakers at the Alberta Beekeeper Commission Provincial Conference held during the day.

Dr. Frank Rinkevich from Baton Rouge Bee Lab in Louisiana spoke about a three-year study of whether varroa resistance to Apivar is occurring. After checking 700 colonies owned by 30 beekeepers in different areas of USA, he concluded resistance is occurring, but oxalic acid can be used successfully on varroa resistant colonies as a follow up plan B.

Paul Kelly from the University of Guelph Bee Research Centre in Ontario spoke about beekeeper choices mainly for smaller scale beekeepers. His centre has over 80 free videos on beekeeping, on YouTube, including six on queen rearing. He emphasized the advantages of inserting queen cells in nucs rather than foreign mated queens as being cheaper and more successful.

The next meeting of the EDBA will probably be during the February IPM (integrated pest management)



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

seminar from February 8 - 10, 2023. Also some members may visit the Beaverlodge Field Day on June 23. Monthly meetings are usually held on the second-to-last Thursday of the month, unless a bee conference in November or February is held during a different week. Also there may be additional 'visit the beekeeper' sessions, similar to those organized by the Calgary association.

Malcolm and Craig's beekeeper course in Edmonton will be taught once a month on Saturdays. The provisional dates are January 21, February 18, March 25, April 22, and May 13. ([Contact them here](#) to see their learning opportunities.) Graduates of the course can participate in the free mentoring sessions on most weeks from May to August.

[Calgary and District Beekeeping](#)

CDBA 2023 **memberships and beekeepers' insurance** are now available on the association website at: [CDBA membership](#). The executive encourages you to support our club by taking out a membership. The nominal \$25 fee helps to pay for our regular meetings and guest speakers, some free workshops, our website, and other club activities throughout the year.

Membership benefits include: monthly meetings with educational beekeeping presentations, group honeybee package purchase, mentoring programs, social events (Summer BBQ, Winter Potluck and Honey Competition, Bees and Beers), assistance identifying and treating bee diseases and newsletter. CDBA members also participate in community programs such as educational presentations to schools, horticultural societies, retirement residences, children's clubs and community centres; honeybee swarm recovery; and, bumblebee recovery. They participate at agricultural exhibitions and fairs including Aggie Days, Stampede, Calgary Youth Science Fair, Makers Fair, Priddis and Millarville Fair, Cochrane Pioneer Days and community fall fairs.

If you would like **liability insurance coverage** for 2023, please make your payment (membership and insurance is \$120) before Dec 26th. Signing up before December 26th will allow the CDBA to forward all necessary documentation and payment to the Co-operators Insurance in time for your coverage to start on January 1, 2023.

Finally, don't forget to [register your beekeeping with the City of Calgary](#) if you keep bees there. You will need proof of proper experience and/or education when you apply – follow the [link](#) for all the details.

CDBA Winter Potluck Dinner

Don't miss this very special evening – February 12, 2023. More news will be posted online as we get closer to February, but **please mark your calendar now**.

The evening includes delicious food, a honey judging contest (more about that elsewhere in this issue), and an entertaining speaker.

Thanks to Liz Goldie, we have a mouth-watering picture to whet your appetite!



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ABee Landing Board: [email ABee Landing Board](#).



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

CDBA Honey Competition

Here's your chance to prove you know how to make good honey and bottle it well. Take the best you can do and bring it to the February 12th Potluck dinner.

There are protocols to follow when setting up honey for judging – cleanliness, sparkle, density, even the fill level of the jar are judged. Entries are placed among the traditional three categories (Light, Dark, & Creamed) and also into a flavour-taste category.

The 'flavour' category is separate from the others because including a 'taste test' in the general competition wouldn't be fair – some judges prefer a strong flavour and others a mild sort of honey. Instead, honey is judged by quantifiable qualities.

CDBA members and their guests are invited to the

*CDBA Winter Potluck
Dinner and Honey
Competition*

Sunday, Feb. 12, 2022

Doors open - 5 pm

Dinner - 5:30 pm

Honey Judging - 5:30 pm

RSVP and/or volunteer to help, at
smuldersjessie@gmail.com

Please include what you will bring (appetizer, main, side dish or dessert).

Door prizes, honey awards and a presentation will be included.

Some previous years' samples, judging, and awards:





ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

How it was. – Will Pratt

We invited Will Pratt to write a few articles to give us a glimpse of the history of prairie beekeeping. Will is an historian who works for Parks Canada – and he manages over forty hives in apiaries north of Cochrane.

Sugar and Beekeeping in Alberta during the Second World War

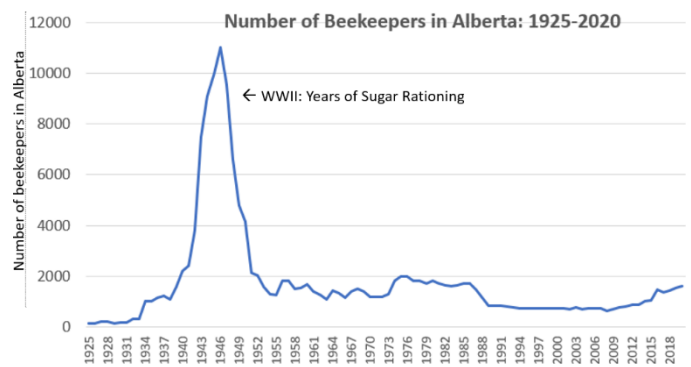
When sugar was rationed during the Second World War, Albertans fired up smokers and donned bee veils for the first time, intent on keeping their tea sweet despite global conflict and disruption of supply chains. In the days before war broke out in Europe in September 1939, Canada created the Wartime Prices and Trade Board in order to ration and manage prices, wages, and consumer goods. The First World War brought shortages and high prices of consumer goods. In 1939, folks were already hoarding, fearing a repeat of the dearth. One of the goods they were stocking up on was sugar. The next year brought price controls on sugar. In 1942, Japanese attacks and shipping constraints reduced supply.

