

# The Bee Cause



Volume 10, Issue 1

January 2013

- Next general meeting is 7:30 Tuesday, January 8<sup>th</sup> at the River Heights Community Centre, 1370 Grosvenor Ave., Winnipeg.
- (in room right off main-door)

Speaker: Beekeeping 2013 & RRAA executive

### Inside this issue:

- Beekeeping Ethics Pg 1
- RRAA Presidents Pg 2
- RRAA minutes of November 2012 meeting Pg 3
- MBA Report
- Healing with Honey article 1 Pg 4
- The Classifieds Pg 5
- Editor's Notes:
- Royal jelly –larval rearing Pg 6
- Small hive Beetle in Manitoba Pg 7
- Royal Jelly Could Fly
- Butyric acid and benzaldehyde In Honey Pg 8
- Healing with Honey article 2 Pg 9
- Horse photos article 1 Pg 10
- republished our note RRAA's 50th Pg 11
- RRAA Registration

## Beekeeping Ethics around Beeyard Locations

By Doug McRory, Retired Provincial Apiarist

November 2012 The Ontario Bee Journal

Over my 47 years with beekeeping in Manitoba ethics have been unregulated most likely because our beekeepers of the time have been practicing respectful honesty and integrity most times. As RRAA editor I felt this article of major value to all Manitoba Beekeepers. Now what is Doug McRoy talking about.

There is no law in Ontario that governs how far away from neighbouring bee

yards a new one can be established. Still, there has always been an unspoken agreement when establishing a new bee yard that the establishing beekeeper would maintain at least two miles distance from other established bee yard locations.

Generally speaking, if the landowner agrees, then a beekeeper can put bees there. Occasionally a landowner will agree to allow more than one beekeeper to put bees on their property. Because of the risk of robbing and the spread of bee diseases such as American Foulbrood (AFB), it is wise for beekeepers to maintain as much distance as possible from other bee yards. It is totally unacceptable to knowingly put bees right next to someone else's established bee yard. When you are looking for new locations you should ask the landowner that you are approaching if they are aware of bees very close by. Usually neighbours in the country make each other aware of things such as bees being on their property. They may or may not be aware of where bees are located but at least you have tried to find out.

It is often hard to determine where bees are located as beekeepers naturally put them in places that are not

easily seen from the road. Normally if an established beekeeper finds out that there are bees close to their location, they find out who has put them there and they talk to that beekeeper and tell them about their established location. The beekeeper that has moved in should move the bees to a location that does not interfere with the other beekeeper. The other consideration that should come into play is - we as beekeepers should be utilizing the bee pasture resource of an area to the maximum. Almost everywhere honey bees are kept in Ontario, at least 30-40 bee hives can be kept at two mile intervals. A beekeeper with one or a very few colonies should not expect to monopolize such a potential resource by claiming such an area as his exclusive right to that bee yard area. There could be several small bee yards within this area. If a commercial beekeeper who is trying to make his living from the bees has established bee yards already, then the smaller beekeepers should respect that the resource is being well utilized there and respect that beekeeper's claim on that resource area. Too many bees in an area can make it non-productive for everyone!

We do not have a very good mechanism in place currently to utilize the beekeeping potential resource of each possible (continued on pg 4)

**2012 Executive**

**President:** Charles Polcyn  
Ph 204-284-7064  
231 Buxton Road  
Winnipeg, MB R3T 0H4  
Email: charles\_polcyn@ymail.com.

**1st Vice President:** John Badiuk  
Ph .204-943-0166  
128 Victoria Ave W  
Winnipeg, MB R2C 1S5  
Email:honeyb@mymts.net

**2nd Vice President:** Brian Smith  
Ph 204-373-2527  
P0 Box 423  
Emerson, MB. R0A 0L0  
Email: smthbgs1@mymts.net

**Secretary:** Ron Rudiak  
Ph 204-326-3763  
216 Loewen Blvd.  
Steinbach, MB R5G 0E5  
Email: manbeekr@mts.net

**Treasurer:** John Speer  
Ph 204-222-3007  
Box 16, Group 555, RR 5  
Winnipeg, MB R2C 2Z2  
Email: jurnss@mymts.net

**MBA Delegate:** Jim Campbell  
Ph 204-467-5246  
Box 234  
Stonewall, MB R0C 2Z0  
Email: jaycam@mts.net

**Secretary & Reporter:**  
Ron Rudiak  
Ph 204-326-3763  
216 Loewen Blvd.  
Steinbach, MB R5G 0E5  
Email: manbeekr@mymts.net

**Newsletter Editor:**  
**Ken Rowes**  
Ph 204-755-3427  
Cloverleaf Box 758  
RR1 Anola, MB R0E 0A0  
Email: Roweskd@mymts.net

**Presidents Comments -- January 2013**

I am glad that the World did not come to an end on December 21st as the Mayan Calendar suggested could happen. A lot of my neighbours in the Whitemouth area were of mixed opinions. I wonder if the bees even noticed.

Honey production in Manitoba varied with the rainfall or lack of, and the scorching temperatures of July. Some of my locations did well this summer, while others did little in July and August. A survey of honey production in the USA and across the world indicates a significant shortage of honey. This usually indicates higher wholesale prices for honey and \$2.00/ lb is frequently mentioned for extra white honey. And some retail stores are asking for \$12.00/lb for any type of speciality honey.

The heavy wet snowfall in early October was a problem for some of my hives as they were almost buried in the drifts. Fortunately it warmed up , but I was still moving a dozen hives using a toboggan. At this point the flow was really over in the Buckwheat Fields.

