CAPA News

Canadian Association of Professional Apiculturists (CAPA)

Semi-Annual
Volume 2 | Issue 1 | Spring 2025

In This Issue

Upcoming Events

Apimondia 2025
23-27 Sep — Copenhagen, Denmark
https://apimondia2025.com/?p=home

EAS Conference 2025
Jul 27-Aug 1 — Cherry Hill, New Jersey
https://easternapiculture.org/

ESC-ESAB Conference 2025
5-8 Oct — Calgary, Alberta
https://entsocalberta.ca/jam2025/

ESA Conference 2025
16-19 Nov — St. Louis, Missouri
https://entsoc.org/events/annual-meeting

Editorial Board message

The semi-annual online Canadian Association of Professional Apiculturists (CAPA) newsletter, *CAPA News*, is available in both English and French.
CAPA News will highlight the Association's activities and provide valuable insights into apiculture and beekeeping. Each issue will feature a range of content, including reports, scientific article summaries, responses, notes, letters, reviews, and short commentaries. Topics will span honey bee health, emerging research, importation issues, provincial apicultural updates, national regulatory organizations, and studies on other insect pollinators.

Both language versions are accessible on the CAPA website: https://capabees.com/capa-news/.

The English edition will also be republished in the Canadian Honey Council (CHC) newsletter, *HiveLights* (https://honeycouncil.ca/educationresources/hivelights-newsletter-archive/);
and in *Bee Culture* magazine (https://beeculture.com/).

The French edition will be featured in the Quebec Beekeepers' newsletter, *L'Abeille* (https://www.apiculteursduquebec.com/node/1).

The Editorial Board warmly invites CAPA to contribute to the newsletter. We welcome reports, papers, and news items relevant to the beekeeping community. Please follow the newsletter's submission guidelines and send your contributions to: **capa.news24@gmail.com**.

CAPA AGM—2025

The 2024/2025 Canadian Association of Professional Apiculturists AGM was held in February at the Lord Elgin Hotel in Ottawa in conjunction with the Canadian National Beekeeping Convention hosted by the Canadian Honey Council. The two-day CAPA AGM was a success as representatives from across the country gathered to discuss pertinent issues like the efficacy of *Varroa* mite treatments, international bee importation, and the emerging threat of the *Tropilaelaps* mite. The AGM also offered an opportunity for CAPA to discuss the wide scope of work each of its members had undertaken in 2024: Provincial Apiarists reported on the beekeeping activities and statuses of their respective provinces, the eleven CAPA committees each delivered their reports, and representatives for the CHC were welcomed into the CAPA AGM for a joint meeting.

The AGM was followed up with the Canadian National Beekeeping Convention which featured scientific talks from national and international speakers, including several CAPA members . The talks covered topics like bee metabolism, bee health, IPM, nutrition, pollination, and acaracide evaluation. The Convention also featured three discussion panels on queen production vs importation and the *Tropilaelaps* mite. All in all, the three-day AGM and Convention was another valuable opportunity for representatives from Federal and Provincial governments, academia, and industry to convene and discuss the most prescient issues affecting apiculture and research findings influencing the beekeeping industry in Canada.

By: Cameron Menzies, CAPA News editor, crmenzies@gov.pe.ca.

Summary of Tropilaelaps Workshop, University of Alabama

In November 2024 four Canadian apiculturists (Jordan Janisse, Paige Marchant, Derek Michol-son, and Ali Panasiuk) attended the *Tropilaelaps* workshop at Auburn University in Alabama, this educational trip was both scary and reassuring.

The workshop covered *Tropilaelaps* biology, life cycle, parasitism, dispersal and distribution. We discussed the known behaviours of their native hosts, the Asian Giant honey bees, and the mechanisms they employ to manage mite loads compared to *A. mellifera*. There is a difference in the ability of the various *Apis* species to manage mite populations within their colonies. *A. mellifera*, with their short history of *Tropilaelaps* parasitism leaves them at a distinct disad-vantage! This is part of the 'scary' I mentioned.

