Eastern Apicultural Society



SPRING 2015



UNITED STATES DEPARTMENT OF AGRICULTURE Office of the Secretary Washington, D.C. 20250

NATIONAL POLLINATOR WEEK

June 15–21, 2015

By the Secretary of Agriculture of the United States of America

A PROCLAMATION

WHEREAS pollinators such as honey bees, native bees, birds, bats, and butterflies contribute substantially to the economy of the United States and are vital to keeping fruits, nuts, and vegetables in our diets; and

WHEREAS pollinator losses over the past few decades require immediate attention to ensure the sustainability of our food production systems, avoid additional economic impact on the agricultural sector, and protect environmental health; and

WHEREAS President Barack Obama has established a Pollinator Health Task Force to create and implement a Federal strategy to promote the health of honey bees and other pollinators; and

WHEREAS it is critically important to expand Federal efforts and to take new steps, including development of new public-private partnerships and increased citizen engagement, to encourage the protection of pollinators; increase the quality and amount of pollinator habitat and forage; reverse pollinator losses; and help restore pollinator populations to healthy levels;

NOW, THEREFORE, in recognition of the vital significance of protecting pollinator health, I, Thomas J. Vilsack, Secretary of the U.S. Department of Agriculture, do hereby proclaim June 15–21, 2015, as National Pollinator Week. I call upon the people of the United States to join me in celebrating the significance of pollinators with appropriate observances and activities.

IN WITNESS WHEREOF, I have hereunto set my hand this 6th day of May 2015, the two-hundred thirty-ninth year of the Independence of the United States of America.

Secretar



Journal of the Eastern Apicultural Society of North America, Inc. Volume 44, Number 1

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From the Desk of the President

write this report fresh from the -20°c Family Day holiday here in Ontario! I spent the day with my five-year-old daughter at the local ski hill (her first time ever). August

seems so far away, particularly with the piles of snow and bitterly cold weather. However, I know spring will be here in as little time as the holidays have gotten behind us. Our EAS Guelph team has been meeting every two weeks to keep ahead of that hectic time we as beekeepers will face when the flowers start to come up. Most of our speakers have now been confirmed, our workshops are in the final stages of planning with details soon to come to the web site.

The Tech Tour this year is shaping up well and I hope you will register; it's a chance to see a lot of varying aspects of the industry. Everyone will be bussed, so no worries about maps, carpooling, or sampling a little mead and local beer. We'll start the morning out with a tour of Ontario's largest apiary, Parker-Bee Apiaries, where owner Mike Parker and the Ontario Beekeepers Association have been working on an osmosis unit to clean old comb. Next, we're off to the Niagara Butterfly Conservatory for a box lunch with over 2,000 colourful tropical butterflies floating freely among lush, exotic blossoms and greenery. Paths wind through the rainforest setting, past a pond, waterfall, and the emergence window, where butterflies leave their pupae and prepare to take their first flight! Over 2,000 butterflies, made up of 45 different species, call this beautiful space home.

Lastly to finish off the day, we will be touring one of Ontario's most successful beekeeper's honey house and staying for a BBQ dinner with a live band and of course the annual auction including a queen auction. John Van Alten of Dutchman's Gold has graciously offered to open his honey house for this rare opportunity. The evening event has limited attendance and is restricted to the first registrants for the Thursday Tech Tour or Conference.

This day promises to be a lot of fun!

I look forward to seeing you very soon! Stay tuned for more updates on the web site, www.easternapiculture.org.

André Flys

President's Report - February 16, 2015

Journal Ads, Articles, and Letters to the Editor

EAS is seeking articles and ads for our upcoming issues. Have something to say to the Society? Why not write a letter to the editor? Our journal comes out quarterly.

Email requests to Journal@easternapiculture.org for more information. For ads or ad prices please contact ads@ easternapiculture.org. Free Internet Access and WiFi ot University of Guelph & EAS 2015

Potherings of a Chairman...

pring is in full swing here in southeastern Pennsylvania. The Black Locust bloom is just wrapping up. The blooms lasted for over a week this year. So far it looks like a great honey season for us. Usually Locust bloom brings rain, but it did not this year and everything is very dry. We have not had rain here in over a

month. Good weather for bees to fly but not good for the plants.

Passports Needed

Do not forget! You will need your passport or enhanced driver's license (EDL) (available in MI, NY, VT, and WA) to return to the United States from Canada when you attend EAS 2015.

Honey Show Rules

The rules for the 2015 Honey Show are published in this Journal. Please read them for the details of competing at EAS Ontario.

EAS Ontario

Registration is open online at <u>www.easternapiculture.org</u> for EAS 2015 at the University of Guelph. The city of Guelph is only one hour west of Niagara Falls. So, for many of us, it is closer than some of the last few EAS Conferences. And, what a wonderful place to bring the entire family for a few days or the entire week! The Falls are just so majestic—you must include them on your bucket list. *If you register for the conference, you will be visiting the falls on Thursday. It is included in the registration fee.*

This EAS Journal has information on EAS 2015 and articles from our Ontario hosts. Come meet them in person at EAS Guelph. Visit the EAS web site, <u>www.easternapiculture.org</u>, for pictures and bios on each of the speakers.

Keynote Addresses

We have planned keynote addresses from two of my favorite speakers, Mark Winston and Robert Page—both are authors of books that belong in every beekeeper's library. Mark Winston's *The Biology of the Honey Bees* is a must have if you want to know the about the physiology of the honey bee, and I am sure that Mark will be signing his latest book, *Bee Time: Lessons from the Hive.* Robert Page and Harry Laidlaw's *Queen Rearing and Bee Breeding* is still my bible for raising queens. Rob's latest book, *The Spirit of the Hive: The Mechanisms of Social Evolution*, answers such questions as what causes honey bees to collect more or less pollen and nectar?

Short Course (Monday-Wednesday)

The Short Course is the first two days of the week. On Monday, sign up for the Queen Rearing workshop led by the Ontario Tech Transfer Team. They have been working with the Ontario beekeepers for over fifteen years to produce some of the best queens in the world. Many local and regional clubs have been starting to develop local queen programs. The Tech Transfer Team is a wonderful model to emulate. Come and learn first-hand how to start or enhance your program. (We have invited local, state, provinces, and regional organizations to share their programs. Several have described their approaches in this EAS Journal.)

Also on Monday, check out the Train-the-Trainer, Pest Management Workshops, and other beginning and advanced topics in beekeeping. After dinner, stop by and compete in the Bee Olympics—traditionally a very popular EAS event.

On Tuesday the Queen Rearing workshop continues. (The class is for two days, and you must attend both Monday and Tuesday.) For something a little new, stop in for the Mead-making class. And do not forget to visit the vendors. They will open for business Tuesday, Wednesday and Friday.

Then on Tuesday night, why not sign up to visit Propolis, Etc. for a BBQ and Social. This event is free to all attendees, but requires preregistration. Propolis, Etc. is a sponsor of EAS 2015.

Conference

Wednesday is the first day of the conference. (If you purchase the Short Course, you will be able to stay for Wednesday events, also.) The conference opens with keynote addresses and the morning symposium. The afternoon is filled with a multitude of workshops and break-out sessions. In the evening, join us for a panel discussion by international researchers from around the world, explaining the plight of the honey bee on the planet.

Tech Tour

Thursday is the Technical Tour—a visit to two large beekeeping outfits, Niagara Falls, a butterfly conservatory and much more. Dinner is free Thursday night for the first 350 who register. Thursday night is also the annual EAS live auction and the famous queen auction from the Ontario Beekeepers' Association. The OBA produces some of the finest breeder queens in the world.

The Conference wraps up on Friday. Please attend the EAS Annual Meeting. The meeting is your chance to ask questions of the board and make motions from the floor to improve the EAS Society

Friday is the last day to visit the vendors. Be sure to see the Honey Show. Both will be wrapping up following the afternoon break.

Banquet

The Friday night banquet wraps up the week. The awards will be presented to the honey show winners. Meet the newest EAS Master Beekeepers. At the end of the banquet, André Flys will be passing the gavel to Jeff Burd, EAS 2016 President.

EAS Administration

The EAS Board of Directors has elected Erin MacGregor-Forbes as the next EAS Chairman, starting immediately following the EAS 2015 Friday night banquet. The chairman's term is four years, with a two term limit. She will name her vice chairman at the Board of Director's meeting in Guelph on August 12. All of us look forward to Erin to lead us for the next four years, and beyond.

Often the EAS Convention is the only time I get to see most of you. Please stop in when you get to EAS Ontario and say hello.

See you in Guelph, eh?

Jim Bobb

Chairman's Report May 26, 2015 Email: Chairman@easternapiculture.org Phone: (610) 584-6778

CONFERENCE ONTARIO 2015	ERENCE Swarm to Ontario for EAS 2015 August 10-14, 2015 University of Guelph 2015 Short Course/Conference Registration Form ATTENTION: You may register on-line at www.easternapiculture.org starting early April. Mail registration is now open. If you are registering by mail, WE MUST RECEIVE YOUR FORM BEFORE JULY 20, 2015. After that date, you may still register on-line or during the conference. However a \$25 administration fee will be charged and dorm rooms, meals, and special events may not be available after that date. If you are a specifier or yolunteer, places onter your Begistration Code					
First Name(s)		Last Name				
Address		City				
State/Prov	Zip/Post Code	Country				
Phone	E-mail	@				
EMERGENCY (1. Contact Person:	CONTACT	Phone:				
Do you want to receive REGISTRATION 3. C O M B I N A T I All five days for on Name(s)	re the quarterly EAS Journal by email? N O N SHORT COURSE & CONFERENT e price!	 □ or by postal mail (available for annual membership only)? □ CE (Includes Thursday EAS Tech Tour and Thursday lunch.) # of people X \$325 = \$ 				
 SHORT COURSE Three Days Cours Name(s) 	Only e (Mon–Wed, Aug 10-12)	# of peopleX \$175 = \$				
5. MAIN CONFER Three Days Confe Name(s)	RENCE Only (Includes Thursday EAS To rence (Wed–Fri, Aug 12-14)	ech Tour, lunch, and Thursday lunch.) # of peopleX \$250 = \$				
6. ONE DAY CONFE	RENCE ONLY (Please specify days)	□Mon □Tues □Wed □Fri ¢ of days X # of people X \$75 = \$				
7. TECH TOUR ONL	Y Thursday – Lunch Included. Same ra	e for adults and students. # of people X \$100 = \$				
8. STUDENT REGIS Show high school	TRATION (Please specify days) DM or college ID at registration. Students u	on \Box Tues \Box Wed \Box Fri <i>inder 18 must be accompanied by an adult.</i>				
Name(s)	DNS (Included in Registration Fee—No	• extra charge.)				
9. I plan to bring	_ entries for the Honey Show.	ing the Chart Course, Desistants must commit to ottend				

4_____

EAS Registration Form Ver 3.4a

LUNCH

11. LUNCHES (Please specify days for lunch.) Thursday lunch is included in EAS Technical Tour

	Total # of lunches	× \$12.00 = \$
Name	□Mon □Tues □Wed □Fri	
Name	 □Mon □Tues □Wed □Fri	
12. I/we will attend the Lifetime M	lember Luncheon Friday, Aug 14. (Please purchase lund	ch or bring bagged lunch.)
DORM ROOMS Please conta SPECIAL EVENTS Children under 18 must be acco Reserve these events early, as Take advantage of these great of	ct University of Guelph directly for room reservations. 519 ompanied by an adult at Special Events. tickets are sold on a first requested basis. Many of the ev opportunities to socialize with many of the speakers and to Tour of Guelph store. Eree Event	9 824 4120 ext.52845 vents have maximum capacities. fellow beekeepers. # of people
MONDATINICITI - Tropolis Etc.		
WEDNESDAY NIGHT – Free E	vent – International researchers discuss Ontario's Pollina	ator Health Plan - # of people
THURSDAY NIGHT – Free Eve You must be registered for the	nt – BBQ and Queen Auction at Bee Farm (limited to firs conference or signed up for the Thursday Tech Tour to l	t 350 signed up) - # of people be eligible for the free Thursday night BBQ
13. FRIDAY NIGHT ANNUAL BANG Indicate # of each entrée Locally	QUET y themed chicken dinner Vegetarian dinner# c	of people X \$ 45 =\$
CHARITABLE DONATION 14. Donation to Honey Bee Research 15. Donation to Speaker & Education 16. Be an EAS 2015 Sponsor Please limit each messag Queen Level Sponsor Worker Level Sponsor Message	IS (EAS is a 501(c)(3) nonprofit organization.) ch Fund (help us help honey bees) on Fund (help us help beekeepers) or (Place a comment in the EAS 2015 Programe to 50 characters \$50 \$25	\$ \$ \$ \$
Late registration fee if after	July 20, 2015	\$ 25.00 = \$
Page 2 Subtotal (Sum up th	e values in the lines above)	\$
Page 1 Subtotal	,	\$
<u> </u>		·
GRAND TOTAL (Sum of Pag	ge 1 & 2 Subtotals)	\$
Please list any suggestions or restri	ctions that we should know about to ensure an enjoyable	experience at EAS 2015.