The information I have received about the Winnipeg bylaw adjustment for Urban Beekeeping will come to a city council meeting on January 14th. I am not very optimistic about the direction the Report from Animal Services will take. However there is supposed to be a copy of their report on the official City Clerks website in the first weeks of January. I intend to attend the Council Meeting on the 14th, and hope to be able to persuade the council sub-committee to provide support to the many pollinators of private and community gardens. Locally grown food can help many members of the Winnipeg Community eat well and have a healthier diet. Other members of the beekeeping public are invited to attend the Council Meeting on the 14th and be a part of the agenda. You will need to inform the City Clerk of your wish to make any remarks related to the topic of Urban Beekeeping and By-Law changes The Protection Council members are: Eadie, Smith, Fielding, Steen and Nordman.

Our last meeting RRAA meeting in November was a combination Social Night and Gadget Night. Several interesting items were displayed, one on using Agar instead of pectin for Jam Making and the others on using Oxalic Acid in a variety of ways as a late treatment for Varroa mites.

Mr JR Badiuk coordinated a varied spread of meats, breads, cheeses and desserts that we all enjoyed.

Two official parts of the Business Meeting was the selection of a 4 person Search Committee for the 2013 RRAA Executive and the Approval of a \$2000.00 grant to Dr. Curries research into controlling populations of Varroa Mites in winter quarters. The members at the meeting were all in favour of using some of our accumulated funds towards an activity that could benefit all beekeepers. This is that time of the year for beekeepers to do those repairs and complete projects that were started in the summer. Warm weather will arrive again and the bees will be happy to fly outside. . There will be some mortality of hives and that often is a positive feature of winter helping us decide the queen selections for the summer of 2013.

We are planning a months travel trip to Cuba in mid-January and I expect to meet a few beekeepers as we travel the length of the Island.

**I wish you all a happy holiday and a prosperous New Year!**  
**Yours in Beekeeping --Charles Polcyn RRAA 2012 President**

—/\—

### Minutes of the RRAA General Meeting River Heights Community Club – Nov. 13, 2012

**7:30 PM:** Charles Polcyn opened the November meeting with a few comments about the interesting articles that Ken provides on the pages of the Bee Cause. For example the article on the honey bees mechanism for producing body heat.

Our logo remains undecided and needs a decision so it can be used on correspondence, our web site etc.

**Correspondence:** At present the City of Winnipeg is working on the proposals which could allow rules for keeping honey bees within the city and the a more recent one that could possibly allow keeping a small number of chickens. When completed the City will post them online for comment.

**Minutes:** Moved by Brian Smith and seconded by Chris Argeriou to approve minutes of the September 11 and October 9 general meeting as circulated in the Bee Cause. No changes were required.

**MBA Report:** Jim Campbell outlined some of the proposals under discussion to protect the beekeepers of Manitoba from the arrival of hive beetles from another country (eg. the US). The option of creating beekeeping zones is being examined. A proposal to have an area along the US border where no honey bee colonies would be kept. Another proposal is for quarantined yards that are movement restricted. Beekeeping transition zones. The Canadian Honey Council may select to become involved which will have the effect of making the restrictions the same in each province.

**Treasurers Report:** John Speer reported that our bank account stands at \$5400. For the honey show, the MBA has sent us a check for \$400 and Bee Maid has sent us \$450.

**Funding For Research:** At this time Dr. Rob Currie is on a sabbatical for one year. We will need more information on proposed research in order to add our financial support in the amount of \$2000.

**Coffee Break:** Coffee and a large selection of prepared meats, cheeses of various types and cookies arranged by John Russell..

**Program - Gadget night:** Armand St. Hilaire shared his techniques for making fruit jam using honey and have it gel, without boiling, by using powdered agar. Agar is made from an abundant plant that occurs in the ocean which is harvested and processed into a powder for use in making various food products. No sugar is required to cause foods to gel in contrast to using pectin. Armand supplied some jars of his raspberry jam and spoons so we could all enjoy a generous sample.

Alex Remkes and his son have used oxalic acid for varroa mite control for several years. Dissatisfied with using the electrically heated evaporators that are slow for treating a large number of hives, they have built their own evaporator that cycles much faster so more hives can be done easily.

Brian Smith demonstrated a styro-foam top feeder that is very bee friendly as no bees drown when the hive lid is removed for filling. This design allows for feeding in cooler weather than the wooden feeders. Brian and Sandra also use a digital thermometer to determine when the frames of honey in their honey supers reach 85 degrees F which is an ideal temperature for extracting.

**Loonie Draw:** A jar of honey from Wisconsin went to Ken Rowes, Sandra Smith won the special wine bottle and Albert Anderson won a roll of duct tape. Howard Alexander won a honey cook book, Alex Remkes won the jar of raspberry jam made with agar, Chris Argeriou won the bee escape and Alex Remkes' name was drawn for a bag of cookies.

Thanks to everyone for participating and those donating the fine draw items.

Ron Rudiak, recorder – RRAA

### MBA Report - January 2013

Jim Campbell, MBA Representative

Manitoba Beekeepers' Association (MBA) held their 107<sup>th</sup> Annual General Meeting on November 22, 2012 at Neepawa. For the first time in many decades, the meeting had to be postponed due to the blizzard blanketing most of Western Manitoba. Although in past years, a couple of meetings ended early when a snowstorm threatened, so the meeting delay was an unusual occurrence. New directors elected include Philip Waldner, East Selkirk, and Mark Friesen, Morden.