Other factors that raise the hair on the back of the neck are the 'rapid' change in the geographic distribution of *Tropilaelaps* and the potential for this mite to find its way to North America.

We examined preserved mite specimens from Thailand under scopes and observed them on sticky boards and had a try at identifying them in amongst the debris, NOT an easy task! The session covered the various monitoring techniques available, similar to those used for *Varroa*, and discussed the viability of each.

A session on Incident Command Systems, their use and structures, was insightful especially for those of us whose roles would be directly involved in a response should *Tropilaelaps* make it to North America. We participated in two mock scenarios involv-ing suspected *Tropilaelaps* introductions that were informative. A sample action flow chart, provided by Chris Rosario, was pro-vided for each participant to take home and adapt to their own situation.

We discussed the needs in research, extension and surveillance and where gaps exist in these areas.

The key concepts I came home with were:

1)*Tropilaelaps* are small, fast and hard to detect as the damage is very similar to that caused by *Varroa*.

2) There is a need for *Tropilaelaps* specific best management practices, monitoring techniques and registered treatments.

3) We need to have multi-level action plans in place as soon as possible (regional, provincial, territorial, national, international).

4) Need to educate and have open dialogue at all levels.

5) This will be a collaborative effort North America wide. Maybe the most important is we are not alone! We have many knowl-edgeable people in the industry we can work with and that is the reassuring part.

By: Paige Marchant, Provincial Apiarist, Government of Newfoundland and Labrador, Corner Brook NL, Canada, Paige-Marchant@gov.nl.ca.

BC-TTP Update

The **British Columbia Technology Transfer Program (BC-TTP)** is part of the British Columbia Honey Producers Association (BCHPA). Its mandate focuses on improving honey bee health, increasing productivity, and supporting local food production in BC by conducting research, creating educational resources for beekeepers, and facilitating the transfer of knowledge and technology. The program collaborates with various stakeholders, including the beekeeping industry, farmers, researchers, and government bodies. Key goals include promoting best management practices, integrated pest management strategies, and advancing sustainability within the beekeeping industry. The BC-TTP is a small (but mighty!) team composed of Dr. Nuria Morfin (Chair of the Steering Committee), Dr. Muhammad Fahim Raza (Technician in Apicultural Research), Becky Miller (Administrative Assistant), and Leilani Pulsifer (Science Communicator). Together with our collaborators, we are involved in various research projects aimed at enhancing the resilience and productivity of the beekeeping sector in British Columbia.

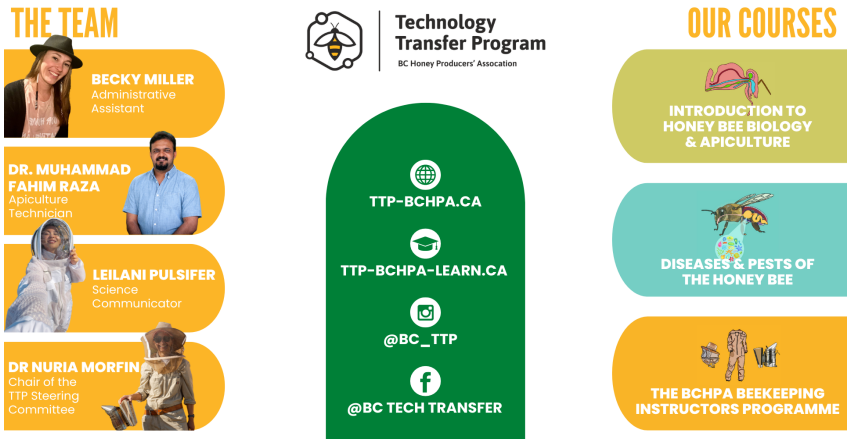
Key Projects:

- *Marker-Assisted Selection in Breeding:* This study aims to improve beekeeping sustainability by using genetic markers to breed resilient bee colonies. It focuses on traits like hygienic behavior and low *Varroa* growth. Funding: Vancouver Foundation, Sustainable Canadian Agricultural Partnership, and others. Collaborators: University of British Columbia, University of Manitoba, and the BC Bee Breeders Association.