Canadians were asked to reduce their sugar consumption to three-quarters of a pound per week per person. In May, this was cut to half a pound. Unfortunately, as historian Jeff Keshen put it, “not all proved honourable enough for the honour system.” Voluntary rationing was met by panic buying. On 1 July 1942, sugar became rationed by coupons at a rate of a half a pound per person per week. That’s just one kilogram a month. Prior to rationing, Canadians were consuming over four kilos each month. This obviously made a difference in Canadian diets.

Naturally, honey was a viable alternative, but unfortunately the bee juice joined a whole range of sweets on the ration list in 1943. A coupon was good for six fluid ounces of extracted honey (255 grams), ten fluid ounces of maple syrup, one half pound of comb honey in squares, or a range of other syrups and

sweeteners. You could also just obtain your standard half pound of sugar.

This stoppage on sweetness led many Canadians to try beekeeping for the first time. In Canada, the number of beekeepers rose from 27,150 in 1940 to 43,340 in 1945. Alberta made up a major proportion of this increase with a rise from 1589 beekeepers in 1939 to some 10,000 in 1945.



Provincial apiarist, W. G. Le Maistre, wrote in 1945, that “the majority of our 10,000 beekeepers have gone into the business, without any previous knowledge of it, during the last three years.” After the war, one beekeeper recalled his wartime mentor: “he was the Bee-Man, having kept bees for years, long before any shortage of sugar set the rest of us thinking in terms of sweet stuff.” Honey production in Alberta soared from 2.18 million pounds in 1939 to 6 million in 1945.

Despite the restrictions, beekeepers were allowed to obtain sugar for their bees by applying to the provincial apiarist who could grant a permit for the industrial use of sugar.

We will never know what proportion of the sugar made it into the feeders, but given the hoarders and panic buyers mentioned above, it is likely that there was some slippage from the apiary to the kitchen. In 1945, it was announced that only beekeepers who produced honey for sale and were registered with the commodity ration administration would receive sugar to feed their bees to the tune of 15 pounds per colony per year. Le Maistre



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

suggested that the rationing of sugar had a negative impact on the 1945 crop as restrictions curtailed feeding during a cold and cloudy spring.

Newspaper coverage on 3 August 1945 advised beekeepers to save enough sugar for spring feeding as the next allotment wouldn't come until the following fall. A few days later, an atomic bomb was dropped on Hiroshima and the war was coming to an end, but sugar rationing would continue into 1946. The war had destroyed sugar production in Java and the Philippines and caused great damage to European sugar beet fields.

Back in Alberta, the big beekeeping boom fizzled. While there were some large honey crops in the immediate war years, the number of beekeepers in the province declined steadily. In 1954, honey production dropped below pre-war levels. It seems that the many hobbyists and backyard enthusiasts who entered apiculture during the war decided it was easier to once again buy their sweeteners from the grocery store.



Managing Thousands of Colonies

The members of the Calgary and District Beekeepers Association were given an inside look at management of a very large beekeeping farm when Reece Chandler of Scandia Honey shared his insights at our November bee club meeting.

Reece drove in from Scandia, in a blizzard, two hours east of Calgary. The bee club greatly appreciated his visit and talk, "A Year in the Life of a Beekeeper" – a month-by-month account of commercial bee farming.

Attendees at the meeting were treated to Reece's great sense of humour and his wide-ranging knowledge. "In the end, it is people who are important," said Reece. He has given employment to dozens of folks while treating them as partners in the enterprise. Reece has also been a keen supporter of the Calgary and District Beekeepers, helping members by finding and delivering packages, good drawn-out equipment, and by sharing his constant enthusiasm. Thanks, Reece!





ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

Unofficial Minutes of the Alberta Beekeeper Commission AGM, November 30, 2022 – Malcolm Connell

The meeting began at 1pm. It was a hybrid meeting.

Resolutions

1) Corridors for Pollinators: maintaining roadsides for pollinators; establishment, restoration, management, and maintenance. Motion passed.

2) Synchronize the processes and time taken to get foreign workers in between the Seasonal Agricultural Workers Program (SAWP) mostly bringing in workers from Mexico and the Agricultural Stream, more focused on workers from Nicaragua and Peru. **Motion passed.**

SAWP has been taking one month to process applications. AS takes 4-5 months. COVID facilitated more processes done on line. However, embassy staffs were fewer in number and paper work got bogged down.

Rod Scarlett, CEO of the Canadian Honey Council, was commended for his work getting charter flights of workers organized during COVID.

3) A united effort to get Insurance companies to provide car/truck insurance for foreign workers and not penalize commercial beekeepers by not providing any business insurance. Motion failed.

Many foreign workers come with an international driver's licence and work for the same beekeeper year after year. However, insurance companies are reluctant to recognize their licences, but are not reluctant to threaten to remove all insurance from individual commercial beekeepers. I think the motion failed because of the feeling that commercial beekeepers should solve the problem individually. Success stories on this issue need to be circulated.