Issues around the discovery of small hive beetle in Manitoba were debated at different times during the meeting. Some discussion focused on the potential adverse economic impact on producers raising queens and bees for sale in the quarantined area. Although attendees sympathized with the difficulty, there didn't appear to be an easy solution to overcome the problem.

In one resolution, producers approved a plan to have apiary sites (self registered on a web site so aerial applicators could verify fields where extra precautions would be needed. During the 1960's apiary sites needed to be registered with the province, as required by Section III of The Animal Husbandry Act, Chapter 6, R.S.M. 1954. Fees began at \$1.00 in the early 60's and increased to \$2.00 per site by 1967.

Due to the delay in meeting, a guest from Health Canada wasn't able to attend. The original plan was to have a presentation on Illegal Product Imports and Repercussions. The talk was to identify many risks associated with importing products not approved for use in Canada. Current plans call for a report to be written in a future MBA newsletter.

The 107<sup>th</sup> Annual Convention for Manitoba Beekeepers will be held 1-2 march 2013 at the Radisson Downtown Hotel, 288 Portage Avenue, Winnipeg. Speakers will be announced shortly. Advance registration should be \$195 for non-members for the two days. —//\—

#### Research Donation Finalized

Jim Campbell, MBA rep

Red River Apiarists' Association (RRAA) has recently made a sizable grant towards Honey Bee Research being done at the University of Manitoba (U of M).

In mid December 2012, RRAA donated \$2000 as a grant to U of M, as directed by members of the bee club. At their regular meeting of RRAA in September, members approved the plan to support a honey bee research project at U of M. Discussions with U of M on how to proceed, were hampered somewhat, as Dr. Rob Currie is currently on a one year sabbatical leave for research. Meanwhile, Dr. Currie's students are already in the second year, of a three-year Manitoba Beekeepers' Association project, aimed at keeping bees healthy by evaluating a number of varroa treatment products. This project fit the RRAA plan, as results directly benefit all Manitoba's beekeepers.

Arrangements were finalized with Entomology Office staffs, which were pleased to accept the support from RRAA, and agreed to ensure the cheque would be deposited to the correct research account before the end of December. Rob was able to help the process and assisted in preparing the necessary documents. Rob also expressed his appreciation for the endorsement and grant from RRAA. —//\—

**(from pg 1) bee yard location in Ontario. Conflict can occur between many small scale beekeepers over bee yard locations where there is plenty of resource for all of them in a relatively small area. It would be nice if the registered beekeepers could go on a restricted internet site and see where the registered bee yards are with the number of colonies at each site. That would allow beekeepers to come to agreements to work the resource to what it can withstand. This could help rationalize the traveling that beekeepers do from their home operation to their bee yard locations. Now many beekeepers keep passing each other on the road, where if it was worked out to reduce each beekeeper's travel time and gas, beekeeping would be more profitable. Then there is the topic of what is acceptable bee yard rent. The usual rule of thumb is one pound of honey for every bee hive in the bee yard. I have had smaller bee yards and I have decided to give two cases of 500 gram packed honey per beeyard. The landowner then can utilize the honey as they see fit. When I had commercial bee yards of 32 colonies each I always gave a 30 pound pail per bee yard. I would vary that to what I felt the family could eat themselves without supplying their whole extended family.**

**Be sure to pay whatever you agree to within a reasonable time of extracting honey!!! There is nothing that gets talked about more than beekeepers who do not live up to their bee yard rent obligations. It can give all beekeepers a bad reputation.**

—/\—

## **HEALING WITH HONEY-SWEET SUCCESS!**

**Submitted by Rhéal Lafrenière** Manitoba Agriculture, Food and Rural Initiatives

**Written by Barb Glover**

4 litres of honey, 120 days of TLC, 92 bandage changes and they are back on track!

Our tragic story started on May 19, 2012 when a miniature horse named Eastside Acres Unicorn, raised by Don and Barb Glover of Boissevain had an unfortunate accident. The 3 yr old filly was sent to Barb Mennie of Kemnay for some driving lessons. A few days into the training the filly had the accident which tore a huge chunk out of her right jowl. The wound was deep in her cheek and jawbone. The throat was still intact and the teeth and jawbone were visible. It was a heart wrenching mess!

Grand Valley Vet Clinic was called and Dr. Allister

Gray surveyed the situation. "You have a big challenge here-she might not make it" The Glover's said you may as well put her down-she'll never heal"

But Barb Mennie saw a will to live in the little filly's eyes and she knew she had to try. Barb was no stranger to horse and dog injuries and had a wealth of experience in saving animals with lots of TLC and tons of patience. Some of this patience and understanding came from a lifetime of being a Psych Nursing Assistant at Brandon Hospital from which she had just recently retired.

Dr. Gray cleaned up the wound, tied off some arteries and applied a pressure bandage. And he suggested using "Natural raw honey" therapy. Processed honey usually found in the stores is not to be used for wound healing. It doesn't have the same healing qualities. Raw honey "directly from the bees" was not a problem as Don Glover is a Boissevain beekeeper.

Barb Mennie said the choice of honey was to keep the bone moist and infection out. Barb decided to also put her favourite product "Cut Heal" around the edges to hopefully prevent proud flesh from forming. "Uni" was given pain killers and antibiotics for one week and oral antibiotics for 2 weeks.