- *Education and Knowledge Transfer:* This initiative addresses the lack of formal beekeeping education in the region by creating a learning platform with courses on honey bee biology, diseases and pests, integrated pest management, and other vital topics. It aims to support the sustainable growth of beekeeping in British Columbia and the Pacific Northwest: https://ttp-bchpa-learn.ca/ Funding: Project Apis m, BC Honey Producers' Association. Collaborators: Green Stone Learning Inc.

- *Amitraz Resistance in Varroa Mites:* The BC-TTP supported Simon Fraser University in evaluating resistance to the pesticide amitraz in *Varroa* mite populations in the province, which is crucial for managing pest resistance. Funding: Abbotsford Community Foundation. Collaborators: Simon Fraser University.

Upcoming Project | Towards a Self-Sufficiency in Apiculture for Food Security in a Net-Zero Economy: The BC-TTP will support the University of British Columbia in a project that aims at evaluating strategies for overwintering honey bee queens in northern conditions and help improve local stock production and the sustainability of Canadian beekeeping. Funding: University of British Columbia, NSERC. Collaborators: Dr. Leonard Foster, UBC.



We also prioritize knowledge transfer by hosting workshops. Last year, we offered 21 workshops and presentations across BC, Canada, and abroad. These sessions covered topics such as integrated pest management and basic beekeeping.
For more information or to get in touch, please visit our website (ttp-bchpa.ca), send us an email (info@ttp-bchpa.ca) or send us a DM through Instagram (@BC_TTP) or Facebook (@BC Tech Transfer).

By: Dr. Nuria Morfin, Assistant Professor, University of Manitoba, Chair of the BC-TTP Steering Committee, nuriamorfin@ttp-bchpa.ca; & Leilani Pulsifer, Science Communicator for the BC-TTP, leilanipulsifer@ttp-bchpa.ca.

ATTTA Update

The **Atlantic Tech Transfer Team for Apiculture** (ATTTA) is the only regional tech transfer team in Canada, supporting beekeepers across the four Atlantic Provinces. The core of our work is in the Maritime region, but we also have very close relationships with the Newfoundland beekeeping industry. The over arching mandate for ATTTA is, "Building capacity, growth and competitiveness for a sustainable Atlantic Canadian honey bee and pollination sector." Under this banner we have three themes which direct our efforts:

- Ensuring sustainability for the honey bee and pollination sectors through growth and continued application of best practices,
- Confronting challenges of the beekeeping industry through dissemination of current, credible information, a pluralistic approach to knowledge transfer, and an application of regionally appropriate research,
- Providing effective solutions to meet the demand and safeguard the consistency of the region's supply of bees for pollination.

The support for the work of ATTTA comes directly from both the beekeeping and wild blueberry industries. The pollination of wild blueberries is a significant part of the overall beekeeping industry in the Maritime region and both of these sectors are heavily reliant on each other. So, ATTTA's work, in a large part, is to ensure that Maritime beekeepers are supplying healthy strong colonies to support wild blueberry production. The ATTTA is led by a full-time senior apiculturist supported by one other full-time apiculturist. Perennia Food and Agriculture, a Nova Scotia Crown Corporation, provides a base for ATTTA as well as managerial and administrative support. A steering committee made up of industry and government stakeholders provides strategic direction to the group. Depending on seasonal activities the team expands to include two or three seasonal apiculturists. This group is busy throughout the beekeeping season undertaking fieldwork, data collection and extension activities.

The Team's applied research is focused around two main themes: honey bee health and pollination efficiencies. Collecting data on the *Varroa* status of beekeepers in the Maritime region, as part of a three-year project, is one current main focus of the seasonal work of the team. Investigating pollination efficiencies for wild blueberries is another significant aspect of our annual field work. The ATTTA participate in a large number of training and extension activities. Examples include our Fundamentals of Beekeeping program done in partnership with Dalhousie University. This course, which is taught throughout the entire beekeeping season, is a continuum of high-level beekeeper education provided in our region since 2012. Many of our most successful beekeepers have begun their beekeeping career with this educational foundation. The "What's the Buzz with ATTTA" weekly blog is another important extension tool. This has been visited by over 130,000 beekeepers overall and has several thousand views per month.