Mail this form with check, made payable to EAS 2015, or credit card information to:	
EAS 2015 Registration, Lou Naylor, 633 East Main St., Unit D1, Moorestown, NJ 08057	7
Name on Card	2
Master Card or VISA #	
Expiration Date/ 3-digit code on back of card	F F 3
Signature	
You can also register online with a credit card at www.easternapiculture.org!	
Registration questions? Email registrar@easternapiculture.org, or call Lou at 856-234-1799 (8am–8pm Eastern Time).	

EAS CONFERENCE

An Ontario Apiculture Primer for EAS Members

By Paul Kozak, Provincial Apiarist, Ministry of Agriculture Food and Rural Affairs, Animal Health and Welfare Branch



B

eekeeping is practiced in most regions and counties of Ontario. This covers many diverse landscapes in a very large province. The geography of Ontario bears mentioning as Ontario borders Minnesota to the west, eastern Michigan, western New York State, Quebec to the east and the northern

reaches of Ontario cover James Bay in the Arctic. Honey bees are kept in landscapes as diverse as farmlands of grain, oilseeds, orchards or dairy interspersed with the northern limits of the Carolinian forest, mixed maple and boreal forest. Many of the honey bee colonies in Ontario are located in southern Ontario, particularly in the milder climate of the Niagara Peninsula, the prime fruit-growing and, more recently, wine-producing region of Ontario.

There are approximately 112,000 registered honey bee colonies and approximately 7,000 bee yards in Ontario as of late 2014. Most of the honey bee colonies (~80%) are managed by commercial beekeepers. Non-commercial beekeepers are also very important. The Ontario Beekeepers Association (OBA) and the approximately 26 local beekeeping associations throughout the province work with all sizes of beekeeping operations on issues that impact them.

Beekeeping Activities in Ontario:

Beekeepers in Ontario are relatively diversified, producing a substantial honey crop, providing domestic and export pollination services, and producing locally raised queens and colonies in a northern climate.

Honey Production:

Honey bee colonies in Ontario are capable of producing 75 to 100 lbs, or more, per colony in a single year. Production varies by region, specific yard location and weather. Although honey production in Ontario is less per colony than the prairie provinces (Alberta, Saskatchewan, and Manitoba), there are regions of Ontario that can yield large honey crops. As well, since there are a large number of beekeepers, a large number of colonies and many beekeepers marketing directly to a large urban population, honey production in Ontario is valued more, per unit production, than many other provinces.

Pollination Services:

Honey bee colonies in Ontario are often used for pollination of Ontario fruit (apples, cherries, blueberries, watermelon, etc.), vegetables (pumpkins, squash, field cucumbers, etc.), and oilseeds (canola). Honey bee colonies are moved

6



in large numbers (~30,000 colonies in 2014) in spring to pollinate the large blueberry and cranberry crops in eastern Canada (Quebec, New Brunswick, Nova Scotia and Prince Edward Island).

Production of honey bees:

Beekeepers produce and sell honey bee colonies, nucleus colonies or honey bee queens, to other beekeepers within Ontario or to other provinces and states. There are Ontario bee breeders that have been able to market their stock to beekeepers throughout the United States, particularly certified Buckfast stock that has been imported to Ontario since 1990. In addition to Buckfast, many beekeepers have been selecting their own local stock. Ontario has always been a leader in the selection and breeding of honey bees, especially with the Ontario Bee Breeding Association and the hygienic testing that beekeepers collaborate on under the Ontario Beekeepers Association's Technology Transfer Program. Ontario has a limited production season for queens, compared to the southern U.S., but Ontario beekeepers have adapted a successful model for the production of queens and colonies in northern climates.

Annual Statistics on Ontario Beekeeping:

- \$26 million in value of honey
- \$395 million in pollination value to Ontario agriculture (with an estimated additional \$70 million to agriculture outside of Ontario)
- Ontario has a significant proportion of honey bees in Canada (second highest by number of hives per province) and the highest number of colonies in eastern Canada.
- Ontario honey bees provide a large proportion of the pollination services in eastern Canada
- Ontario has more beekeepers than any other province with almost half of the registered beekeepers in Canada (3,200 / 7,000 = 46% of all beekeepers)

Legislation and the Apiary Program:

Beekeeping in Ontario is governed under the *Bees Act*, which covers the rights and responsibilities of beekeepers, and addresses the issue of bee health, particularly pests and diseases. The Apiary Program under the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) includes a staff Provincial Apiarist and approximately 18 Apiary Inspectors. Apiary Inspectors inspect honey bee colonies for pests and diseases, and monitor for issues of honey bee health such as new and emerging pests and suspected pesticide incidents. Monitoring is done through taking samples, and working closely with federal and provincial counterparts and labs to detect honey bee pathogens and pesticide residues. Apiary Inspectors conduct anywhere from 1,000 to 1,400 inspections a year throughout Ontario. Apiary Inspectors also provide advisory and extension services to beekeepers on honey bee health and best management practices. The Provincial Apiarist works closely with the beekeeping industry, related industries, researchers and other areas of government to address issues related to beekeeping and honey bee health, and to provide technical advice.

Honey Exchange

Want to try out some different honeys? Exchange up to three jars of honey with another beekeeper!

Drop off up to three jars of honey, clearly labeled, when you arrive at the Registration Desk at EAS 2015. You will receive a ticket for each jar. After noon on Friday, bring your tickets and exchange the tickets for jars of honey.

It's as simple as that.



Pests and diseases:

Ontario has been proactive at addressing pest and disease issues in honey bees with a suite of options and a proactive Integrated Pest Management approach that has been adopted broadly across the commercial sector. Monitoring for varroa levels is promoted along with established treatment thresholds developed by Dr. Ernesto Guzman (University of Guelph) and Les Eccles (Technology Transfer Program, Ontario Beekeepers Association). Applied research is a priority for Ontario and researchers and specialists are focused on developing new methods of varroa control, getting data to demonstrate that treatments are effective under local conditions.

2014 Ontario Treatment Recommendations for Honey Bee Disease and Mite Control

Link: <u>www.omafra.gov.on.ca/english/food/inspection/</u> <u>bees/2014-treatment.htm</u>

An Introduction to Honey Bee Pests and Diseases in Ontario

Link: <u>www.omafra.gov.on.ca/english/food/inspection/bees/</u> intro-bee-pests.htm

In recent years, Ontario has had atypical honey bee losses over winter and acute bee mortality incidents during the beekeeping season. The province recently announced a multipronged Pollinator Health Strategy that will help strengthen pollinator health.

The province of Ontario recognizes there are several factors that can impact pollinator health, and will look for ways to address them as the provincial strategy is developed: <u>www.</u> <u>omafra.gov.on.ca/english/pollinator/meeting-reg.htm</u>

A) Pollinator Habitat and Nutrition

B) Pesticide Exposure

C) Diseases, Pests and Genetics

D) Climate Change and Weather

Throughout December and January, public consultations were held to seek comment on components of the initial proposed pollinator health strategy. Comments received will be considered as we move forward.

Public Consultation - Pollinator Health

Link: <u>http://www.omafra.gov.on.ca/english/pollinator/meet-ing-reg.htm</u>

There is a lot going on in Ontario with honey bees with many positive initiatives. I hope to see you at EAS Guelph in August, 2015.

Paul Kozak is an integral member of the team planning EAS 2015 at the University of Guelph. Register for the conference this August and attend the educational Wednesday night event he has planned for us.



Thursday of the conference will feature the Tech Tour, which will give registrants a chance to see a lot of varying aspects of the industry. Everyone will be bussed, so no worries about maps, carpooling, or sampling a little mead and local beer.

The Thursday Tech Tour is included in the price of the Wednesday through Friday Conference registration. If you are not registering for the full conference, the Tour can be purchased as a single day registration on Thursday for US\$100.



Niagrara Falls

Parker-Bee Apiaries All about the Bees

We'll start the morning out with a tour of Ontario's largest apiary, Parker-Bee Apiaries, where owner Mike Parker and the Ontario Beekeepers Association have been working on an osmosis unit to clean old comb.



Next, we're off to Niagara Falls, where we will be having a boxed lunch (included) at the Falls. <u>www.niagaraparks.com.</u>





Niagara Butterfly Conservatory

Then, we're off to the Niagara Butterfly Conservatory with over 2,000 colourful tropical butterflies floating freely among lush, exotic blossoms and greenery. Paths wind through the rainforest setting, past a pond, waterfall, and the emergence window, where butterflies leave their pupae and prepare to take their first flight! Over 2,000 butterflies, made up of 45 different species, call this beautiful space home. www.niagaraparks.com/niagara-falls-attractions/ butterfly-conservatory.html



Dutchman's Gold

Staff (John and Alison on left)

Optional Free Evening Event, Limited to First 350 Registrants. To finish off the day, we will be touring one of Ontario's most successful beekeeper's honey house and staying for a BBQ dinner with a live band and, of course, the annual auction, including a queen auction. John and Alison Van Alten of Dutchman's Gold Honey and Maple Products and Tuckamore Bee Company have graciously offered to open their honey house for this rare opportunity. <u>www.dutchmansgold.com</u>

THE EAS CONFERENCE



THE EAS MASTER BEEKEEPER CERTIFICATION PROGRAM

PART 1 OF 3: THE PROGRAM

BY NATALIE ANN COMEAU

Reprinted with permission of the Ontario Beekeepers' Association.

DO YOU FANCY YOURSELF A FAIRLY KNOWLEDGEABLE

beekeeper? Enjoy a challenge? Like to test your knowledge? Well, the Eastern Apicultural Society's got the program for you at the upcoming EAS 2015 Conference in Guelph, August 10-14.

Founded in 1955 to promote bee culture, educate beekeepers, and support excellence in bee research, the EAS is an international non-profit organization – the largest non-commercial beekeeping organization in the United States, and one of the largest in the world.