Everyday Barb cleaned the wound area using a large syringe to get into all the areas. She had to pick bits of food out of the wound as it was open to the inside of Uni's mouth for about a month. She used a 4" x 8" gauze as well as a 4"x4" to cover the wound area. Then it took 2 rolls of gauze and 2 rolls of vet wrap to keep everything in place. It was such a hard place to dress. She had to be quite inventive about criss-crossing it over her ears. It had to stay in place but not cause any sores around her ears. And it was very hard to work with the honey as everything ended up very sticky. Then Barb says "One night in bed I thought of cutting the round container off of the honey and keeping it in the fridge, then just slicing off what I needed (1/8" of an inch or so) and placing it on the gauze, ready to put on the wound. This worked very well as I could get her wrapped before the honey started melting in. The whole process took me about 2 hours from start to finish."

As the weeks went by the job got a little easier as the honey started to do it's healing. The wound slowly got smaller and smaller. By mid June it just needed a 4"x8" gauze and there was no more food coming through the hole. "It was too good to be true!" Barb says. "By mid July we only needed about 3/4 of a 4"x4" gauze. And by the first of August I only wrapped her during the day because of the flies and left it open at night to the air. By the end of August there was no more bandaging"

By Sept 9<sup>th</sup> Barb resumed the driving training that was interrupted May 21. She amazingly had no trouble with the bit in her mouth. The "Miracle of Honey" had really done it's job. The hair all grew back in too which was equally as incredible.

Barb says "From the beginning Unicorn never gave up the "will" and never stopped eating. I fed her seniors pellets and beet pulp which was easy to chew and some hay. There were a couple of days of not drinking well but we overcame

(continued on pg 6)



### Editor's Note by Ken Rows

Do you find it hard to focus on the things you have laid out this winter? Time is flying by and here it is January 1st with me trying to make a deadline. Skiing in the New Year made for a 4 am bed time quite a side focus.

Some nice cold weather had me out in my apiary sight clearing and expanding. Have lost 3 colonies inside which I have cleaned – weak. With the survivors I have around threshold infestation of mites so may use drip of Oxalic solution.

December 6 I was at the Hazelridge school near by representing the beekeeping agribusiness for Made in Manitoba Breakfast Coordinator **Jessica Brady of Agriculture in the Classroom – Manitoba Inc.** Blew me away - a great experience and a chance to answer the grad 1 to 5s questions. I experience an epiphany, they recited the Lord's prayer and sang Oh Canada.

Looking forward, my summer seeds are listed and orders to go, my bee boxes and frame material in the work shop in the making, keeping with the 2% exchange rate of old brood comb. I enjoy this time being able to focus a bit better on that stuff, so much loosing sight of the newsletter deadline.

Still have the frame show case to finish at Brian Smith's.

How about you, are you prepared and have you plans to check the hives when the weather warms in February? You can place a kilo of solid honey on if you know they in need. Although canola is frowned on to use as feed, I have warmed it up, stirred/spun it to break the crystals and refroze it and fed bees with it in February. I have also added snow to outdoor colonies when I fell they could benefit with more wind break and less heat loss.

I hope you get grabbed by the Honey Medical articles enclosed in this newsletter. You may be asked about healing abilities of honey or even solicited by a buying client. This past year I have had just that experience so hope to be more prepared with even more propolis.

I would like to express my deep thanks and appreciation to my good beekeeping friends who are stepping down from RRAA executive positions: Ron Rudiak who has been so faithful to the beekeeping industry as well as the RRAA and Brian Smith who has given of his time as well helping chair meetings and other events including the Manitoba Honey Show while reaching out to help members. Both searching the literature for answers and sharing with the RRAA.

**Note** if you have an ad in the paper needing change please inform the editor.

### CLASSIFIEDS

**1 For sale:** Complete honey extracting line 48 Frame extractor, uncapping table, sump, tank, pump, pipes.  
**Contact Lance at 204-712-6783, lancewld@gmail.com**

**2 For sale:** 20 Supers (used) for sale; \$25 each; two (2) for \$40 p/u; or delivery extra. Frames (used) \$6.00 each. Bee pollen for sale. **Call 204 878-4353 Glenn & Margaret or margandg@mymts.net**

*The Bee Cause* is the official publication of the Red River Apiarists' Association for distribution to its members and their colleagues in the beekeeping industry. It is published eight times a year on a monthly basis except December and the summer months of June, July, and August when membership meetings do not occur.

Articles can be best submitted in word documents as email attachments. Though they may be edited for spelling and basic grammar, no changes will be made to their contents, message and opinions. They are those of their originator and not of the Red River Apiarist Association.

Deadline for any submission to this newsletter is the second Saturday preceding the membership meeting to allow for publishing and mailing delays. Regular membership meetings are normally scheduled 7:30 PM on the second Tuesday of every month at the River Heights Community Centre located at 1370 Grosvenor Avenue in Winnipeg except the months as noted above.

The Red River Apiarists' Association, formed in 1963, represents the beekeepers of the Red River Valley and environs in southern Manitoba. The association provides a forum for the promotion of sound beekeeping practices through education, networking opportunities, meetings, field days, workshops, presentations by local apicultural experts, as well as the dissemination of this monthly newsletter.