4) That Alberta only have one rep on the Canadian Honey Council instead of two. This would cut the fee ABC pays to CHC. Alberta got the extra rep originally I think because they have the largest honey industry among the provinces. The fear expressed was that if Alberta tried to get the second rep back in later years, it could be refused. **Motion failed.**

5) ABC donates \$5,000 to the newly formed CBF (Commercial Beekeepers Federation) to help them in their lobbying efforts to get the US border open for Canada to get US bee packages again, as before 1987. **Motion failed.**

This motion had the most divisive debate, continuing for the last 35 years. CBF members in favour mentioned they had had 38 meetings with federal officials and ministers in Ottawa during 2022, including Zoom meetings. They said the CHC had never asked for the border to be opened. The risk assessments done before by the CFIA (Canadian Food Inspection Agency) had not included any commercial beekeepers on the decision committee. The newly created Bee Sustainability Committee was also criticized for lacking a commercial beekeeper committee member. The COVID crisis showed we can't rely enough on package imports from New Zealand, Australia, and Chile. USA could provide a lot of packages. The rep from Kona Queens in Hawaii said USA also needed more packages, so Canada could not expect USA to solve the problems. CFIA is being sued by the new CBF.

Finally, it was mentioned this \$5,000 donation issue could increase the ABC deficit if more commercial beekeepers asked for their refundable fees back (\$200 plus \$1.35 for each hive owned). ABC is a refundable commission where after paying their fees, members can ask for and get 100% of the fees back).



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

6) Collaboration between CHC (Canadian Honey Council) and CBF (Canadian Beekeepers Federation)?

Moved by a member of CBF who said that the issue is we are not being heard. However, fears were expressed that more commercial beekeepers who oppose this would ask for their fees back from the Alberta Beekeepers Commission. Someone asked if CBF is incorporated and has operating procedures. The answer was they are just registered as a lobby group. The collaboration was suggested as possible since the Alberta Beekeepers Commission talks to both groups. So far there have been no talks between the CHC and the CBF. **Motion failed.**

7) That all commercial beekeepers participate in the farm safety video course. It was foreshadowed that one day it could be mandated. **Motion failed.**

This was a difficult discussion. Someone suggested commercial beekeepers who did it should get a \$200 refund. However, someone said this would just increase the ABC's deficit. Some resentment to increasing the basic member fee last year from \$100 to \$200 was evident. Watching the video would incur another fee. Basically, the course activity was described as just watching a video for an hour. Another suggestion was to show it for an hour at the February IPM (integrated pest management) seminar or show at the next AGM in November in order to save \$37,000. Also, more paperwork could create \$100,000 in audit fees. Should it be done online?

Ag Safe is created for farmers by farmers. If members join it, the members will be protected from government overreach on safety issues. There was one case this year which involved a fatality. The family involved received lots of support from Ag Safe. The failure of this motion foreshadows further problems.

8) Beekeeper drivers want an exception from the new system of electronic logs to document hours commercial drivers work. **Motion passed.**

Beekeepers, particularly those who work driving bees south for pollination in May, usually work through the night and sleep during the days, i.e. They work very irregular hours for a few weeks. Nine livestock groups are asking for this exemption. A beekeeper driving a truck load of bees can't be forced to rest eight hours by a highway. Some of these drivers are driving bee hives across Canada.

The meeting adjourned at 5:23 pm.

December 1: Day one of conference presentations at the ABC

The conference began with an unsuccessful attempt to screen the pre-recorded message from the Alberta Minister of Agriculture. About 200 people registered for the conference. Speaker presentations followed.

Dr. Frank Rinkevich, USDA Honey Bee Breeding-Genetics and Physiology Lab (Baton Rouge, USA).

'Managing amitraz-resistant varroa'. Does amitraz work anymore?

Amitraz resistance is a fact and is the most consistent factor that explains control failure at the colony level. 760 hives from 35 beekeepers in different parts of the USA participated in the three-year study. 292 samples had a 30% resistance threshold. However, another visit to those resistant colonies showed success in curbing varroa when using oxalic glycerine in shop towels. This displaced resistant varroa and lowered their numbers and restored the success level of treatments. The Argentine cardboard method with oxalic (Aluen CAP XR OA) was also mentioned. Rotations of treatments do work.

The Apivar resistance test can predict amitraz treatment success. Beekeepers in the study did not get a lot of varroa from neighbours. There was still resistance to coumaphos after 20 years. Old Apivar strips are just as effective as new strips (a surprise). Frank acknowledged the help of the Honey Bee Health Coalition.



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

Paul Kelly, University of Guelph, Honey Bee Research Centre.

He works mostly with small scale beekeepers. He has 120 hives. The university has 300 hives. He requeens hives using queen cells which are cheaper and more successful than buying mated queens.

He uses a simple incubator to transport queen cells when requeening. It's composed of a small cooler which fits a hot water bottle. Four inches of sawdust are put on top, and soaked with warm water. The cells are kept in the sawdust safely for up to five hours. Hives are wintered in single boxes, unlike the doubles used by most prairie beekeepers. After putting a queen cell into a nuc, check after seven days to see if the cell hatched. Check 20 days later to see if the queen is laying.

Two five-frame nuc boxes are put above an excluder which has a brood box and queen below. After a few days of bees going through the excluder, take away one or both nucs which include frames of brood to another location and put a queen cell in each separated nuc.