Master beekeeping programs are offered through several universities and beekeepers' associations throughout the United States – although there is no standard curriculum or official governing body. The most recognized and longest-running in North America is offered by the Eastern Apicultural Society, which provides resources and guidance to beekeepers who wish to become certified, and conducts certification exams at its annual conference.

According to the EAS website: "The purpose of the Master Beekeeper certification program is to identify and certify people who have a detailed knowledge of honey bee biology, expertise in the proper practices of beekeeping, and can present this information to the beekeeping and non-beekeeping public in a detailed,

The EAS Master Beekeeper Certification Program



accurate, clear and authoritative manner. The goal of this program is to certify that those who are awarded the *Master Beekeeper Certificate* are competent at a college level in the four areas where they are tested."

The program was created in 1978 at Cornell University, the brainchild of bee biologist and world-renowned apiculturist Roger A. Morse, Ph.D. (1927-2000). A professor of entomology, Morse was a regular columnist for *Bee Culture* magazine, and authored many articles and books, including *The New Complete Book of Beekeeping*.

Morse modelled his program on similar organizations in the United Kingdom which made higher education in the science of beekeeping available to the general public. The curriculum focused on current research and best practices, and the goal was that master beekeepers, once certified, would mentor novices and serve as a resource in their communities. The program was tremendously popular, and in 1981 Morse handed the reins over to the EAS, making Master Beekeeper certification accessible to a much wider audience.

Today, growing interest in beekeeping in North America – especially among small, hobby beekeepers – has created a need for experienced, knowledgable beekeepers to provide mentorship, coaching and support. Certified Master Beekeepers also serve as a source of expert information in their communities, providing information to media and guidance to local governments. There are approximately 150 EAS certified master beekeepers, only six of which are in Canada – four in Ontario and two in Quebec.

To apply, candidates must have at least five years' experience as a dedicated hobbyist, a commercial beekeeper, or an apiary inspector. A letter of recommendation is required from a Master Beekeeper, professional beekeeping specialist, or the president of a local or provincial beekeeping organization who knows you well. The cost is \$100US, and the deadline to apply is July 1st. "Anywhere from a dozen to double that number take the exam each year," says Dewey Caron, the current EAS Master Beekeeper advisor. "The pass rate is anywhere from 50% in the case of the lab exam to nearly 100% for the field exam." Very few candidates pass all four exams on their first try.

On the first night of the conference, candidates meet as a group with the Master Beekeeper advisor and a handful of Master Beekeepers to learn more about the program and ask any lastminute questions. The written exam is held the following morning, with individual oral exams taking place in the afternoon. The lab exam takes place the next day, followed by the hands-on field exam in the beeyard. On the last day of the conference, candidates meet individually with the Master Beekeeper advisor to get their results and review their exams. The passing grade is 85% – certificates are awarded to successful candidates at the banquet. "THE PURPOSE OF THE MASTER BEEKEEPER CERTIFICATION PROGRAM IS TO IDENTIFY AND CERTIFY PEOPLE WHO HAVE A DETAILED KNOWLEDGE OF HONEY BEE BIOLOGY. EXPERTISE IN THE PROPER PRACTICES OF BEEKEEPING, AND CAN PRESENT THIS INFORMATION TO THE BEEKEEPING AND NON-BEEKEEPING PUBLIC IN A DETAILED. ACCURATE, CLEAR AND AUTHORITATIVE MANNER."



ROGER A. MORSE, PH.D. CREATOR OF THE EAS MASTER BEEKEEPER PROGRAM

THE EAS CONFERENCE



In our upcoming issues, we'll delve into more detail about the four exams, what to expect, and how to prepare for them. And we'll provide plenty of sample questions, like these, to test your knowledge:

- 1. What are the primary functions of bees located in the centre and on the outer surface of the winter cluster for an outdoor wintered colony in Ontario?
- 2. True or false: Nurse bees secrete protein-rich material from abdominal glands to feed their brood.
- 3. The queen's mandibular gland produces a pheromone that both helps unify a colony and is a means for worker bees to identify her. What pheromone does the worker's mandibular gland produce?
 - A. The same pheromone as the queen, but in smaller amounts
 - B. Nothing, it is vestigial
 - C. Worker-identifying pheromone
 - D. Alarm pheromone, secondary to the sting alarm chemicalE. Swarming and clustering pheromone
- 4. Miel virgen is honey from which social bee in the Americas?
- Approximately how much honey is used to produce a bottle of mead? (Assume your yield = 4 finished bottles/gallon of mead started)
- 6. What does the label "Lehua" on a Hawaiian honey jar likely refer to?
- Of the 12 major human foods (coffee is not one of them), how many require insect pollination?
- 8. Name the major crops in the Maritimes and Western Canada that require honey bee pollination?
- 9. Approximately how many bee colonies are needed annually to pollinate almonds in California?
- 10. A Langstroth bee hive is constructed/organized similar to a natural nest in a bee tree. Describe four points in common between a bee hive and a natural nest in a tree.



ANSWERS:

- 1. Bees on the winter cluster surface serve as insulators to conserve heat. Bees in the centre of the winter cluster generate heat and care for brood, if it is present.
- 2. False
- 3. D
- 4. Stingless bee
- 5. 3-4 lb.
- 6. Floral source
- 7. One
- 8. Blueberries and canola
- 9. More than 1.5 million
- Small, defensible entrance; parallel, vertical beeswax combs; organized brood area with food storage to the sides and above; propolis smoothing the roughness around the outside of the nest.

A FULL LIST OF RESOURCES CAN BE FOUND ON THE EAS WEBSITE AT EASTERNAPICULTURE.ORG - IT INCLUDES BOOKS, JOURNALS, NEWSLETTERS AND WEBSITES **ON TOPICS RANGING** FROM BASIC BEEKEEPING KNOWLEDGE TO ANATOMY, **BIOLOGY, BEHAVIOUR, DISEASES** AND PESTS, BEESWAX AND HONEY, PESTICIDES, PLANTS AND POLLINATION. THE MASTER BEEKEEPER CERTIFICATION COMMITTEE IS AVAILABLE TO ANSWER QUESTIONS BY EMAIL AT MBCERTIFICATION@ EASTERNAPICULTURE.ORG.

EAS 2015 Conference Schedules

Registration & Information

	Registration and Information Desk at Rozanski Hall
Sunday	3:00 p.m.– 7:00 p.m.
Monday	7:30 a.m.– 4:00 p.m.
Tuesday	7:30 a.m.– 4:00 p.m.
Wednesday	7:30 a.m.– 5:00 p.m.
Thursday	8:00 a.m.– 9:30 a.m.
Friday	8:00 a.m.– Noon
Places return voi	r mool oord and darm

Please return your meal card and dorm keys before you leave campus; you will be billed \$75 to replace each item that is not returned.

imaster beekeepers							
Meet and Greet Candidates	Monday	1:30 p.m.– 2:30 p.m.	TBA				
Exam Study Groups	Monday	2:30 p.m.— 4:00 p.m.	TBA				
MB Exam Volunteers' Dinner	Monday	5:00 p.m.— 7:00 p.m.	TBA				
Exam Review	Monday	7:00 p.m. – 9:00 p.m.	TBA				
Written Exams	Tuesday	8:30 a.m.— 12:30 p.m.	TBA				
Oral Exams	Tuesday Tuesday Tuesday	12:30 p.m.– 4:00 p.m. 10:00 a.m.– 4:00 p.m. 10:00 a.m.– 4:00 p.m.	TBA TBA TBA				
Lab Exams	Wednesday	8:30 p.m.– 12:30 p.m.	TBA				
Field Exams	Wednesday	10:00 a.m.—4:00 p.m.	Beeyard				
Annual Meeting	Friday	7:30 a.m.— 8:30 a.m.	TBA				
Exam Review (Candidates receive scores and get questions answered.)	Friday	3:00 p.m.— 5:00 p.m.	ТВА				

Meetings							
EAS Board of Directors' Meeting (bring your lunch)	Wednesday	Noon– 1:30 p.m.	TBA				
EAS 2016 New Jersey Preview	Friday	10:30 a.m.— 10:45 a.m.	Rozanski 101				
EAS Annual Business Meeting (Everyone is encouraged to attend.)	Friday	10:45 a.m.— Noon	Rozanski 101				
Life Members Banquet (bring your lunch)	Friday	Noon— 1:30 p.m.	TBA				

Annual Honey Show

Drop Off Show Entries	Rozanski Hall	Tuesday, Wednesday	1:30 p.m.– 4:30 p.m., 10:30 a.m.– Noon
Show Open to Public	TBA	Friday	9:00 a.m.— 3:00 p.m.
Post-Show Pick Up of Entries	TBA	Friday	After 3:00 p.m.
Top Awards Presentation (at Banquet)	Creelman Hall	Friday	6:00 p.m.– 9:30 p.m.

Housing Options for EAS 2015

On Campus Accommodation

Dormitory Rooms

Traditional Residence Rooms

The Traditional Residences have either single (one twin bed) or double (two twin beds) rooms. Shared bathroom facilities are available per floor. These rooms are not air-conditioned.

East Village Townhouses

The East Village Townhouses have three floors. The ground floor has a kitchen (including stove and fridge, dishes, cutlery, etc. are not included) and living room. The first floor has two bedrooms (each with one twin bed) along with one shared bathroom. The second floor also has two bedrooms with one shared bathroom. Guests may choose to book an entire townhouse or decide to share a townhouse with up to three other guests. Each person will have a separate bedroom. Townhouses are the only residence equipped with central air-conditioning.

Daily housekeeping service is provided for Townhouse Rooms. This includes making the bed, emptying the garbage can and replacing towels. Your bed linens will be changed once per week.

On Campus Amenities

All on campus rooms include:

- single/twin beds (linens are provided)
- a small towel (it is recommended that you bring an extra towel)
- shared washroom facilities
- a telephone for local calls
- free parking

Room Booking Notes

If you wish to lodge with a specific person(s), please include the name(s) when you complete your accommodation registration. If you choose a Traditional student room, you will automatically be paired up with another conference student of the same gender unless you specify a roommate. All rates are quoted per person, per night and each individual must register and pay for their part of the room.

Dormitory Key Charge

Attendees will be issued a voucher confirming that their keys have been returned upon check-out. A \$75.00 charge will apply to anyone who does not return their keys.

Bed & Breakfast Accommodation

You will receive a continental breakfast for each morning of your stay. More information will be provided at check-in.

Rate per night

82.25
74.90
58.80
130.15
117.15

Accommodation Only

Traditional Single Room\$ 73.10
Traditional Double Room (Single Occupancy) - Early Bird
Traditional Double Room for Students Room (Single Occupancy) - Early Bird\$ 49.65
Townhouse Room For 1-2 ppl. (Single Occupancy) - Early Bird
Townhouse Room For 3-4 ppl. (Single Occupancy) - Early Bird
Please book dormitory room accommodations directly with

the University of Guelph at <u>http://events.uoguelph.ca/ei/get-demo.ei?id=243&s=_0U40WYWDR</u> or call (519) 824-4120 ext 52845.

Hotels

- When contacting hotels be sure to mention that you are attending EAS.
- Hotels often sell out for EAS so be sure to book early. The rates are in Canadian dollars.
- You must book before July 9, 2015 to get the discount rates.