*We are on the web!*  
[www.beekeepingmanitoba.com](http://www.beekeepingmanitoba.com)

**3 For sale:** Just a quick note saying that we have approx. 200 supers of drawn plastic comb for sale @ \$32 each. Can deliver to Winnipeg. Supers are in good to average shape and all the frames are fully drawn out plastic frames. We have no AFB history. **Paul Gregory paul@interlakeforageseeds.com**

**4 For sale:** 50 frame Maxant extractor for sale with a brand new spare fibre drive wheel. I was hoping to get \$2000 for it OBO contact : **wrobertson86@outlook.com -Wade Robertson**

**5 Wanted:** Looking for good used Cowen type horizontal 28 to 60 frame extractor, plus sump and pump. Call **Don Friesen, Rosenfeld, at 204-746-8863 or e-mail stonefield71@hotmail.com**

**6 For sale:** 20 Medium supers. 20 Pail feeders with screened lids, in good condition. Contact: **Lance 204-712-6783, lancewld@gmail.com**

**7 Wanted:** 2 or 4 frame stainless steel extractor, crank or motorized contact Dennis Ross at 204 878-2924 or rosskr@my mts.net

**8 For sale:** 12 hive top feeders, 19 queen excluders, 4 super extractor. Contact Doug at Tel 757-4694 or [doug.henry1@gmail.com](mailto:doug.henry1@gmail.com)

(from pg 4) that little glitch and she hasn't looked back since. I must admit she is a little spoiled but she deserves to be!"

Barb also wants to praise the caring, concern and expertise of Dr. Alister Gray and the "barn crew" at home that helped her out. Without them this might not have worked out as easy. The Glovers are eternally grateful that Barb wanted to keep Unicorn alive and going. And we all praise the "Miracle Healing Power of natural raw Honey"

Eastside Acres Unicorn now permanently resides at Barb and Lloyd Mennie's Clearview Acres hackney pony farm at Kemnay where she can continue to get spoiled.

Photos are attached. —/\—

**Larval Rearing by Worker Honey Bees Lacking Their Mandibular Glands** by Ying-Shin Peng and S.C. Jay  
Can. Ent. 111:101-104 (1979)

It was interesting to read that Royal Jelly was not the only que determinant for producing queen bees. Ying-Shin Peng and Professor Cam Jay performed experiments in an attempt to ascertain the significance of the mandibuar glands of nurse bees in female caste differentiation. Groups of 200, 10 day old nurse bees, with their mandibular glands removed, fed female larvae for 80 h in plastic queen cell cups in the laboratory. After this, each larva finished feeding in a 4-day-old queen cell containing "royal jelly", final development occurred in an artificial pupation dish. Because four adults, classified as "queenlike intermediates," were reared it appears that (1) mandibular gland secretion is less important as a larval food than that of the hypopharyngeal glands, and (2) if a "queen determining substance" exists the mandibular glands are not its only source.

Female caste differentiation appears to depend on the amount and kind of food the larva are fed. The differentiation begins in the early larval stage and becomes progressively more "fixed" as the larva develops. Various physiological and biological studies indicate that the critical stage in the regulation of female dimorphism lies between 72 and 85 h of the larval stage (i.e. 3-3 1/2 days) and that after this time little regulation in caste characters is possible.

The young larvae in the study were fed for 80 h (i.e. throughout their differentiation period) by nurse bees who lacked their mandibular glands. When they were 92 h old, and well past the "critical" period of differentiation, they were transferred to natural queen cells containing food of 90 h old larvae where they completed their feeding in about the next 28 h. Therefore they believed that the "queenlike intermediate" bees reared resulted primarily from the diet received from the nurse bees lacking their mandibular glands and that the caste-differentiation mechanism was initiated by these nurse bees during this feeding period.

The hypopharyngeal glands of the worker nurse bees secrete the "basic" larval food fed to queen larvae and younger worker larvae. It contains all of the essential nutrients (e. g. proteins, lipids, vitamins, heterocyclic compounds, growth factors, etc.) that have been found in royal jelly and worker jelly. The mandibular glands secrete growth factors (e. g. bioprotein) but are probably accessory in nature to the hypopharyngeal glands because the larvae in the trials obtained sufficient nutrients from worker bees lacking mandibular glands to support their growth and development.

Queen larval food (i.e. royal jelly) consists of a clear substance from the hypopharyngeal glands and the crop, and a milky-white material which is a mixture of secretions from the mandibular and pharyngeal glands. Larval in this study were fed a watery-yellowish food by the nurse bees lacking their mandibular glands. This food was always present in lower amounts than that found in queen cells of colonies and undoubtedly varied in chemical constitution from the normal diet as well. Despite all of this, adults were produced that had characteristics resembling queens rather than worker ones.

Certain growth factors have also been found in small amounts in the post-cerebral and thoracic glands. The amounts present in the thoracic glands appear to depend on specific changes occurring in the environment (e. g. when a hive rears queens). It is possible, therefore, that the thoracic and/or post-cerebral glands may contribute certain secretions to larval food, particularly when nurse bees lack their mandibular glands.

A dialyzable fraction has been extracted from royal jelly and shown to be necessary for the initiation of the queen differentiating mechanism (Weaver 1962, 1966, 1974). Rembold in 1967 showed that when this fraction was omitted from the larval diet, there was a loss in "queen determining" effect. Later Rembold suggested that a "queen determining" substance originates in the mandibular glands of the nurse bees. Because queenlike intermediate bees were reared in this study by worker nurse bees lacking mandibular glands, it appears that if such a "queen-determining" substance dose exist in royal jelly, the mandibular glands are not its only source. Peng and Jay go on to say perhaps the thoracic and/or post-cerebral glands are involved in the synthesis and secretion of this substance and note that their study did not show if female caste differentiation of honey bees is influenced by the presence, in the diet, of a "queen-determining" substance and/or a nutritional balance mechanism.