Create flatbed wheel barrels with two wheels by modifying a cart from Canadian Tire. These can carry 300 lbs of boxes and honey, and save your back. Aluminum hive stands weighing five pounds can be purchased from Canadian Tire. They can be used to sit on when checking a hive, or can hold up to 300 lbs. of tipped up honey supers. Carry your smoker in a bucket. An upturned bucket can be used as a seat when examining your hive, and save your back.

He's been doing barrel feeding for 20 years and finds it faster, and the bees don't rob out other hives. Put 10" of straw in a barrel of 2:1 sugar syrup on the same day you remove honey supers. Prop up the barrel lid with bricks to stop racoons. Take off the honey supers before opening the barrel. Move a bad hive at midday.

Paul's department has produced about 80 free beekeeper videos on Y tube, including six on queen rearing. Their channel is [linked here](#).

Panel discussion on 'The Purpose of Tech Teams'

Panel participants were

Jeremy Olthof, President of Alberta Beekeepers Commission

Jeff Lee, VP of BC Beekeepers

Nathan Wendell, Pres of Saskatchewan Beekeepers

Ian Stepler, Pres of Manitoba Beekeepers (appeared via video link). [See his free videos](#).

The 5 questions they attempted to answer were

- 1 What are the biggest issues re sustainability in your province?
- 2 Are tech teams best used for hive monitoring and how can we foster collaboration across the provinces?
- 3 If Apivar is no longer good, what next?
- 4 What is the one thing you would like improved with provincial and national organizations?
- 5 How do you see polarizing issues affecting the beekeeping industry now?

Main points

BC government is undertaking a sector assessment of the beekeeper industry.

Tech teams were seen as valuable for hive monitoring and providing education courses. Duplicating other provinces in applied research but no special interprovincial collaboration seems to be occurring. They need to follow a structure similar to that in the cattle industry: provide support on the ground, feedback guidance.

Should tech teams have a seat on CAPA (Canadian Association of Professional Apiarists) ? It was pointed out that all tech team heads were individual members.



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

Ian Stepler said that Canadian beekeepers had no sustainable backstop, unlike other agricultural sectors. This appeared to be an indirect reference to the need for more package bees. Protocols are being worked out for importing package bees from Ukraine and Italy.

There is a need to translate academic knowledge to help beekeepers now. There is a disconnect between keeping up with problems and new solutions.

There needs to be more national focus on improving domestic bee stocks to effectively replace losses as Saskatchewan is doing.

There has been a backlash in BC, most of whose beekeepers are hobby beekeepers and sideliners are against being an incubator to provide replacement bees to commercial beekeepers on the prairies.

The most positive surprise was the leaders of the four western provinces beekeeper organizations finally started having Zoom sessions together a year ago, to discuss problems and issues.

Ian Stepler suggested prairie beekeepers have contracts with BC producers to produce more nucs to sell rather than competing in honey production. There were a few BC beekeepers present who were trying to make contacts with beekeepers who wish to buy nucs. A few Alberta bee clubs have been approached to coordinate the sale of nucs to hobby beekeepers.

During the discussions another issue was brought up by Kelly Odea from Kona Queens in Hawaii.

He said he lacks contacts in Western Canada. If he had better contacts, he could sell us more queens. He hopes the old system of shipping queens involving Air Canada comes back.

The collaboration between Dr. Medhat and Gus Rouse was mentioned. This led to the battery boxes being replaced by individual queen cages. Also, Bee Maid got involved as a distributor. Kona and other Hawaiian

beekeepers were selling 250,000 queens a year to North America.

Trade Show

One new addition at the trade show was the participation of the Jamaican beekeepers who are hoping to find employment for Jamaican beekeepers in Alberta. If you are interested in contacting workers from there, contact Donna Adams, Jamaican liaison Service in Kelowna, 250-762-4219, donna.adams@jamliser.com.

Bag of Goodies

Each conference participant got a bag of samples. They included 'Going Nuts' from Calgary, a big black and grey hive tool, a packet of 'Honey Mix Seeds' (purple coneflower, red poppy, aster crego, forget me not cynoglossom, cornflower) from AFSC.CA. They were packed for 2020 and expired on March, 2021. They could probably still be planted. A rubber honey bee was included (similar to a rubber ducky: too big for a child to swallow but small enough for a beekeeper to play with it in the bath).

I thought it was the best beekeeper conference I had attended for a number of years. Kudos to the organizers for a job well done.

Submitted by Malcolm Connell



Calgary Beekeepers: Upcoming meetings

The Calgary and District Beekeepers Association Annual General Meeting will be in April. The AGM will include the election to some board and executive positions. The call for nominations will be announced in March.

Please take advantage of all the benefits CDBA offers – educational programs, bee liability insurance, mentoring, and community endeavours. Our next regular meeting (January 11) will feature **Dr. Olaf Rueppell of the University of Alberta**. His talk, "**Cell size - egg size - bee size**", will be presented via Zoom.



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

Our series, *"It's honey, Honey"* focuses on backyard urban beekeeping as performed by a very experienced Haysboro (SW) Calgary beekeeper. Mark is quite active in our bee club, contributing with Saturday at the Hive, organizing the winter banquet, and volunteering in a wide variety of roles, including auditing CDBA's financials. The retired firefighter is an award-winning honey producer and accomplished bee master.