Best Western Royal Brock Hotel

http://book.bestwestern.com

716 Gordon Street Guelph, Ontario, N1G 1Y6, CA Phone: 519/836-1240 Toll Free Reservations: 800-780-7234

Enjoy convenient access to the University of Guelph, Sleeman Centre, OMAFRA and Guelph Arboretum while staying at this Guelph, Ontario hotel. Welcome to the BEST WEST-ERN PLUS Royal Brock Hotel & Conference Centre where the service is friendly, the amenities are top-notch, the location is unbeatable and the accommodations are comfortable and affordable. Guests staying at this Guelph Best Western hotel will enjoy well-appointed guest rooms featuring cable satellite television, refrigerator and free high-speed Internet access. Guests are greeted with a complimentary hot breakfast every morning. The BEST WESTERN PLUS Royal Brock Hotel & Conference Centre provides a complimentary weekday newspaper and features an outdoor swimming pool with sun deck and free parking.

When making your reservation mention the code 'EAS Beekeepers' to get rates starting at \$93.99 (Canadian) per room, per night, plus applicable taxes. You must book before July 9, 2015.

Housing Options for EAS 2015, continued

Days Inn Guelph

http://www.daysinn.ca

785 Gordon St. Hwy 401 exit 299 Guelph, On N1 G1Y8 CA Tel 1-519-822-9112

Located in Guelph, Days Inn - Guelph is convenient to University of Guelph and Alumni Stadium. This eco-friendly hotel is within close proximity of Macdonald Stewart Art Centre and Stone Road Mall. Make yourself at home in one of the 87 air-conditioned guestrooms. Complimentary wireless Internet access keeps you connected, and satellite programming is available for your entertainment. Bathrooms feature shower/ tub combinations, complimentary toiletries, and hair dryers. Conveniences include complimentary newspapers and coffee/tea makers, as well as phones with free local calls. A complimentary continental breakfast is served daily. Featured amenities include express check-in, express check-out, and complimentary newspapers in the lobby. Free self parking is available onsite.

When making your reservation mention the code 'EAS Beekeepers' to get rates starting at \$89.00 (Canadian) per room, per night, plus applicable taxes. You must book before July 9, 2015.

Delta Inn

https://www.deltahotels.com/Groups/Delta-Guelph-Groups/U-of-G-BeeKeepers-Conference

50 Stone Road West Guelph, ON N1G 0A9 Phone: 519-780-3700 Fax: 519-824-1023 Reservations: 888-890-3222

Situated in the University of Guelph Research Park, on the campus of the University of Guelph, Delta Guelph Hotel and Conference Centre offers a convenient central Guelph location. Easy access to Guelph's major employers, The Cooperators, Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), Linamar and Sleeman Breweries. A short walk or drive to the 140-store Stone Road Mall or Canada's largest outdoor sculpture park, The Macdonald-Stewart Art Centre. Enjoy the modern comforts of our large banquet and conference facilities, and dine at a locals' favorite; Fifty West Restaurant and Bar.

Guests also enjoy easy access to Waterloo Regional International Airport (YKF) and only a 45 minute drive to Toronto Pearson International Airport (YYZ) via the 401.

Reserve your stay today in one of our 148 modern guest rooms and extended-stay suites, and discover the convenience and style of our Guelph hotel.

When making your reservation mention the code 'UOFGBEE15' to get rates starting at \$135.00 (Canadian) per room, per night, plus applicable taxes. You must book before July 9, 2015.

Holiday Inn Guelph Hotel & Conference Centre http://www.higuelph.ca/

601 Scottsdale Drive – Guelph – Ontario – N1G 3E7 Phone: (519) 836-0231 Fax: (519) 836-5329 E-mail: reservations@holidayinnguelph.ca

The only full service hotel in Guelph with a large heated indoor pool and free parking! Our Guelph hotel is only minutes away from downtown Guelph. A short distance from the University of Guelph campus, Linamar, Monsanto Mandel Scientific, Cargill, Nestle Waters, OMAFRA, Syngenta, CFIA, Semex, Eli Lily, The Cooperators, Sleeman Breweries and Denso. Located adjacent to Stone Road Shopping Centre.

When making your reservation mention the code 'EAS' to get rates starting at \$109.99 (Canadian) per room, per night, plus applicable taxes. You must book before July 9, 2015.

Camp Sites

Camping sites are listed at Guelph Lake Conservation Area, www.grandriver.ca/index/document.cfm?Sec=44&Sub1=0&sub2=0

The GRCA offers unparalleled camping experiences at eight of twelve Grand River Parks. Experience the best the Grand River watershed has to offer!

Campsites are available on a daily, monthly, or seasonal basis. Reserving ahead is a good idea for holiday weekends or for your camping vacation. At some areas there are premium riverside campsites and radio-free campsites. Parks are open from May 1 to October 15. Pools at Byng Island and Brant Park open in mid-June.

Reserve your campsite online at <u>www.grcacamping.ca/Web</u> or phone 1-877-558-GRCA (4722).

Parking

Parking for attendees who stay overnight in the dorms is included in the accommodation rates. Residents will receive a GREEN parking pass and may park in P19 (North residences), P17 (East residences and Townhouses) or P13 (South residences).

If you are staying in one of the hotels, it is suggested that you walk from the hotel to save on parking. But if you need to drive to campus, the parking cost is \$9.00 per day (including tax) or \$36.00 per week (including tax). Parking permits are required Monday through Friday, from 8:00am to 5:00pm. An ORANGE conference parking pass entitles visitors to park in lots P13, P14, P15, & P19. Parking permits can be purchased at the registration desk.

Please note that the parking passes must be displayed on the vehicle's dashboard.



MARK WINSTON, EAS 2015 Keynote Speaker

Professor Apiculture & Social Insects Simon Fraser University, British Columbia

Recognized as one of the world's leading expert on bees and pollination, Mark has had an illustrious career researching, teaching, writing and commenting on bees and agriculture, environmental issues and science policy. He directed Simon Fraser University's Centre for Dialogue for 12 years, where he achieved wide recognition as a distinguished Canadian educator.

Mark is also author of *BeeTime: Lessons from the Hive*

"There are powerful lessons to be learned from bees about how we humans can better understand our place in nature, engage the people and events surrounding us with greater focus and clarity, interact more effectively in our relationships and communities, and open ourselves to a deeper understanding of who we are as individuals, communities and a species."

Read about Robert Page, EAS 2015 Second Keynote Speaker, in the next EAS Journal.

Master Beekeeper Certification Committee

Certification Committee Now Accepting Applications

The Master Beekeeper Certification Committee invites EAS members to consider applying for this year's certification exam. Any experienced beekeeper is eligible to apply for certification as a Master Beekeeper.

Persons interested in applying should have a minimum of 5 years as a serious beekeeper in some aspect of apiary management, such as a very dedicated hobbyist, commercial beekeeper, worker for a commercial beekeeper, or apiary inspector. Also, it is helpful if applicants have completed the equivalent of a college level course in beekeeping. An applicant should be well read in apicultural literature. In addition, a Recommendation of Candidate for EAS Master Beekeeper Examination in support of the individual seeking Master Beekeeper Certification must be submitted by the application deadline. This recommendation may be supplied by a current master beekeeper, professional beekeeping specialist, or current president of a local, state, or regional beekeeping organization with whom the applicant has a long standing personal association. The recommendation can be submitted with the application or can be sent separately but must be received by the application deadline.

The application and recommendation forms can be downloaded from the EAS website and submitted by email to <u>mbcertification@easternapiculture.org</u>, or by mail to Carol Cottrill, EAS Certification Committee, 164 Wyman Hill Road, Rumford, ME, 04276. If you are unable to download these forms, write the Certification Committee at the address above or send an email to <u>mbcertification@easternapiculture.org</u> asking for an application. The deadline for application is July 1, 2015. All applications and letters of nomination must be received by the July 1 deadline.

More information about the Master Beekeeper Certification application process and the exam can be found on the website (<u>www.easternapiculture.org</u>) by hovering over Master Beekeepers and then clicking on Certification.

This year's schedule at the conference will include an open review session on Monday evening, August 10, 2015. The written and oral exams will take place on Tuesday, August 11 and the laboratory and field exams on Wednesday, August 12.

The Master Beekeeper Certification Committee will be happy to answer questions; our email address is <u>mbcertification@</u><u>easternapiculture.org</u>







Short Course Workshops



Queen Rearing Class



Introductory Beekeeping



Beekeeping and IPM (Integrated Pest Management)

Registrants must commit to attend both Monday and Tuesday, August 10 and 11. Class size is limited to 25 attendees. This queen rearing workshop consists of classroom sessions and demonstrations with hands-on lessons in the bee yard. Participants are required to have prior beekeeping knowledge and experience in maintaining colonies.

Topics include queen biology, methods of rearing queens, preparing a cell builder colony, grafting techniques, and care of cells and queens. Each participant will have the option to buy a copy of the Ontario Queen Rearing Manual which corresponds with the workshop.

Participants will need protective gear (hat, veil) and closed-toe footwear. Long-sleeved, light-colored, and light material clothing is suggested. Full bee suits tend to be very warm. Refillable water bottles are recommended. A notebook and pencil can be handy. Cameras are welcomed. The class is limited to 25 people. This beekeeping workshop consists of classroom sessions and hands-on lessons in the bee yard. Participants of all experience levels are welcome. Topics include basic honey bee biology, beekeeping equipment, working in the bee colony, seasonal beekeeper responsibilities, harvesting and extracting honey, and preparing bee colonies for winter.

Each participant will have the option to buy a copy of the Ontario Beekeeping Manual which corresponds with the workshop. This intermediate beekeeping workshop consists of classroom sessions and hands-on lessons in the bee yard. Participants should have taken an introductory beekeeping workshop or course and/or have at least one season of beekeeping experience prior to attending. Topics include pest and disease biology and identification, monitoring for pests and diseases, record keeping, treatments and integrated pest management.

Each participant will have the option to buy a copy of the Integrated Pest Management for Beekeeping in Ontario Manual which corresponds with the workshop.

Vendor Registration

Vendor registration is now open. Please visit the EAS web site, www.easternapiculture.org to register online or print out a paper vendor registration form. The web site also contains information on vendor booth sizes, ad participation in the program booklet, bag stuffers, and sponsorships for the short course and conference breaks. If you are bringing goods into Canada for sale, please read the recommendations on the vendor web pages.



Painting Hive Equipment

By Paul Kelly,

Research and Apiary Manager, Townsend House, Honey Bee Research Centre, The University of Guelph

In many ways, beehives aren't much different than our own houses. Both provide entrances, ventilation, insulation and a weather- proof exterior. As with houses, paint is used to seal wooden hive parts and is the first defense against the elements. Finish applied to hive components will protect your bees and your investment. Beehives will last for generations if the finish coating is maintained. Unfinished wood will rot quickly.

The interior of a beehive is quite humid. This fact is important when we consider the type of paint to use. Oil based top coats should be avoided as they form a vapor barrier and are prone to peeling caused by trapped condensed moisture. We wouldn't put a vapor barrier on the outside wall surface of our own homes for similar reasons. In my opinion, the most durable finish for beehives is a single coat of oil based exterior primer followed by two coats of latex exterior paint. These materials form porous, breathable, coatings so moisture is not trapped.

Paint or chemical wood preservatives shouldn't be used on interior surfaces because they could contaminate hive products. Bees do a remarkable job of painting the hive's interior walls with propolis. Let them do their own decorating.

A quick, cheap, way to paint hive equipment is to stack it up, stabilize the stack by putting something heavy on top, and apply paint with a long handled roller. Recessed hand -holds in supers can be painted with a brush prior to using the roller. Be sure to follow the paint manufactures recommendations regarding surface preparation and recoat times.

What the best colour? Avoid very dark colours so your hives don't overheat in the sun. Bees orient better to hives with a variety of colours so go wild!