I apologize for the somewhat highly technical articles, however, pressed for time and articles to use I have used those that are in my library from my days as an undergraduate of Dr. Jay's and my continued fascination of bees and insects in general. Although, I promised to purge your imagination and splash something old and new to your beekeeping knowledge base.

The editor

**Discovery of Small Hive Beetle  
in a honey beekeeping operation near the Manitoba-North  
Dakota border** – Rhéal Lafrenière, MAFRI Provincial Apiarist

The small hive beetle (SHB), *Aethina tumida* Murray, is an emerging and invasive pest of the honey bee, which was discovered in North America in Florida in 1998. It is now found in most states across the US, especially in warm, coastal states along the Atlantic. In Canada, the SHB was initially discovered in Manitoba associated with the importation of raw beeswax from Texas (2002) and secondly with the importation of packaged bees from Australia (2006). In both situations, the pest failed to establish a successful breeding population the following spring and died out.

SHB has also been found in Alberta (2006), Québec (2008 – 2012) and Ontario (2010 – 2012). Similar to Manitoba, SHB failed to establish in Alberta in 2006, but has been found practically every year in Québec and Ontario after its initial discovery.

In September 2012, a beekeeper from the Morden area reported finding what he suspected may be an adult SHB in his extracting facility. After initially identifying that the beetle specimen closely resembled SHB, MAFRI staff notified the Canadian Food Inspection Agency (CFIA) of the discovery and asked to validate the identification. CFIA confirmed that the submitted specimen appeared to be an adult SHB, but that the size of the beetle appeared to be atypical and requested additional specimens be submitted.

MAFRI conducted an inspection of the extracting facility as well as the apiary sites that were associated with the equipment in the building at the time of the beetle discovery. No more beetles were found in the extracting facility but One (1) adult SHB was discovered in a colony located in one of original apiary sites.

The beetle specimen was submitted to CFIA and confirmed to be SHB, but again the size of the specimen was atypical so 100% confirmation was difficult. MAFRI also inspected two (2) apiary sites of a neighbouring beekeeping operation. One of the apiary sites was located within one (1) mile of the apiary where the beetle was found and the second site was located one (1) mile from the Manitoba-North Dakota border and approximately eight (8) miles from the SHB positive apiary site.

One (1) adult SHB was found in a honey bee colony in the apiary site closest to the border. The beetle specimen was submitted to CFIA for identification, but given that it closely resembled reference specimens in the MAFRI Apiculture lab including size, it is highly suspected to be confirmed to be SHB.

Under the authority of *The Bee Act* B15, effective immediately MAFRI have undertaken to establish a temporary quarantine of the affected operations, until which time a proper control strategy can be put in place. At this time of the year, this should have little to no impact on the affected beekeeper, at least until spring.

In light that the route of this SHB invasion was most likely due to beetle dispersal across the border rather than through the importation of bees or hive products from locations known to have SHB, any control action will have to take into consideration what barriers for re-infestation are feasible.

MAFRI will consult with CFIA, the other Provinces and industry to de-

termine the necessary surveillance and control actions required to maintain the SHB status that currently exists in Canada. Based on the outcome of the consultation process, MAFRI can decide if the quarantine should continue next spring and if so what resources would be required to maintain or expand the SHB control strategy. At the very least, MAFRI will continue to work closely with the beekeepers in the affected area to monitor the colonies over winter and inspect other beekeeping operation along the border next spring.

SHB is on the list of immediately notifiable diseases with the CFIA and as such is regarded as a non-endemic pest, which is not generally found in Canada. The principal reason why CFIA is able to defend that statement is because of the extensive surveillance and control measures conducted in Ontario and Québec to allow the country to be regarded as “free” of small hive beetle outside of the control zones.

If CFIA was no longer able to declare Canada as free of SHB, this could have significant impact on import/export conditions placed on Canadian bees and bee products with certain countries

If Manitoba does not take the necessary action to control SHB, which would continue to allow CFIA to defend Canada’s SHB free status, in addition to impacting Canada’s international trade, other provinces may also decide to restrict inter-provincial movement of bees and equipment originating from Manitoba. This would include the movement of 3000+ colonies that are transported every year from Manitoba to BC for wintering.

—/\—

**Royal Jelly Could Fly?**

By Jim Campbell, Secretary MBA

Beekeepers in Manitoba are waiting anxiously to hear if a Royal Jelly school project could be part of space experiments in early 2013.

Beekeepers are aware several items produced by bees contribute to peoples’ health, primarily due to the natural elements found in products such as Honey, Bees Wax, Propolis, and Royal Jelly. Many of these products are available at “Bee Outfitters” at Bee Maid in Winnipeg. Yet some school students North of Winnipeg could be taking the health benefits to even greater heights.

Grade 5 and 6 students, along with some club members, in the Interlake School District (ISD), in the municipalities of Rockwood and Woodlands, have been selecting topics, doing research, and preparing submissions on a variety of projects during this past fall. All of this activity is focused on being involved in a much wider goal than most would normally think about for school children. They are looking at Experiments In Space!

“This is the first time the Student Space flight Experiments (SSEP) program has considered students outside the United States (US)” stated Maria Nickel, director student space flight experiment program, ISD, “and our students are pretty excited about the opportunity”.

Nickel noted receiving 160 experiment proposals from about 450 students, who worked in groups of two to four people. This list needed to be narrowed down to 14, with these being submitted to a Winnipeg review panel, which in turn selected three projects. Among the top three projects is one using Royal Jelly and its' ability to help maintain bone mass.