Collaborating with the other six tech transfer teams across Canada has provided another great opportunity to share in knowledge and information. Most recently these collaborative efforts have been seen in the hugely successful webinar, "Staying Ahead of *Varroa*." In Partnership with Véto-pharma and the CHC, this was a great example of how the Canadian honey bee industry works together to achieve a common goal. For more information on ATTTA, please reach out to attta@perennia.ca.

Left to Right: Greg Dugas (Seasonal Apiculturist), Kayla Gaudet (Apiculturist), Andrew Byers (Senior Apiculturist), Kaitlyn Newton (Seasonal Apiculturist) John MacDonald (Seasonal Apiculturist).

By: Dr. Andrew Byers, Program Lead Atlantic Tech Transfer Team for Apiculture, abyers@perennia.ca.

KRTP Update

The **Manitoba Knowledge & Research Transfer Program** (KRTP) was established in 2021 by the Manitoba Beekeepers' Association (MBA). The mandate was conceived with four pillars: education, services to beekeepers, demonstrative research, and communication.

Like other tech transfer programs, our focus includes honey bee health, IPM strategies, best management practices tailored to local conditions, community engagement, and overall advancement of the beekeeping industry. To support Manitoba beekeepers in maintaining optimal bee health and productivity, the KRTP strives to:

- Contribute to filling knowledge gaps between research and real-world application.
- Develop and share knowledge and practices with both proactive and responsive approaches that address changing environmental, biological, and economic conditions — with the ultimate goal of ensuring beekeepers have access to the most current and beneficial information for their operations.
- Facilitate connections between the beekeeping community and apicultural researchers to advance science and practice.

Recent or Ongoing Research and Activities:

Research

2023-2025 Field Trials of RNA *Varroa* Biopesticide (Norroa™); Purpose: Evaluate efficacy of *Varroa* control product; Collaborator: GreenLight Biosciences.

- Field Trial: Impacts of Feed Quality on Wintering; Purpose: Assess impacts of various quality syrups on wintering, specifically acidic syrups that have been degraded by time, temperature or other factors.; Collaborator: University of Manitoba.
- Oxalic Acid Extended-release Strips (Varroxsan™) Winter Experiment; Purpose: Assess the safety and efficacy of OA glycerin strips in an indoor wintering setting; Collaborator: University of Saskatchewan.
- Miticide Resistance Assessments: Assess efficacy of Apivar® using Apiarium bioassays on mite populations of special interest, as well as collecting mites for genetic analysis at NBDC.

Services

- Syrup testing: Assist beekeepers to identify degraded syrups (pH, titratable acidity, BRIX) that may negatively impact colonies, especially pre-winter.
- Breeder stock evaluations: Assist beekeepers to evaluate breeder stock for pest and pathogen resistance traits using freeze-kill brood assays and UBeeO. The 2025 season will include low-*Varroa*-growth evaluations and marker-assisted selection tools via collaboration with the University of Manitoba.
- Bee Health Monitoring Program: Assist beekeepers with assessing health of their apiaries by inspecting and sampling colonies for *Varroa*, *Nosema*, viruses, and brood diseases.

KRTP TEAM

Matthew Polinsky
Program Lead

Amanda Turriff
Technician

Community Engagement

- The KRTP seeks to provide relevant, high-quality learning opportunities for the Manitoba beekeeping community, including: annual queen rearing workshop, presentations at regional association meetings, contributing guest lectures to the U of M beekeeping course, and hosting webinars.
- Core KRTP funding is provided by Sustainable Canadian Agricultural Partnership.

Find us: Instagram @krtpmb; Facebook: KRTP – Manitoba: manitobabee.org; Polinsky: krtpmb@gmail.com.

By: Matthew Polinsky, Manitoba Knowledge & Research Transfer Program Lead, krtpmb@gmail.com.