Paul Kelly will be providing bees for the EAS Short Course and Conference held at the University of Guelph, August 10-14. If you see Paul, he just might offer to show you the honey house and indoor hive over wintering facility at Townsend House, just on the other side of the Campus Arboretum.





	2015 EAS SHORT COURSE, Monday, August 10, 2015 (<i>Subject to Change</i>)							
Location TBA	6:30 - 7:30 AM	Yoga for everyone						
	6:30 - 7:30 AM	Breakfast @ Universi	ty Centre Food Court					
	Starts 7:30 AM	Registration (Rozansk	ki Hal)					
Rozanski 101	8:00-8:30 AM	Welcome to Eastern A	Apicultural Society and	d University of Guelph				
		Queen Rearing Workshop	Beginners Intro to Beekeeping	Integrated Pest Management Workshop	Advanced Beekeeping	Honey Show	Train-the- Trainer	
		Rozanski 107	Rozanski 105	Rozanski 106	Rozanski 102	TBA	TBA	
Breakout Session #1	8:30 - 9:15 AM	Welcome and intro- ductions, queen and drone biology, queen rearing equipment, queen and nuc regulations	Welcome and intro- ductions, basic bee biology	Welcome and introductions, pest and disease identification	Honey bee anatomy, lab session Zachary Huang	Honey Show Michael Palmer		
Breakout Session #2	9:15 - 10:00 AM	Protocol for rearing queens, record keeping, timing	Beekeeping equip- ment, getting started	Monitoring and record keeping, IPM components and value	Honey bee anatomy, lab breakout session Zachary Huang	Honey Show Michael Palmer		
	10:00-10:15 AM	Coffee Break @ Roza	nski Hall					
Breakout Session #3	10:15 - 11:00 AM	Yard Session <u>Station #1</u> Prepare cell builder <u>Station #2</u> Prepare mating nucs <u>Station #3</u> Collecting, tagging and clipping queens <u>Station #4</u>	Yard Session <u>Station #1</u> Opening a colony, working a colony, development stages <u>Station #2</u> Installing a nuc, making a split, moving a colony <u>Station #3</u>	Yard Session <u>Station #1</u> Monitoring (ether roll, alcohol wash, sticky board, sugar dust) <u>Station #2</u> Cultural management techniques	Managing honey bee defensive behavior <i>Greg Hunt</i>	Honey Show Michael Palmer		
Breakout Session #4	11:00 - 11:45 AM	Queen cell care, mated queen care, transporta- tion and introduction mated queen care ar introduction			Division of labour in honey bee colonies <i>Zachary Huang</i>	Honey Show Michael Palmer		
	11:45 - 1:00 PM	Lunch @ TBA						
		Advanced Beekeeping	Beginners Intro to Beekeeping	Advanced Beekeeping	Advanced Beekeeping	Honey Show	Master Beekeepers	
	1	Rozanski 107	Rozanski 105	Rozanski 103	Rozanski 102	TBA	TBA	
Breakout Session #5	1:00 - 1:45 PM	Apiculture in Ontario <i>Paul Kozak</i>	Preparing to harvest hive products	Spring management <i>Tammy Horn</i>	Honey bee nutrition <i>Pierre Giovenazzo</i>	Honey Show Michael Palmer	Master Beekeepers	
Breakout Session #6	1:45 - 2:30 PM	With a commercial orchard design like this, who needs to rent bees? <i>Stefan Sobkowiak</i>	Seasonal respon- sibilities of the beekeeper	Finding and replac- ing queen bees <i>Tammy Horn</i>	Honey bee pheromones <i>Zachary Huang</i>	Honey Show Michael Palmer	meet and greet	
	2:30 - 2:45 PM	Coffee Break @ Roza	nski Hall				Master	
Breakout Session #7	2:45 - 3:30 PM	Talk on bee management <i>TBA</i>	Yard Session <u>Station #1</u> Feeding and Winter Wraps Station #2	Doug's double nuc method of overwintering <i>Doug McRory</i>	The swarming cycle of <i>Apis mellifera</i> <i>Gard Otis</i>	Honey Show Michael Palmer	Beekeepers study groups	
Breakout Session #8	3:30 - 4:15 PM	Talk on bee management TBA	Extracting	Indoor wintering of honey bee colonies <i>Rob Currie</i>	Interpreting colony conditions to di- agnose swarming, supersedure, and emergency queen rearing <i>Gard Otis</i>	Honey Show Michael Palmer		
	4:15 - 7:00 PM	Dinner @ local restau	irants (check sponsori	ng establishments)				
Location TBA	7:00 - 9:00 PM	Beekeeping Olympics	3				Master Beekeepers Exam Review	

	2015 EAS SHORT COURSE Tuesday, August 11, 2015 (Subject to Change)								
6:30	- 7:30 AM	Yoga for everyone (Location TBA)							
6:30	- 7:30 AM	Breakfast @ University Centre Food Court							
Start	ts 7:30 AM	Registration (Rozar	nski Hal)						
		Queen Rearing Workshop	Beginners Intro to Beekeeping	Integrated Pest Management Workshop	Advanced Beekeeping	Beer Making Workshop	Master Beekeepers	Master Beekeepers	Master Beekeepers
		Rozanski 107	Rozanski 105	Rozanski 106	Rozanski 102	TBA	TBA	TBA	TBA
Breakout Session #1	8:30 - 9:15 AM	Stock selection and breeding	American foulbrood diagnosis and management <i>Steve Pernal</i>	Treatments	Honey bee viruses and their association with varroa <i>Mollah</i> <i>Hamiduzzaman</i>	Royal City Brewing Co.	Master Beekeepers Written Exam		
Breakout Session #2	9:15 - 10:00 AM	Yard Session <u>Station #1</u> Frame selection and grafting <u>Station #2</u> Preparation of cell bars, grafting frames, queen cages and queen candy	Nosema disease, biology and control <i>Daniel Borges</i>	OBA Tech Transfer Program	The varroa project: A citizen science program for hobby beekeepers <i>Rebecca Masterman</i>	Royal City Brewing Co.		Master Beekeepers Oral Exams	Master Beekeepers Oral Exams
10:00	0 -10:15 AM	Break with vendors	s @ Peter Clarke Hal	I					
Breakout Session #3	10:15 - 11:00 AM	(CONTINUED) Yard Session Station #1 Frame selection and grafting Station #2 Preparation of	Nosema identifica- tion lab session Pierre Giovenazzo & Daniel Borges	Yard Session <u>Station #1</u> Oxalic Acid, Thymovar <u>Station #2</u> Formic Acid, MAQS™ <u>Station #3</u> Antibiotics, Fumigilin-B	Varroa mite control <i>Rob Currie</i>	Royal City Brewing Co.	Master Beekeepers Written Exam	Master Beekeepers Oral Exams	Master Beekeepers Oral Exams
Breakout Session #4	11:00 - 11:45 AM	cell bars, grafting frames, queen cages and queen candy	Nosema identifica- tion lab session <i>Pierre Giovenazzo &</i> <i>Daniel Borges</i>	<u>Station #4</u> Apistan®, Checkmite + ™, Apivar®″	Oxalic acid: A miticide for varroa control <i>Medhat Nasr</i>	Royal City Brewing Co.			
11:45	5 - 1:00 PM	Lunch @ University	Centre Food Court						
		Queen Rearing Workshop	Advanced Beekeeping	Advanced Beekeeping	Advanced Beekeeping	Advanced Beekeeping	Master Beekeepers	Master Beekeepers	Master Beekeepers
		Rozanski 107	Rozanski 105	Rozanski 102	Rozanski 103	Rozanski 108			
Breakout Session #5	1:00 - 1:45 PM	Extra grafting prac- tice time	Pesticides and basic toxicology <i>Cynthia</i> <i>Scott-Dupree</i>	When beekeeping goes bad <i>Phil Craft</i>	A reduced risk integrated pest man- agement program for honey bees: Basics and in practice <i>Medhat Nasr</i>	Honey bee genetics <i>Greg Hunt</i>	Master Beekeepers Oral Exams	Master Beekeepers Oral Exams	Master Beekeepers Oral Exams
Breakout Session #6	1:45 - 2:30 PM		The immune system of honey bees <i>Paul Goodwin</i>	From the flower to the cell: Making nectar into honey Dennis vanEngelsdorp	Improving bee management: Pest surveillance and biosecurity Medhat Nasr	Sex determina- tion in honey bees Zachary Huang			
2:30) - 2:45 PM	Break with vendors	s @ Peter Clarke Ha	I					
Breakout Session #7	2:45 - 3:30 PM		Honey bee patholo- gy: Stressor effects and honey bee defenses <i>Geoff Williams</i>	Helping our bees prepare for winter <i>Phil Craft</i>	Residues in hive and honey products <i>Steve Pernal</i>	The evolution of honey bees <i>Dennis</i> vanEngelsdorp	Master Beekeepers Oral Exams	Master Beekeepers Oral Exams	Master Beekeepers Oral Exams
Breakout Session #8	3:30 - 4:15		Small hive beetle <i>Pierre Giovenazzo</i>	"Ask Dr. Phil" Q&A session <i>Phil Craft</i>	The antimicrobial properties of honey <i>Karol Mathews</i>	Elemental honey bee breeding <i>Ernesto</i> <i>Guzman</i>			
4:15	5 - 7:00 PM	Dinner @ local rest	aurants (check spo	nsoring establishment	s)				
7:00	7:00 - 9:00 PM Propolis, Etc. BBQ and Social (free but requires preregistration) 367 Michener Road, Guelph, ON								