It's honey, Honey

By Mark Soehner
Winter 2022

As I write this outside viewing my apiary and garden, it is Wednesday 28 September 2022, 3PM. The afternoon is magnificent again with a clear sky and 28C/82F. I am seated in my very old handmade Muskoka chair, whisky & coke at the ready, and Casey, the 12-year-old English Springer Spaniel, is stretched out on the grass in shade.

The bees are prepared for winter. The seven hives were harvested throughout summer with the completion on target 31 August. The bees have been devouring the 2:1 sugar syrup. My sugar bill has been \$250.

During September, the boxes were reduced to two deep, with a sugar patty and burlap added yesterday. Sugar syrup and pollen patties were topped up throughout September. Today was the 7th oxalic acid vapourizing treatment. I will do one more.

The entrance in September was reduced to 1/3 normal to combat a significant wasp presence in the yard. There is a top ¾" vent each hive added for the winter. There is a sloped outer roof atop each hive to reduce the risk of water migration. There is a toothed bottom entrance guard each hive to keep the vols and mice out. The boxes are Beaver polystyrene with an R7 estimated rating. The queens are 2021 vintage, so relatively young.

The bees and I are ready for winter.



Mark Soehner



Mark's birthday cake: Best wishes and many happy returns!

International Black Jar Honey Contest



The Center for Honeybee Research, located in Asheville, North Carolina, is holding its 12th annual **Black Jar International Honey Contest** on June 4, 2023. Entries arrive from beekeepers around the world. Entries are being accepted now, with a deadline of March 1, 2023.

This is a honey-judging contest in which Calgary beekeeper Mark Soehner placed among the finalists for the world's best-tasting honey a few years back.



More details, including previous years' winners and contest categories can be found through this link:
<https://centerforhoneybeeresearch.org/registration/>



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

CDBA Members' Survey

The Board of Directors of the Calgary and District Beekeepers Association (CDBA) has launched a brief survey for members. It will take about five minutes to complete. This is your chance to comment about your bee club's activities and dynamics. Use the link below to complete the short survey. It is open now until January.

You will be asked about which CDBA activities you like, which you regularly participate in, and what suggestions you have for other bee interests you may have.

This is an opportunity to provide your feedback to the Calgary and District Beekeepers Association (CDBA) board. The survey questions have been developed to help the board understand our member needs and for you to share the programs you are interested in and what you would like to see offered in the future.

[CDBA Member Survey - Complete Now!](#)



Holiday Spirits by Ron Miksha

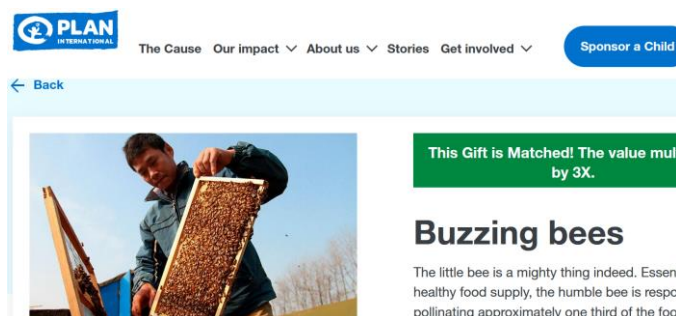
We all do what we can and pick our own favourites, but charitable giving goes up during the holidays. It's hard to know which organizations to trust and which are much too top-heavy, with our gifts ending up in the hands of administrators and advertisers.

To be more certain that donations are going to people who can use a hand up, we can research organizations for their effectiveness. Several of the country's most impactful charities are located in Calgary, according to the [MoneySense website](#).

Across all of Canada, one of the charities noted as providing the most impact is our own local [Calgary Food Bank](#). They take food donations, or you might sell your honey to neighbours and contribute cash. But, properly-labeled containers in cases (e.g., 12-500 gram) could be

accepted and would be greatly appreciated, Avaleen Streeton, a food-donations supervisor there told me.

There are other ways to give meaningful help. Several non-profit organizations support folks in remote parts of the world by sending livestock, including honey bee colonies, to improve food security. Among these are [Plan Canada](#), [Heifer International](#), and [Samaritan's Purse](#). It is possible that a box of chicks might be better than a box of bees for a struggling family, but the option is there. My family usually buys a pig for a family somewhere. But twenty or thirty dollars is enough to earmark for a hive of bees. For \$2,500 you can donate an entire honey farm through Heifer International!



There are many other sharing options, of course. Groups such as the [Alberta Beekeepers Commission](#) and our [Calgary and District Beekeepers Association](#) accept gifts through the links highlighted here. But many other organizations would welcome our help.

One online vetting site lists [nine favoured bee-oriented charities](#). They tell us "*the best charities for saving bees in terms of overall impact are [Project Apis m.](#) and the [National Wildlife Federation](#). Charities such as the [Planet Bee Foundation](#) and [Bees For Development](#) do amazing work empowering local communities to protect their native bees.*"

If you want to generally help the environment, you can support native pollinators through [Xerces Society](#), [Pollinator Partnership](#) and [The Bee and Butterfly Habitat Fund](#). Closer to home, the [Alberta Native Bee Council](#) works to conserve native pollinators.

- Ron



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association



Notes from Dr. Olav Rueppell's Bee Lab at the University of Alberta

Editor's remark: Dr. Rueppell's research lab is at the University of Alberta. Here he shares some of his important work that affects the health and success of bees in Alberta.