The Stonewall Teulon Tribune reported, "Nine ISD students may be touching the stars, as one of their experiments could be headed to the International Space Station. The ISD is the first international division to be part of SSEP, which has launched student experiments to the space station since June 2010".

"Getting a few millilitres of Royal Jelly to fit in a test tube should be easy," replied Jim Campbell, Stonewall area beekeeper, when contacted about the project, "yet quite unusual to collect in early spring 2013 in Manitoba, however I have a Canadian source that can help your students". With this confirmation, one project was on its way.

Now comes the waiting game, to find out whether the Grade 5 group from Brant-Argyle, or one of the grade 5 or grade 6 groups from Woodlands will have their project selected. The Woodlands Grade 6 student group experiment deals with Royal Jelly, and if selected, it could be on its' way to the space station in early 2013.

—/\—

### **Unrealistic MRL's for butyric acid and benzaldehyde In Honey**

CHC request for review and changes by CFIA

Below is response from CFIA on removal of bee repellants from Honey sampling list.

Complete response is on CHC web, indicating the two acids are found naturally in some honey so not tested any more, yet at the moment, I forget where listed.

In February of this year the Canadian Honey Council received a CFIA response from a letter we wrote to you in December of 2011. (See attached) The issue concerns the unrealistic MRL's for butyric acid and benzaldehyde. In the February response letter it was indicated that CFIA is working on a solution. Recently, the matter has taken a significant turn for the worse as some packers are now refusing to accept shipments of honey over the prescribed MRL's. The economic implications are significant if this matter is not dealt with some degree of expediency. Members of the Canadian Honey Council would appreciate knowing what progress has been made and if, in fact, CFIA has made a request to Health Canada to

exempt honey from the appropriate regulations?

Respectfully,  
Rod Scarlett  
Executive Director  
Canadian Honey Council

CFIA Response

Thank you for your e-mail of July 3, 2012, in which you make reference to my letter of February 3, 2012 and request an update on possible solutions to the difficulties being faced by the honey industry due to the current maximum allowable residue limits (MRLs) for butyric acid and benzaldehyde in honey. I understand that the current MRLs have created significant delays for producers wishing to ship honey for packing.

After reviewing the Honey Council's letter of December 11, 2012, Health Canada conducted a Health Risk Assessment of butyric acid and benzaldehyde in honey. The purpose of this Assessment was to evaluate the potential health risks of these compounds and to review the current MRLs being used by the Canadian Food Inspection Agency (CFIA) when monitoring these chemicals in honey.

As a result of this Assessment, Health Canada has determined that typical levels of butyric acid and benzaldehyde in honey do not pose an unacceptable health risk to humans. Health Canada has also determined that the monitoring of bee repellents containing these chemicals does not fall under the authority of the Pest Control Products Act, and as such, the default MRL of 0.1 ppm is not suitable for compliance monitoring. As a result of these findings, the CFIA will no longer include butyric acid and benzaldehyde as part of its regular monitoring program.

I trust this new information will be of assistance to you. I also understand that the Honey Council has been in recent contact with the CFIA's Honey Program regarding the outcome of Health Canada's Health Risk Assessment, and that representatives from the Honey Program will be communicating this information to you in greater detail.

Again, thank you for writing.

Yours sincerely,  
George Da Pont  
(613) 773-6000  
George.DaPont@inspection.gc.ca  
President/Président  
Canadian Food Inspection Agency  
Agence canadienne d'inspection des aliments

—/\—

## Healing With Honey Brings Sweet Rewards, Honey has antibacterial properties

BY TERESA PITMAN

MONDAY, OCTOBER 29, 2012

As an emergency clinician, who also trained as a veterinary surgeon, professor emerita Karol Mathews was always looking for new ways of > treating wounds and helping animals heal.

“While researching the various treatments for infected and contaminated wounds, I came across studies that found honey was quite > effective,” she says. In fact, she learned that honey had been used on wounds for at least 6,000 years and is mentioned as a treatment in both the Bible and the Qur’an.

When a dog was brought to the Small Animal Clinic from the Humane Society in 1998, she decided to give it a try. “As luck would have it,” she jokes, “we happen to have an apiary on campus.”

Paul Kelly, a beekeeper at U of G’s Honey Bee Research Laboratory, gave her a sample of raw honey to use on the beagle, which had been injured in a barn fire 10 days earlier. The dog’s skin had been burned from its head to its tail and was infected with five different kinds of bacteria. Although the dog was given antibiotics for the infection, the lack of blood flow to the damaged skin meant the antibiotics weren’t active at the wound site.

After two days of applying the honey, there was no further bacterial growth. The debris and dead tissue was cleansed away by the honey and there was visible healing in the bottom of the wound and the edges of the skin.

Mathews was sold and has used honey to manage wounds ever since. “With the rise in acquired antibiotic resistance by microbes, I think honey can play a very important role. It not only kills the infecting agent, whether bacterial or fungal, it helps the injured tissues heal,” she says. Despite honey’s long history of use, bacteria have not developed resistance. Honey can also prevent the formation of biofilms, which bacteria create to protect themselves, and honey also appears to break down the biofilm and kill the bacteria within it.

Pasteurized honey, Mathews explains, has been heated to at least 60 C for about 30 minutes. This effectively kills bacteria, yeast spores and fungi potentially in the honey but also halts the action of the enzymes believed to be beneficial for wound healing and antibacterial activity. Non-pasteurized honey is often heated to remove any crystals that may be present. Mathews says that the heat is not always well-controlled and can sometimes exceed the levels at which the heat-sensitive enzymes are affected. Raw honey, on the other hand, is simply centrifuged from the honeycomb with no heat applied.