	2015 EA	S GENERAL CON	IFERENCE -Wed	nesday, August ´	12, 2015 <i>(Subjec</i> i	t to Change)	
6:30 - 7:30 AM		Yoga for everyone (Location TBA)					
6:30 - 7:30 AM		Breakfast @ University Centre Food Court					
	Starts 7:30 AM	Registration (Rozansl	ki Hall)				
Rozanski 104	8:00 - 8:30 AM	Chair and President's Welcome			Master		
Rozanski 104	8:30 - 9:30 AM	Keynote speaker: Mark L. Winston "Value or values: Audacious ideas for the future of beekeeping"			Beekeepers Lab Exam		
Rozanski 104	9:30 - 10:30 AM	Keynote speaker: Robert E. Page Jr. "The spirit of the hive: Mechanisms of social evolution" [[(Location		
	11:00 - 11:50 AM	Break with vendors @ Peter Clarke Hall				TBA) Field Exam in	
Rozanski 104	11:00 - 11:45 AM	Presentation of Hambleton Award to Dr. Ernesto Guzman			Apiary		
	11:45 - 1:00 PM	Lunch (EAS Board M	eeting) @ University C	entre Food Court			
		Breakout Session #1	Breakout Session #2	Breakout Session #3	Breakout Session #4	Queen Rearing Workshop	Master Beekeepers
1:00 - 1:30 PM		Rozanski 101	Rozanski 101	Rozanski 101	Rozanski 101	TBA	TBA
		Field studies exam- ining exposure and effects of neonics on bee health <i>Cynthia</i> <i>Scott-Dupree</i>	The legacy of early nutritional stress for honey bee foragers <i>Heather Mattila</i>	Creating for- est-based beekeep- ing corridors <i>Tammy Horn</i>	Antibacterial and antioxidant activity of Canadian honeys: Main components and their mode of action Katrina Brudzynski	Cell starter to cell finisher	Lab Exam (Location TBA) Field Exam in Apiary
	1:30 - 2:00 PM	Health of honey bee reproductives: Effects of parasites and pesticides on drones and queens <i>Geoff Williams</i>	The influence of genetic diversity on foraging productivity <i>Heather Mattila</i>	A year in the life of Headwaters Farm <i>David Mendes</i>	Honey treatment for wounds: Why it is the best <i>Karol Mathews</i>		
	2:00 - 2:30 PM	Honey bee stressor interactions: Nosema and pesticides, from the laboratory to the field <i>Geoff Williams</i>	Essence of royalty: Honey bee queen pheromone <i>Mark Winston</i>	Bee Squad: Helping people help bees <i>Rebecca Masterman</i>	Talk TBA		
	2:30 - 3:00 PM	Break with vendors @ Peter Clarke Hall					
	3:00 - 3:30 PM	Effects of neonicoti- noids and varroa on honey bee health <i>Nuria Morfin</i>	Native pollinators in Ontario agriculture <i>Alana Pindar</i>	Beekeeping in cities Thomas Nolan & <i>Fran Freeman</i>	COLOSS Honey Bee Research Association Geoff Williams		
	3:30 - 4:00 PM	Clothianidin in corn and impact on bee survival, foraging and honey production David MacKay	The Canadian Pollination Intitiative has helped apicul- ture nationally and internationally <i>Peter Kevan</i>	Data Informed Beekeeping Best Management Practices <i>Dennis</i> vanEngelsdorp	Beekeeping devel- opment projects: Why some succeed and far too many fail <i>Gard Otis</i>		
	4:00 - 4:30 PM	Pesticides, para- sites, pollinators: Impacts of environ- mental stressors on bees <i>Nigel Raine</i>	Using managed polli- nators for biological crop protection and enhanced production <i>Peter Kevan</i>	Biosecurity in the bee yard <i>Paul Kozak</i>	Amazing beekeep- ing discoveries at Tel Rehov, Israel: Innovative use of morphometric analyses <i>Gard Otis</i>		
	4:30 - 5:00 PM	A season long study of pesticide exposure in Ontario and Quebec Nadia Tsvetkov	The challenges of reconciling environ- mental stewardship and agriculture <i>Rene Van Acker</i>	Organic beekeeping <i>Julie White</i>	Beekeeping in Bangladesh <i>Phil Craft</i>		
,	5:00 - 7:30 PM	Dinner at local restau	ırants (check sponsori	ng establishments)			
Rozanski 101	7:30 - 9:00 PM	Pollination and Pestic	cides Panel Discussion	1			

2015 EAS GENERAL CONFERENCE - Thursday, AUGUST 13, 2015 (Subject to Change)				
6:30 - 7:30 AM	Yoga for everyone (Location TBA)			
7:00 - 8:00 AM	Breakfast @ University Centre Food Court			
Starts 8:00 AM	Registration (Rozanski Hall)			
BUSES LEAVE AT 9:00 AM	Tech Tour Parker Bee Apiaries, Butterfly Conservatory, and Niagara Falls Lunch on Tour			
7:00 - 9:30 PM	Dinner and Social at John and Alison Van Altens Farm with Live Music Dutchman's Gold and Tuckamore Apiaries			

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2015 E	AS GEN	ERAL CONFERENCE - Fr	iday Aug. 14, 2015 <i>(Subj</i> u	ect to Change)			
6:30 - 7:30 AM		Yoga for everyone (Location TBA)					
7:00 - 8:00 AM		Breakfast @ University Centre Food Court					
Start	s 8:00 AM	Registration (Rozanski Hall)					
Rozanski 101 8:30 - 9:15 AM		Presentation of Student Award and Conference to Andony Melathopoulos					
Rozanski 101 9:15 -	10:00 AM	JO AM Presentation of Roger Morse Award and Conference to Dr. Medhat Nasr					
10:00 -	10:30 AM	Break with vendors @ Peter Cla	rke Hall				
		Breakout Session #1	Breakout Session #2	EAS Society Business			
		Rozanski 102	Rozanski 103	Rozanski 101			
10:30 -	10:45 AM	Impact and control of honey bee viruses current and future approaches <i>Rob Currie</i>	The Honey Bee Health Project: What have we learned so far? <i>Steve Pernal</i>	EAS 2016 New Jersey Preview Jeff Burd			
10:45 -	11:00 AM			Annual EAS Business			
11:00 -	11:30 AM	Responses of bees against mites and viruses Mollah Hamiduzzaman	Fruits, vegetables, and pro- bee-otics: Natural treatments for nosema disease <i>Daniel Borges</i>	Meeting (Starts at 11:45)			
11:	:30 - Noon	The use of genomic tools for honey bee health <i>Brock Harpur</i>	<i>Nosema ceranae:</i> Immigrant but not a newcomer! <i>Pegah Valizadeh</i>				
Noon	- 1:00 PM	Lunch (EAS Life Members Banquet) @ University Centre Food Court					
		Breakout Session #1	Breakout Session #2	Queen Breeding	Master Beekeepers		
		Rozanski 102	Rozanski 103	Yard Location	ТВА		
1:00	- 1:30 PM	Virulence factors from <i>Paenibacillus larvae</i> , the cause of AFB <i>Rod Merril</i>	Breeding for disease resistance: Using proteomic markers <i>Steve Pernal</i>	Yard Session Check Queen Graft Acceptance			
1:30	- 2:00 PM	The immune system of honey bees <i>Paul Goodwin</i>	Marker assisted selection for breeding resistance to varroa <i>Rob Currie</i>				
2:00	- 2:30 PM	Natural immunity and resis- tance of honey bees to nosema disease <i>Pegah Valizadeh</i>	VSH testing in honey bee breeding <i>Pierre Giovenazzo</i>				
2:30	- 3:00 PM	Break @ Peter Clarke Hall					
3:00	- 3:30 PM	Effect of miticides on bee health and behavior <i>Hanan Gashout</i>	Breeding for mite biters, raising and sharing queens <i>Greg Hunt</i>		Master Beekeepers Exam Results		
3:30	- 4:00 PM	Drivers of colony health: Disease, chemicals, and nutri- tionoh, my! Dennis vanEngelsdorp	Breeding for lower defensive behavior <i>Greg Hunt</i>				
4:00	- 4:30 PM	Talk on bee diseases TBA	Queen health: Evaluation of imported and local honey bee stock <i>Patricia Wolf Veiga</i>	Instrumental insemination of queens: Demonstration at Townsend House <i>Krispn Given</i>			
4:30	- 5:00 PM	National honey bee health survey in Canada: First year results <i>Carlos Castillo</i>	Buckfast bee program in Ontario <i>Paul Kelly</i>	Instrumental insemination of queens: Demonstration at Townsend House <i>Krispn Given</i>			
6:00	- 9:30 PM	Banquet @ Creelman Hall					

Regional and Local Bee-Raising Concepts

EAS has been inviting local, state, and regional cooperative queen programs to share their concepts and philosophies—specifically what they tried, what worked, and what didn't work. This issue highlights the Northern Bee Network and the Montgomery County Pennsylvania Local Queen Breeding. If your organization has a story to tell, please forward it to <u>journal@easternapiculture.org</u>.

Local Queen Breeding in Montgomery County, Pennsylvania

Scott Famous and Vincent Aloyo

The Montgomery County Beekeepers Association, located in Southeastern Pennsylvania, has recently initiated a local queen breeding program. Currently, there are not enough queen breeders raising resistant stock locally to provide a consistent supply for all who need them. Our solution is to educate and empower beekeepers to start raising better stock for themselves. Our program's goal is to provide the "knowhow" and quality cells for participants to do exactly that: create resistant colonies that have a fighting chance at survivability, season-in and season-out, in our region of Pennsylvania.

We started our program by breeding from local stock and introducing quality queens from a variety of sources. Queen cells were reared from selected queens for distribution to club members. Participants are taught how to make "proper" queenless splits; care for their cells after pickup, including transport and placement in their new colonies; evaluate the cells for proper hatch or non-hatch; schedule visits for follow-on inspections and determine the success of the new queen's mating efforts or failure; and finally, provide vital feedback for the program. Participants, through ongoing participation in the cell program, take responsibility to provide their apiaries with all the quality queens they require, while improving bees' resistance to varroa-related diseases, productivity, and overwintering ability. By distributing cells to many apiaries, queens mate with local drones, thus enhancing genetic diversity.

Our program realized significant achievement in 2014, with many skills and lessons learned, many great queens reared, valuable data gathered, and a great deal of progress made by both the facilitators and participants. For 2015, we kicked off the new season with instruction and review during our March and April regular club meetings, so that club members are ready to prepare nucs for this year. As an additional incentive for members to participate in our breeding program, we offered low-cost nuc box setups to help offset expenses. Then, we began grafting from the best colonies that survived the winter and exhibited other desirable characteristics. Once again, queen cells will be distributed to club members for introduction into their queenless nucs. Furthermore, in 2015, we plan to expand our cell-making capabilities to meet increased demand and reach out to other bee clubs to share what we've learned, encouraging them to follow suit.

The Northern Bee Network

Meghan Milbrath

Beekeepers in Michigan have taken a different approach to increasing the availability of quality queens. Many states are starting cooperative programs where beekeepers collaborate to raise queens that can survive in their area. In Michigan, we already have many beekeepers who are independently raising queens using their survivor stock. Many of these beekeepers were happy with their stock, had good survival, and had successful systems that they liked. Rather than focus on getting everyone to work together on developing new stock or methods, we needed a way to provide greater access to these already successful queens. The Northern Bee Network, www. northernbeenetwork.org, was designed to provide greater access to locally raised queens, and support for beekeepers looking to raise and sell their own queens and nucs. Initially funded by a kickstarter project and surviving on private donations, the web-based network provides free profiles of local queen producers and locally based beekeeping support.

Beekeepers looking to purchase a locally-raised queen can find someone near them on the map, and read their profile to see the strains and management methods. Many of these beekeepers previously had no web presence, so they are much more accessible to new beekeepers used to finding information on the internet. People selling queens or nucs get free advertising, and can use their profile as a web page (and can even direct the domain name of their choice there) so they can have a web page without having to set one up. Beekeepers contact queen rearers directly, and everyone can set their own prices and figure out the details of the sale independently. Individuals with any queens/nucs to sell (even 1) are encouraged to sign up so that others can have access to local bees.

The Northern Bee Network has other resources for beekeepers—it provides a comprehensive listing and map of bee clubs, listings of local classes and courses, provides contact information for local mentors, provides a forum for a queen/ drone exchange, and coordinates bulk purchases of new queens. The program is expanding from Michigan, with listings in Ohio, Indiana, and Wisconsin, with more to come.

Decontamination of Hive Equipment Using Ozone Fumigation

Les Eccles OBA TTP



Dealing with "dead-out" equipment has become a higher biosecurity risk and increased labour activity since the beekeeping industry has incurred a 34% average winter losses over the past twelve years, last year being the worst for Ontario at 58% winter loss. There are a number of issues when dealing with dead-outs that need to be considered, such as why did the colony collapse, what contamination issues could cause risk when reusing the equipment, proper storage to prevent robbing and exposure to living colonies. There have been a number of methods suggesting how to decontaminate hive equipment from dead-outs before reuse, but few have been tests in a practical or commercial beekeeping scenario.