University of Alberta researches new tools for controlling *Varroa* mites

By Rassol Bahreini and Olav Rueppell

We all recognize the parasitic *Varroa* mite as a major pest of our honey bees even though their destructive effects are manifold and sometimes hidden. For example, they can vector a range of viruses from one bee to the next and even aggravate existing viral infections. In the big picture, *Varroa* threatens not only individual beekeepers, but the sustainability of the Canadian beekeeping industry.

In contrast to other reasons for colony failure that are commonly reported – such as “weak colonies in the fall”, “poor queens”, or “I don’t know”, *Varroa* is a single cause that we as beekeepers actually can do something about. Integrated pest management (IPM) programs have been developed at Provincial and National scales for controlling mites with an integration of breeding for more mite-resistant bees, monitoring mite levels, and cultural, physical and chemical means to kill *Varroa*.

IPM encourages beekeepers to monitor mite populations while minimizing population build-up with good colony management and other non-chemical means and only to resort to chemical control as a means of last resort when mite populations exceed treatment thresholds. Thus, under certain conditions, chemical treatments are recommended and these involve some hard pesticides in addition to organic acid treatments, such as formic or oxalic acid, and essential oils, such as thymol. All of these options have their advantages and disadvantages.

Several synthetic Varroacides have been registered in Canada by the Pest Management Regulatory Agency (PMRA) and are commercially available. These include Apistan® (*tau*-fluvalinate, pyrethroid class), CheckMite+™ (coumaphos, organophosphate class), Apivar® (amitraz, formamidine class) and Bayvarol® (flumethrin, pyrethroid class). Overuse of any of these substances quickly selects for the evolution of resistance in the mites: If we kill the 90% most susceptible mites, we leave 10% that are most resistant against that chemical and their offspring will inherit some of that resistance. Thus, our next treatment will not kill 90% of that generation anymore.

This principle seems to have made some of the existing Varroacides quite ineffective at killing *Varroa*. For example, low efficacy of and resistance to commercial Varroacides like Apistan® and CheckMite+™ have been reported in Canada (Currie et al. 2010, CAPA 2020). Therefore, new tools in our “*Varroa*-control toolbox” are needed to rotate treatments around and prevent the build-up of resistance to specific products. Given the high costs of colony losses and the ever-growing risk of *Varroa* resistance to existing products, we think that the effort to develop new products is worthwhile. And with the generous support of the Alberta Beekeeper Commission and funding from the “Results Driven Agriculture Research” program, we have engaged in these efforts to bring new Varroacides as products to the Canadian market.

Our renewed effort is based on previous screens of 26 active ingredients from 19 chemical classes (Bahreini et al. 2020, 2022). These studies suggested a few candidate compounds as potential Varroacides with a high field-efficacy for controlling *Varroa* (>80%), which reduced the mite population below the recommended fall economic threshold, and met the initial criteria for further testing. While some assessments of the toxicological effects of these compounds on honey bees were performed, we need to study these compounds in a lot more detail to determine the right dosage and application method, as well as to ensure that they



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

control mites but do not leave toxic residues in the hives or harm bees in direct or indirect ways.

Thus, in our second phase of this new miticide project (May 2022- March 2024), we are evaluating five of the new compounds in the laboratory and in the colonies. These compounds are vetted for efficacy on mites and safety for honey bees in multiple ways: Varroa mites are directly exposed to different concentrations in plastic cages (Figure 1). In addition, we artificially increase mite levels in experimental nucleus hives and measure Varroa kill efficiency under these conditions. Hive components, such as honey, bee bread, and wax are collected and analyzed for chemical residues. Additionally, the effect of our compounds on honey bees is examined, taking into account that different ages and castes may differ considerably in their susceptibility to be accidentally poisoned. Effects might also be more subtle than death and therefore we are not only studying the bees mortality but take a range of other measures, including studies on how their genome activity that is important for their internal homeostasis might be disrupted. Finally, we also look at the survival and productivity of bees in nucleus hives, evaluating brood patterns, mortality, and development of these small colonies (Figure 2).

The overarching goal of this project is to introduce new Varroacide(s) to the Canadian beekeeping communities and provide information for Canadian pesticide regulating agencies (i.e. PMRA) to register or expand labels for existing registered compounds for in-hive apicultural use. This is a long and arduous road and the next phase of this project for homing in on 1-2 select compounds for full hive evaluation and optimizing delivery methods is already in the planning stages. Future collaboration with beekeepers, pesticide companies, universities and government agencies, will be necessary to support our efforts to gather and deliver the required information for registration processes and commercialization of new miticides in the greater context of sustainable Varroa IPM.



Figure 1: Laboratory assessment of potential new Varroacide's toxicity to honey bee workers and Varroa mites.

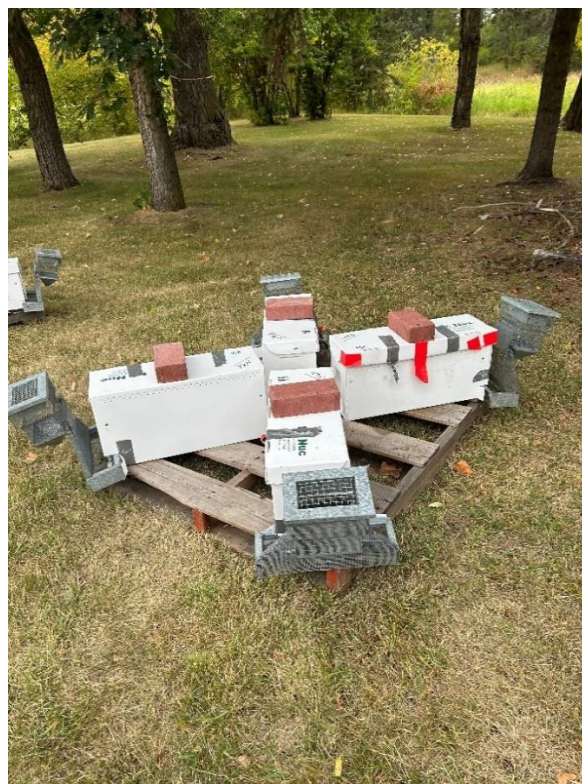


Figure 2: Field evaluation at the Crop Diversification Center North in Edmonton of candidate compounds in experimental nuc hives.





ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

Beekeeping Hint: It's winter! Let the bees bee. They will do best if the beekeeper is in Mexico at this time of year. Poking into their tightly clustered nest can make most situations worse.

Of course, if a blizzard has ripped away the insulation or sent the hive's lid to Saskatchewan, fix that. But be as gentle as possible. Rough motions can kill nesting bees.

When a very mild winter day arrives (plus 5, sunny, no wind), you might carefully lift the lid and glance down into the frames. Don't remove any, but you should be able to tell if the hive contains frames of honey and if the cluster has moved upwards in the hive. On a mild day, a few bees may break cluster and greet you.

From this, you should learn if the colony is alive and if it's hungry. Obviously, feed a light colony (use fondant, not syrup) and place an order to replace dead colonies.

CDBA Zoom Meeting: January 11

Featured Speaker: Dr. Olav Rueppell
Presenting: Cell size - Egg size - Bee size

Olav received his undergraduate and doctorate degrees from the Julius-Maximilians Universität Würzburg, Germany, working on the social evolution in ants. His post-doctoral work at the University of California Davis introduced him to the wonderful world of honey bees. This led him to set up a diverse and productive research group at the University of North Carolina that steadily grew over the past 17 years.

Dr. Rueppell is continuing his work with a fresh start at the [University of Alberta](http://grad.biology.ualberta.ca/rueppell/) where he is studying honey bee biology and health and related topics. For more information please visit: <http://grad.biology.ualberta.ca/rueppell/>

Products of the Hive: Royal Jelly



One of the many products of the hive is the stuff called royal jelly.

Some people consider this an amazing health food. It certainly is for honey bees.

Larvae fed lots of royal jelly develop into queens. Queens mate, lay fertilized eggs and live for years – just three of the traits that sister bees (that aren't imbibing massive amounts of royal jelly), can not do.

Evidence regarding the benefits to humans is much less certain. Although a few papers suggest some positive effects, none are entirely convincing. A person consuming massive amounts of royal jelly from infancy is not likely to live for centuries and lay fertile bee eggs.

There is a market for the product, though the money earned is not always worth the effort spent, especially for Alberta beekeepers working a short season. You will need to get good at grafting queen cells, develop powerful colonies to adequately feed the cells, then cut the little developing queens loose and throw them away. What remains in the cells can be scooped or vacuumed into sterile specimen jars and refrigerated. But remember that every little bit of royal jelly costs a developing queen her life.



Developing queen cells that could be 'harvested'.



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

Honey Reci-bees is a quarterly series of recipes and cooking/baking ideas from Carmen Peccie.

HONEY RECI-BEES by Carmen Peccie

With the holiday season near, I thought that some appetizer-type reci-bees would be good to share. Try these out when your family and friends stop by for a visit!

HONEY PEPPER BACON TWISTS

Vegetable cooking spray
1 cup of honey
1 ½ pounds of thinly sliced bacon
Coarsely ground black peppercorns

Preheat the oven to 350 F. Line a broiler pan with aluminum foil. Place the broiler rack on top and coat it with the cooking spray.

Tie each bacon slice into a loose knot and place them in a single layer on the prepared broiler rack. Brush them with honey and then top them with a grinding of black pepper (however peppery you like it!). Bake until the bacon is crisp and the honey is bubbly, about 15-20 minutes. Transfer the twists with the honey-side up to paper towels to drain and cool. For serving, place them in a napkin-lined dish or tray.

EASY HONEY MUSTARD SAUCE

(makes about ¾ cup)
½ cup mayonnaise
2 tablespoons of Dijon mustard
1 tablespoon of honey

Combine the ingredients in a bowl and mix well. This sauce can be kept in the refrigerator for up to 5 days.



HONEY MUSTARD CHICKEN FINGERS

6 tablespoons of honey mustard (see previous)
¼ cup of fat-free liquid egg substitute
10 ounces of boneless, skinless chicken breast, cut into 8 strips
Salt to taste
Black pepper to taste
20 hard salted pretzel twists, finely crushed
3 tablespoons of granulated sugar

Preheat the oven to 375 F. Mix the honey mustard and egg substitute together in a small bowl. Sprinkle salt and pepper on the chicken strips and then place them in the mustard and egg mixture, marinating for at least 5 minutes.

Mix the crushed pretzels with the sugar and spread it out on a plate. Spray a baking sheet with non-stick cooking spray. Coat the marinated chicken strips with the pretzel mixture and then transfer them to the baking sheet. Give the top of each strip a spritz of non-stick spray. Bake until the chicken is cooked through, for about 20 minutes total, flipping each strip at 10 minutes.