The most extensive research on the anti-infective and healing properties of honey comes from New Zealand, where honey from bees that have gathered nectar from the manuka (*Leptospermum*) bush has been shown to be particularly effective at killing bacteria and fungi.

“In New Zealand, this manuka honey is gamma irradiated to kill bacteria and spores that are occasionally present, then impregnated in bandages and sold as a medicinal agent,” Mathews says. The impregnated bandages (called Medihoney™ by Derma Sciences in Toronto) are used in Canada as well, including Sunnybrook Hospital. They are highly effective in treating contaminated wounds and bed sores, a common problem in elderly patients.

Now Mathews has partnered with Paul Kelly, Dr. Brigitte Brisson, Prof. Carlton Gyles, Prof. Scott Weese, Prof. Ernesto Guzman and graduate student Jessica Pask to study the antibacterial effects of honey from Southern Ontario. Currently, Mathews uses whatever U of G raw honey is available when an animal needs treatment. However, her research will involve testing the honey throughout the season, when the bees are travelling to different plants and trees to collect nectar, and analyzing the components of each sample to identify the plant source of the “best antibacterial” batches of honey. A clinical testing phase will follow to determine the effectiveness of this honey, compared to currently available wound care products, when applied directly to wounds.

Mathews is excited about the potential for healing with honey and hopes this research will provide support for a valuable new option for wound management.

“With antibiotic-resistant bacteria on the rise, people are looking for something else that will be effective and yet not too expensive,” says Mathews. “New Zealand has paved the way, and this research can help to establish the value of our local honey in these situations. It may be a new opportunity for beekeepers as well.”

—/\\—

## Attentiveness

Have you ever thought about bees and ourselves in view of attentiveness vs. distraction. Attentiveness in the home is the same in the hive.

- showing support for each other by listening without immediately getting irritated.
- Setting aside time to listen with eyes and ears

There is more to the honey bees’ attentiveness than acute hearing and smell. Bees carefully evaluate temperature, light and shades, even colour and yes including sounds and smells they receive. It is the intricate abilities to process their senses that make them truly attentive. Its their life style can it be ours?

Photos to Honey Healing Bandages on page 4.



May 26 2012



May 31 2012



June 5 2012



June 5 2012



June 14 2012



June 23 2012



August 9 2012



September 26 2012



September 22 2012

**Celebrating 50 Years**

Jim Campbell, RRAA Exec

**Red River Apiarists' Association will be celebrating a major milestone during the early part of 2013.**

Sometime during 2013, the Winnipeg and Area hobby club known as Red River Apiarists' Association could be celebrating their 50<sup>th</sup> Anniversary. What a party that could be, as Beekeepers look ahead to marking this special event, and reminiscing about what has happened during the past years.

The Club was formed in 1963, partly in response to a need by the Manitoba Beekeepers' Association, to have people serve as promoters of the honey industry. The Provincial Honey Show simply took place within the Winnipeg International Flower Show, traditionally held during the third week of August, at the Winnipeg Auditorium, in downtown Winnipeg. Honey displays seemed compatible with gladiola and other flowers.

Although, at this time, honey shows took place at the Dauphin Fair, and the Provincial Exhibition, in Brandon, RRAA was requested to organize and staff the honey show in Winnipeg. Don Robertson, Provincial Apiarist, along with Dave Smith, Extension Apiarist, approached a

group of hobby beekeepers to determine interest in forming an association having a mandate to look after the Honey Show area.

The plan was to shift emphasis from having Honey Competitions at Beekeeping Conventions, to being more visible to the public. This public promotion started about 1951 with the Provincial Fruit & Vegetable Show, which later amalgamated with the Winnipeg Horticultural Society in 1955, getting renamed as the International Flower Show. With these shows occurring in August, commercial producers were usually busy extracting their crops and unable to do promotions.

At the organizational meeting on March 26, 1963, Mr. Don Robertson outlined the benefits of forming an association for buying packages of bees as a group, plus exchanging ideas about beekeeping and organizing field days. Later, on April 1, 1963 various committees were formulated. One of the last of the original members, Mrs. Anna Donkin, who passed away this past September 12, was appointed to the Refreshment Committee. This passion was reflected for many years, as Ken Rowes alluded to in the last RRAA newsletter.

The first regular meeting took place April 16, 1963 in the Beekeepers Room of the Manitoba Honey Co-operative, 625 Roseberry Street. At this time the first "constitution" was formed. All of this history leads us to reflect at the 50<sup>th</sup> anniversary during 2013.  
—/\—

**Red River Apiarists' Association  
Winnipeg, Manitoba  
2013 MEMBERSHIP APPLICATION**

I apply for membership in the Red River Apiarists' Association. Membership includes one-year subscription to the newsletter "The Bee Cause" (8 issues)- \$25.00.

Name \_\_\_\_\_ Tel. \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Prov. \_\_\_\_\_ Postal Code \_\_\_\_\_

E-mail address \_\_\_\_\_

Signature \_\_\_\_\_

New Member [  ]    Renewal [  ]    Student [  ]    [free 1st year]

Other. Please specify. \_\_\_\_\_

This completed form may be brought to the meeting or mailed with your cheque to :

**John Speer, RRAA Treasurer  
Box 16, Group 555. Winnipeg, Manitoba R2C 2Z2.**

Make cheques payable to Red River Apiarists' Association.

Please do not send cash in the mail., MB R2C 2Z2