The online webinar: Staying ahead of *Varroa*: challenges & strategies

On Saturday March 15, 2025 the Canadian Honey Council, in collaboration with the Canadian Bee Tech Transfer (BTT) Programs and with support from Véto-Pharma held an online event to address the challenges facing beekeepers in controlling *Varroa*. The program organizers' lead by Medhat Nasr invited speakers who gave the following presentations: 1 - Integrated resistance management for acaricide used on *Varroa* - by Phil Lester, Victoria University, New Zealand; 2 - *Varroa* management programs: Perspectives from Quebec – by Julie Ferland, Quebec Provincial Apiarist; and 3 - *Varroa* management programs: Perspectives from Saskatchewan by Geoff Wilson, Saskatchewan Provincial Apiculturist. A panel discussion followed the presentations. The panelists were Maggie Lamothe-Boudreau, Commercial beekeeper from Quebec, CHC director Rod Scarlett, Andrew Byers, Lead of the Atlantic Tech Transfer, Matthew Polinsky, Lead of Manitoba Tech Transfer, and Medhat Nasr, Program lead of the Saskatchewan BTT Program.

The key away messages from the webinar are the following:

- *Varroa* is one of the most significant pests of the honey bee globally.
- The Integrated Pest Management (IPM) is a sustainable strategy to control pests, but *Varroa* is a challenging pest for integrated management.
- So far, synthetic and organic miticides are the key component of mite control.
- Resistance already developed to Apistan, Checkmite and recently to variable degrees to Apivar in Canada.
- One key problem for *Varroa* integrated resistance management is that there is little to no evidence to reduced reproduction of resistant mites. Therefore, reversion of resistance is very slow.
- To have a successful sustainable IPM for *Varroa*, a program must be founded on three pillars: resistant bee stock, chemical treatment options and technical measures. To implement this program, good beekeeping management practices is required.
- The Saskatchewan *Varroa* management program is a beekeeper centric driven one. A consistent message is delivered by government specialists, researchers and Tech transfer personnel to beekeepers to avoid any confusions and stay focused.
- Sampling bee colonies for *Varroa* infestation multiple times through the bee season is important more than ever. Thus, *Varroa* treatment is applied at the right time to kill mites and protect the health of bees from any *Varroa* damages.

One important message through the webinar was "BE READY FOR THE CHANGE BEFORE THE CHANGE HAPPENS".

By: Dr. Medhat Nasr, Saskatchewan Bee Tech Transfer Program Research Lead, medhat.bees@gmail.com.

Articles

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Short News

Congratulations to **Christine MacPherson** (University of Guelph, supervised by Dr. Emma Allen-Vercoe), recipient of the A.S. Atwal Scholarship in Bee Research. This scholarship is annually awarded by the Canadian Association of Professional Apiculturists (CAPA) and Canadian Honey Council (CHC).

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The 2025 Joint Annual Meeting of the **Entomological Society of Alberta** (ESAB) and the **Entomological Society of Canada** (ESC) will take place from 5-8 October 2025 in Calgary, Alberta.

The ESC-ESAB joint meeting will be held six symposiums including one on honey bee:

Symposium: Rising insights: advances in honey bee research

Organizers: Olav Rueppell, Shelley Hoover and Rassol Bahreini

Even though honey bees are not new to Canada, they give rise to an ever-increasing list of intriguing research problems, which are partially fueled by their elaborate social life and fascinating biology and partially by the severe health problems that this commercially important species is facing. In this symposium, we seek to highlight the many great directions that honey bee research is developing in Canada. We focus on honey bees as a long-standing model for many other insect species to bring together experts from various sub-disciplines and elucidate novel aspects of the biology and health of this particular species. Presented research will range across levels of biological organization and include basic and applied science, with a special emphasis on the novel approaches used in recent studies.

For more information visit: https://entsocalberta.ca/jam2025/

The Editorial Board are pleased to invite you to submit your reports, research articles and news at: capa.news24@gmail.com

Robert Lu (Design & Artwork)