HONEY ALMOND BISCOTTI

2 cups all-purpose flour
1 teaspoon of baking powder
½ teaspoon of salt
½ teaspoon of baking soda
½ cup vegetable oil
½ cup of sugar



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

½ cup of honey
2 large eggs
2 teaspoons of grated lemon peel
2 teaspoons of crushed aniseed
1 teaspoon of vanilla extract
6 ounces of slivered almonds, lightly toasted

Whisk the first four ingredients in a medium bowl. In a separate large bowl, whisk the remaining ingredients except the almonds, until smooth. Then stir in the flour mixture, followed by the almonds. Cover and refrigerate the dough for 3 hours.

Preheat the oven to 350 F. Take two baking sheets and first butter them and then dust them with flour. Spoon the dough into 3 equal strips. Flour your hands and shape the strips into two-inch wide by one-inch high logs. Bake the logs until they are just springy to the touch, switching and turning pans after 10 minutes, for about 20 minutes total. Cool them for 15 minutes and leave the oven on for the next step.

Using a large spatula, gently transfer the logs to a cutting board. Cut each log on a diagonal into half inch-thick slices using a serrated knife. Then arrange them on the baking sheets and bake until the bottom is brown (approximately 7 minutes). Turn them over and repeat for the second side. Place on cooling racks. Store in an airtight container at room temperature.



Discussing favourite honey recipes.

A Bee Walked into a Hive. . .

A Bee Walked into a Hive... This feature will brighten everyone's day. Dennis Milbrandt has a great sense of humour and a gift for word-play. Bees, honey, and combs are naturally punny. What could go wrong?

Bees are now assisting police in catching criminals, they assist in sting operations.

This special squad is known as the RCMB.

Three bees land at the bar.

The bar tender says, "what can I get you?"

First two bees order a drop of mead.

Third bee orders a drop of scotch, and asks the barkeep if there might be a job for her.

Barkeep answers "Don't you think you'd have a better chance finding work back at the hive?"

Bee says "No, They don't need a bartender"



Flowers medicate bees

Although we are concerned that bees spread diseases (nosema; foulbrood) and pests (varroa mites) when working flowers, there's a wee bit of good news out in the field.

Research scientist Laura Figueroa, working at the University of Massachusetts, has been studying the way that different plant species can reduce bee diseases in plantings of wildflowers.

Interviewed at a recent symposium in Vancouver, Dr. Figueroa said that sick bees visiting flowers can leave behind pathogens for the next foraging bee to pick up. Thus, flowers can act as hotspots of disease transmission. Flowers, however, can also provide natural medicines to help curb sick bees' infections. See [this piece](#) where she explains how sunflower pollen can strongly reduce infections of a gut pathogen that affects bumble bees.

As we follow these studies, we may learn to plant native wildflowers for food and for medicine for our community of bees. More to come on this good news!



ABee Landing Board



Newsletter 5 – December 2022 Calgary and District Beekeepers Association

THE BACK PAGE EDITORIAL

by Ron Miksha

Corridors for Pollinators

The excellent review of the [Alberta Beekeepers Commission](#) (ABC) by Malcolm Connell (page 9 of this issue) included a list of key resolutions presented for consideration at the ABC Annual General Meeting. The ABC is an organization of Alberta's commercial beekeepers and part of the group's mandate is to encourage things that can help large-scale bee operations. Their motion to support a "Corridors for Pollinators" initiative was approved.

It's reassuring that the commercial beekeepers agree with the need to preserve habitat for pollinators along Alberta's roads. Of course, we might assume that those beekeepers are most eager to preserve their own interests – and that's fair enough. But it's good news for everyone when some of those interests align with the general health of the environment. Here are some of the reasons that ABC passed this resolution:

- ★ Honey bees and other pollinators are important to agriculture, the economy, food security, biodiversity and the environment;
- ★ Pesticides and herbicides have a known negative health effect on honey bees and other pollinators; and,
- ★ Honey bees are a sentinel for [One Health](#).

These, and other points, led the bee commission to "request Agriculture and Irrigation work with Transportation and Economic Corridors to develop a strategy for pollinators accessing Alberta's public spaces and roadways which considers the needs of honey bees, beekeepers and native pollinators."

How will this work? In their background information for the resolution, the Alberta Bee Commission says that

"Increasing the range and diversity of available



A corridor of sweet clover on an Alberta highway

forage throughout the season is critical to ensuring healthy honey bees and other pollinators. Climate change, pesticides, pests and changing field crop varieties are all challenges to the long-term health of honey bees and other pollinators. Alberta has 165,000 kilometres of unpaved and 62,000 km of paved roads which can, with best management practices that keep honey bees, beekeepers and other pollinators in mind, can help to support the nutritional needs of this important resource."

These commercial beekeepers say that the corridor is a response to climate change, pesticides, pests, and changing agriculture. The pollination corridor is a big project. It could lead to restoration of diverse flora to the 2300 square kilometres of Alberta roadside (that's over half a million acres!).

It was likewise encouraging to see Glenda Livingston's article on the wide variety of Alberta native bees (and the suggestions for helping them) on page 2 of this *ABeeLandingBoard*. It's good to see that we can find ways to mitigate our wide footprints – such as ABC's support for Corridors for Pollinators and Glenda's list of basic practical suggestions for our backyards.

As always, we'd like to hear your opinions, especially if you'd like to share any contrary ideas. And many thanks to all our [ABeeLandingBoard](#) volunteers. All readers are invited to contribute. We'd love to hear from you!