Ozone (O_3) is a powerful molecule oxidizing treatment that has been used in a number of industries to decontaminate materials and foods from viruses, bacteria, fungus and pests. It is used around the world in major municipalities such as London, Paris, Los Angeles and Montreal in potable water treatment, and is commonly used in Quebec. In the United Kingdom, the use of ozone in cold water laundering has become a national standard especially within the healthcare sector to remove bacteria and viral contaminants from laundered products. In the food processing sector, ozonated water is used for washing fruit, vegetables and poultry to reduce microbial loads, and to fumigate potatoes to prevent spoilage. In some vegetables it can eliminate up to 90% of surface bacteria. Because ozone (O_3) quickly reduces to oxygen (O_2) when it is exhausted into the atmosphere, it does not produce any significant contamination after use. In short; it is food and environmentally safe.

In 2013, US EPA researcher Dr. Rosalind James reported on the use of ozone to decontaminate hive equipment of pesticide residues and honey bee pests and pathogens. She was able to show that treatments as low as 550 ppm of ozone for 48 hour was sufficient to eliminate wax month larva and adults. At 1000 ppm she was able to reduce surface pesticide residues on comb. At 1500 ppm at 25 °C and 50% relative humidity ("RH") chalkbrood could be killed at close to 100% efficacy. Ozone could also effectively kill American foul brood given a high concentration of ozone at 4000 ppm at 90 RH. The results however were conducted in a small laboratory-based pilot ozone chamber where it was relatively easy to reach high concentration levels of ozone and controlled humidity and temperature.

One of the main objectives of the OBA Tech Transfer Program is to encourage the adoption of proven technologies for use in the beekeeping industry. Often promising research results are stalled even after preliminary research has shown benefit, because investment in the technology by industry in necessary to take it to practical field application. Mike Parker from Parker Bee Apiaries ("PBA") approached the OBA Tech Transfer Program with the initiative to construct a commercial sized ozone fumigation chamber to decontaminate dead out equipment before introducing packages of bees into the hives. The OBA Tech Transfer Program was able to use funds available through the Ontario Farm Innovation Program to conduct a controlled study to evaluate the benefit of using ozone fumigation using the system that PBA would invest in. The other critical piece needed to bring this project into reality was a partnership with Simpson Environmental Corp. ("SEC") of Burlington, Ontario. SEC has specialized in ozone technology for use in sanitation since 1959.

Parker Bee Apiaries and Simpson Environmental Corp. worked in consultation with the TTP in the design of an ozone fumigation chamber capable of fumigating up to 900 standard hive boxes with frames originating from dead out colonies in a single treatment phase. This system was build inside a 53′ reefer trailer, using 43′ for the fumigation chamber and 10′ for the control room and ozone generation system.

The objective of the system design used Dr. Rosalind James' work as a baseline was to achieve an exposure level of 4000 ppm ozone over 24hrs at approx 80% RH. Because of the extreme concentration of ozone required to arrive at this target, SEC manufactured the system needed to concentrate oxygen from ambient air and feed it into the ozone generation system to produce sufficient ozone over 24



hrs to reach the desired exposure level. Since ozone is heavier than air, it was applied to the hive equipment via ductwork and released through fume hoods that sat over stacked hive boxes on pallets, in order to drive the ozone down into the stacked hive equipment and onto the surface area of the comb that was to be decontaminated. When the ozone contacts the hive equipment it would then reduce back to oxygen and then recirculated into the ozone generation system, turned back into ozone and reapplied to the hive equipment in a continuous process over the treatment period.

In order to test the efficacy of the ozone treatment, TTP observed two components: Reduction of pesticide residue, and benefit to colony health. In order to determine the efficacy of pesticide reduction, three groups were formed: Dead out boxes given full 24 hr ozone treatment with heat and humidity, dead out boxes given 24h treatment with only heat and humidity, and dead out boxes with no treatment. Wax samples were taken before and after treatment for all groups. These samples were then submitted to the University of Guelph Lab services for quantitative pesticide analysis. This data was used by the TTP to determine if there was a significant reduction in pesticide residue.

The most commonly found pesticides after analysis were tau-fluvalinate (Apistan), coumaphos (checkmite), 2,4-DMA (Amitraz breakdown product), tebufenozide (insecticide), and boscalid (Pristine, fungicide). Ozone significantly reduced the amount of tau-fluvalinate, tebufenozide and to a great extent boscalid. It did not reduce the amount of coumaphos and there were too insignificant amounts of 2,4-DMA to evaluate effect.

It should be noted that there were a number of other pesticides found in individual wax samples but not in enough samples to evaluate the reductive effect of ozone. These pesticides could have an



impact on individual colony health when present and in combination with multiple pesticides found in comb; treating them with ozone has the potential to reduce their impact.

The evaluation of ozone on colony health after introducing packages of bees to the hive equipment showed a significant population build up to pollination with nearly 1.5 frame sides of bees after approx. 1.5 months after package introduction. Although approx. the same amount of brood was found in treatments, it was ozone treated packages that were able to turn the brood into health bees.

There were challenges in achieving the level of ozone application due to the amount of wood from boxes and frames. Wood adsorption of ozone is high; even with the amount of ozone produced to result in 4000 ppm exposure, only a 500-1000 ppm exposure on the wax comb was achieved because the majority was adsorbed by the woodenware. In the next round of testing the design of application and time applied will be adjusted in order to achieve a high exposure to ozone over a longer treatment period and hence increase its overall efficacy.

It should be emphasized that ozone treatment is not a replacement for the best management practice of culling old frames. This is especially evident with pesticides like coumaphos that are so highly contaminative and slow to break down that it is best to cull comb over time to remove the contaminates. Culling comb from dead-out colonies is an opportune time to heavily cull old frames that can be difficult to achieve in live colonies.

The OBA TTP would like to acknowledge Agricultural Adaptation Council's administration of the Ontario Farm Innovation Program that funded the research portion of this project. The scale of this project would not have been achieved without the investment by Parker Bee Apiaries in innovation and providing the opportunity for research that benefits the beekeeping industry as a whole. This is a great example of how the OBA TTP can use resources available with partnering to deliver practical research.

Les Eccles and the Ontario Tech Team are planning a fantastic Short Course for us at EAS 2015 in Guelph, Canada. Special workshops run by the Tech Team will feature Queen Rearing and Integrated Pest Management (IPM).



One of the best uses of my time in the last ten years was building a flat bed wheelbarrow on the chassis of a purchased twowheeled wheelbarrow. I bought the wheelbarrow on sale for \$99 at Canadian Tire. We already had a single-wheeled flatbed wheelbarrow, but it's tippy when loaded. The conversion to a flat bed was pretty simple; anyone with basic carpentry skills could make their own version. Just be sure to make the front rack 90 degrees to the bed and the dimensions to suit bee boxes. I think you'll find it worth the effort and expense to make one for yourself.

We use the wheelbarrow daily in the bee yard, shed, and honey house. It is particularly helpful in our home bee yard where we have 100 hives in several groups. In many cases, using the wheelbarrow is more efficient than using a truck, since we can load it inside the storage shed and deliver the bee escapes, queen excluders, supers etc. directly to each hive. We also use ours as a mobile elevated work station, and to harvest honey from a few colonies when necessary. In a small apiary you can harvest your honey without ever lifting a full super! Just brush the bees off each frame and transfer them to an empty super on the wheelbarrow. It takes very little storage space when parked upright. The

only hitch in using it is to avoid crossing side slopes when loaded. As you can see in the picture heavy loads are no problem.

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Paul Kelly will be providing bees for the EAS Short Course and Conference held at the University of Guelph, August 10-14. If you see Paul, he just might offer to show you the honey house and indoor hive over wintering facility at Townsend House, just on the other side of the Campus Arboretum.



2015 EAS Show Rules & Judging Criteria

The purpose of the EAS competitive shows is to provide a competitive forum directed toward improvement of the products of beekeeping. This policy statement is intended to establish guidelines to clearly define the rules/standards for you to achieve this goal.

As the show is to be a competition, it is fundamental that all exhibitors know in advance the judging criteria for each class and follow the rules herein. The Honey Show Committee is responsible for drafting policies, rules and judging criteria and for disseminating information. Judges will adhere to the Committee's policies and rules. Annually, the committee within the host state will be responsible for:

- 1. Allocating space for the show and arranging entries.
- 2. Compliance with show rules and judging criteria.
- 3. Obtaining qualified judges.
- 4. Cooperating with EAS Treasurer in obtaining awards.
- 5. Accepting entries and opening show at a predetermined, published time.
- 6. Within three weeks following the Show, fill out a yearly comparison sheet and make recommendations for future shows.
- 7. Record all Blue Ribbon winners for the EAS, and other, Journals.

The Honey Show judging criteria are designed to reflect the skill of the exhibitor. Items over which the exhibitor has no direct control will be de-emphasized. For example, natural flavor or color of honey will not affect scoring, but alteration of either color or flavor in handling or preparation of the entry by the beekeeper will adversely affect the score. Likewise, manufacturing defects in glass jars and bottles will not affect scoring, but surface dust, smudges, scratches, chips or other handling alterations on entry containers will adversely affect the score.

Honey Show judges may be professors of apiculture, or students of apiculture under a professor's supervision, blue-ribbon winners of local, state and/or regional honey shows, or Professionals judging in their fields, such as crafts, mead or cooking. Judges must completely fill out a score card for each entry. If an entry is disqualified the reason for disqualification must be stated on the score card.

Judges should make comments on score cards in order to help the exhibitor improve. The score cards and entries are the property of the exhibitor. Judges must break all ties.

General Show Rules

- All exhibitors MUST BE current dues-paying members of the Eastern Apicultural Society. If NOT registered for the current conference, proof of current paid dues status must be submitted at the time of making entries.
- Only one entry in each class may be made by an individual or that individual's family, or that individual's apiary.

- 3. At the time of entering, the stewards will place a small label, with the exhibitor's number and class, inconspicuously on the entry. The purpose of these small randomly numbered labels is to keep track of entries in a book in case of ownership disputes.
- 4. Separate section or class rules will apply.
- 5. Identifying labels on the entries are forbidden. In Arts & Crafts & Gift Arrangements classes, if the exhibitor's name and/or apiary are an integral part of the entry, names are permitted.
- 6. The exhibitor must choose which classes to place entries in. Judges may adjust classes at their discretion.
- 7. Entries can only be made during the hours published.
- 8. Entries must be left intact and on display until released by the Show Superintendent.
- 9. No commercial products or displays are permitted.
- 10. No EAS entry can be submitted again for three years.
- 11. The decision of the judges in all cases will be final.
- 12. Entries will not be accepted by mail.
- 13. The Show Superintendent has the authority to accept, reject and classify entries in accordance with the show policies, rules and judging criteria.
- 14. Any exhibitor wishing to protest must do so to the Show Superintendent within one hour of the public opening of the show.
- 15. EAS assumes no liability for loss or damage of entries. Although EAS will exercise all due care in judging and displaying entries exhibitors enter items at their own risk.
- 16. Entries not claimed by the end of the conference will be disposed of by the Show Superintendent.

Honey Show Class Descriptions

Extracted Honey

- H1* Three 1-Ib jars of honey, extracted, light
- H2* Three 1-lb jars of honey, extracted, amber
- H3* Three, 1-Ib jars of honey, extracted, dark
- H4* Three 1-lb jars of creamed honey

Comb Honey

- H5 Three section boxes of comb honey
- H6 Three packages of cut-comb honey, 4" square
- H7 Three circular sections of comb honey
- H8 Three 16-oz jars of chunk honey
- H9 One frame of comb honey, any size, wooden or plastic

Black Jar One opaque glass jar containing any color of honey. Exhibitor will provide their own opaque container.

 Entries in classes H1-H3 marked *, must be in queenline type jars, and may have plain metal or plastic lids. Canadian and International exhibitors may enter Classes H1-H3 with 500 gram universal jars; Classes H4 and H8 with 500 gm barrel-type jars.

2015 EAS Show Rules & Judging Criteria, continued

- 2. Entries in class H9 must be displayed in bee-proof cases having the front and back sides made of transparent glass or plastic. All six sides of the frame of honey must be visible to the judges.
- Entries in classes H5, H6 and H7 must be in the appropriate container: window cartons; round section lids – both sides transparent; cut-comb box – all sides transparent.
- 4. Entries in classes H4 and H8 should be in cylindrical jars.
- 5. Honey color classes H1-H3 will be determined by the Show Chairman. An official honey color grader may be used to make the final decision.
- 6. All entries must be the product of the exhibitor's apiary and have been produced since the previous EAS Honey Show.

Judging Criteria

Extracted Honey

Classes H1 to H3, MAX. POINTS

- Density 20 (water content above 18.6% & below 15.5% will be disqualified)
- 2. Absence of crystals 7
- Cleanliness 30 total (Without lint 7; without dirt 10; without wax – 7; without foam - 6)
- 4. Flavor 8 (Points will be reduced ONLY for honey flavor adversely effected by processing)
- 5. Color 5
- 6. Container appearance 10
- Accuracy/Uniformity of filling 20 (Headroom: ½ inch maximum, 3/8 inch minimum with no gap between honey level and cap)

Creamed Honey

Class H4, MAX. POINTS

- 1. Fineness of crystals 30
- 2. Uniformity & firmness of product 25
- 3. Cleanliness & freedom from foam 20
- 4. Flavor 15 (Points will be reduced for honey flavor adversely affected by processing). (Disqualified for fermentation)
- 5. Accuracy of filling and uniformity 10

Comb Honey

Classes H5, H6, MAX. POINTS

- 1. Uniformity of appearance 20
- 2. Absence of uncapped cells 10
- 3. Uniformity of color 15
- 4. Absence of watery cappings 10
- 5. Cleanliness and absence of travel stains 15
- 6. Freedom from granulation and pollen 10
- 7. Uniform weight of each section 10
- 8. Total weight of entry 10

Cut Comb Honey

Class H7, MAX. POINTS

- 1. Neatness and uniformity of cut, absence of liquid honey 20
- 2. Absence of watery cappings, uncapped cells and pollen 20

- 3. Cleanliness of product, absence of travel stains, crushed wax 20
- 4. Uniformity of appearance 15 (color of honey, capping structure, thickness of comb; lack of crystallization)
- 5. Uniformity of weight 10

Chunk Honey

Class H8, MAX. POINTS

- Neatness and uniformity of cut 20 (Upgrade for parallel & 4-sided cuts; downgrade for ragged edges)
- 2. Absence of watery cappings, uncapped cells and pollen 20
- 3. Cleanliness of product 20 (Down-grade for travel stains, foreign matter, wax, foam or crystallization)
- 4. Uniformity of appearance in capping structure, color, thickness of chunks and accuracy and uniformity of fill 20
- 5. Density and flavor of liquid portion of pack 20

(Entries will be disqualified for fermentation or moisture content of liquid portion above 18.6% & below 15.5%)

Frame of Honey

Class H9 , MAX. POINTS

- 1. Uniformity of appearance 25
- 2. Absence of uncapped cells 20
- 3. Uniformity of color 15
- 4. Absence of watery cappings 10
- 5. Cleanliness and absence of travel stains 20
- 6. Freedom from granulation and pollen 10

Black Jar of Honey

To be judged solely on the merits of its taste.

Beeswax Show

Class Descriptions

- B1 Single piece, pure beeswax, 2 lbs or more
- B2 Candles, dipped tapers, one pair, pure beeswax
- B3 Candles, molded tapers, one pair, pure beeswax
- B4 Candles, novelty, single or coordinated set, containing beeswax
- 1. Entries in Class B1 must be covered with clean, transparent plastic film.
- 2. The optimum color for pure beeswax in Classes B1-B3 is light canary to straw yellow.

Judging Criteria

Class B1, MAX. POINTS

- 1. Cleanliness 35
- 2. Uniformity of appearance 20
- 3. Color 15
- 4. Aroma 15
- 5. Absence of cracks & shrinkage 15

Classes B2-3, MAX. POINTS

- 1. Cleanliness, color, quality of wax 25
- 2. Uniformity of appearance and shape 25
- 3. Uniformity of pair 25
- 4. Finishing details: 25
 - a. For molded: flat, finished bottom, wicks trimmed to $\ensuremath{\mathscr{V}}''$

2015 EAS Show Rules & Judging Criteria, continued

- 30
- b. For dipped: last drip left on, wicks left joined

Class B4, MAX. POINTS

- 1. Cleanliness & quality of wax 25
- 2. Design & overall appearance 25
- 3. Finishing details wick trimmed to ½, flat, finished bottom 25
- 4. Originality 25

Mead & Honey Beer Show

Class Descriptions

- M1 Mead, dry, one bottle
- M2 Mead, sweet, one bottle
- M3 Mead made with fruit juices [Melomel, Cyser or Pyment], one bottle
- M4 Mead, sparkling, made with or without fruit juices, one bottle
- HB1 Honey Beer; light-to-medium bodied ale or lager using honey as15-30% of fermentables.
- HB2 Braggot; Medium-to-strong ale using honey as 35-65% of fermentables
- All wines/beers should have been made by the exhibitor by the process of fermentation. In classes 3 and 4 the type(s) of fruit used must be included on a 3" x 5" card to accompany each entry. The card must have the exhibitor's number on it.
- Still wines should be exhibited in clear (not frosted), colorless (not tinted), wine bottles of approximately 750 ml or 25.4 fluid ounce capacity. Beers should be exhibited in plain, unmarked, brown glass, 12 ounce, capped beer bottles. Sparkling wines must be exhibited in champagne-type bottles such as the domestic (U.S.) Champagne bottle.
- Natural cork stoppers are preferred for mead entries but screw top wine bottles or plastic corks may be used in classes 1-3. Corks may be straight cork or flanged and machine or hand-applied. Straight corks should be seated an eighth of an inch below the top of the bottle.
- 4. Entries must not have any identifying labels on the bottles.
- 5. Wine bottles should be filled so that when the cork is pushed right home, the air space is between ¾" & 1" in depth. Sparkling wines should have an air space of 1" to 1-1/4". Beer bottles should be filled so the air space is between ½" and ¾" below the cap.

Judging Criteria

	Still Meads	Sparkling Meads	Honey Beer	Braggot
clarity, color	10	10	10	10
flavor, balance, body	50	40	40	40
bouquet/aroma	20	20	20	20
bottle	10	10	10	10
bottle closure/cork	10	10	10	10
carbonation	_	10	10	10

Arts And Craft Show

Class Descriptions

- A1 Gift Arrangement
- A2 Sewing or needlework items
- A3 Novelty beeswax with additives permitted
- A4 Misc. arts and crafts
- 1. All items must have a beekeeping theme.
- 2. Exhibitor must submit estimate of time to make item.
- 3. Small changes to commercial items or copies of commercial items may be downgraded.

Judging Criteria

Class A1, MAX. POINTS

- 1. General appearance 30
- 2. Originality 30
- 3. Quality of honey & products 25
- 4. Variety of products 15

Classes A2-4, MAX. POINTS

- 1. Artistic Merit 25
- 2. Originality 25
- 3. Skill involved 25
- 4. Design 25

GADGET SHOW

Class Descriptions

G1 Large devices (honey extractors, wax equipment, etc.) G2 Small devices

All entries must be accompanied by a typed or written explanation. This is to be used by the judges in scoring.

Judging Criteria

Classes G1 & G2, MAX. POINTS

- 1. Explanatory text 25
- 2. Practicality 35
- 3. Ease of reproduction 15
- 4. Help to beekeeping 10
- 5. Originality 15

Honey Cookery Show

Class Descriptions

- C1 Cookies, Bars, or Brownies: 1 dozen, no frosting or decoration
- C2 Yeast Bread (1 loaf) or Yeast Rolls (1 dozen)

C3 Cake (1) or Muffins (12): no frosting or decoration

- C4 Candy: 1/2 lb. or 12 pieces
- 1. At least 25% of sweetening agent must be honey.
- Entries must be accompanied by the recipe as used, printed on 3"x5" cards in duplicate, without the name of the exhibitor.
- 3. EAS reserves the right to publish the recipes.
- 4. Entries must be presented on plain paper or foam plates, in dome top cake carriers, or on cardboard covered with foil. Plates and covers will not be furnished by the Show Committee.
- 5. Enter all cakes, breads, rolls and muffins un-sliced.

2015 EAS Show Rules & Judging Criteria, continued

Judging Criteria

Classes C1-C3, MAX POINTS General Appearance 20 Flavor 35 Texture, grain, moisture, uniformity of color 30 Liahtness 15 Class C4, MAX POINTS Attractive appearance 20 Flavor 35 Texture 25 Handling guality in serving 20

Photography Show

Class Descriptions

- P1 Close-up/macro print; Subject must relate to beekeeping
- P2 Scenic, print; Apiary subject such as flowers, hives, etc.
- P3 Portrait, print; Person or beekeeping procedure in appropriate setting
- P4 Essay, prints; A set of from 4 to 7 pictures depicting a beekeeping story.
- 1. The photo contest is open to all amateur photographers.
- 2. Prints must be 5" x 7" inches or larger, mounted on a mounting board that extends at least one inch beyond the print on each side. No frames are permitted. Essay prints may be mounted on one mounting board.
- 3. Prints may be black & white or colored.
- 4. Photographs can be entered only once in any EAS show
- 5. Each photograph, including the Essay as a set, must be accompanied by a 3" x 5" card giving: photo title, entrant's name, address, city, state, zip or postal code, and telephone. The card must state the class entered.
- 6. Brief captions must accompany the Essay photographs. The order of Essay photographs must be indicated clearly.
- 7. Winners must agree to have their photos published by EAS in any/all appropriate publications.

Judging Criteria

Classes P1-P4, MAX. POINTS

- 1. Composition 35
- 2. Treatment of subject matter 35
- 3. Quality and presentation 30

To Stimulate Competition:

In order to encourage more people to participate in the EAS Honey Show, the Honey Show Committee is pleased to give the following awards. Each will receive an engraved silver plate

Extracted Honey Comb Honey Mead and Honey Beer. Arts and Crafts Gadgets Beeswax **Honey Cookery** Photography **Black Jar**

Sweepstakes Award

The Sweepstakes Award will be given to the entrant who amasses the most total points in the show. More entries... more possible points! Here is the point system that will be used:

Prize Ribbon Points

1st Blue 10 2nd Red 6 3rd White 4 4th Yellow 3 5th Green 2 6th Pink 1

Best of Show

An engraved silver bowl given to a blue ribbon class winning entry deemed by the judges to be the best entry in the EAS Competitive Show.

Additional Awards

- The Gamber Award: If you use a Gamber Classic jar when entering the liquid honey categories and win 1st place you'll receive a \$100 Gamber Container gift certificate, if you win 2nd place you'll receive a \$50 Gamber Container gift certificate.
- Auction: To help defray the cost of the EAS Competitive Show, the Honey Show Committee would like to include blue ribbon honey in the Thursday night auction. Blue ribbon winners in the Honey Show are asked to donate one jar or comb of their winning entry to the auction. Blue ribbon winners in the other shows may donate their entry if they so desire.

EAS Executive Committee

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Newfoundland

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EAS Membership and Life Member Dues Payment/Address Correction Form

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