

# The Bee Line

Newsletter of the Maine State Beekeepers Association | [mainebeekeepers.org](http://mainebeekeepers.org)

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## 2021/2022 Maine Honey Bee Survey Results

by Jennifer Lund

### Demographics

329 respondents, representing 2,129 hives. Most (97.9%) identified as backyard/hobby beekeepers (<30 hives) and 94.2% have their apiaries registered with the state of Maine. Most (70.2%) are also members of a beekeeping organization (MSBA, local MSBA chapters, EAS). The average number of years of beekeeping experience was 8.9 years (range 1-68).

Years Beekeeping	N
1 to 3	114
4 to 6	101
7 to 9	24
10 to 20	53
21 to 30	14
31 to 40	14
41+	7

Table 1:  
Beekeeping  
Experience

### Practices

Participants started colonies by splitting already existing hives (41.0%), buying packages (39.5%), and/or nucs (34.0%). 15.5% reported collecting swarms to start new colonies.

Most beekeepers (76.0%) provided supplemental food to their hives during the 2021/2022 beekeeping season. About a third (35.0%) used sugar syrup to boost food stores and encourage comb building. 62.9% of beekeepers used either fondant, candy boards or dry sugar for supplemental winter feeding. About a quarter of respondents (25.2%) reported using pollen

patties or pollen substitute. Almost 23% of respondents use Honey Bee Healthy, Hive Alive or essential oils as feeding stimulants and 1.8% report using probiotic supplements in their hives.

Less than 1% of respondents rented hives for pollination of agricultural. The 388 participants reported harvesting approximately 26,611 pounds of honey (average 81.9 pounds per beekeeper, 13.7 pounds per hive). Participants reported approximately 33,845 (average 86.1 pounds per beekeeper, 14.6 pounds per hive) harvested in the 2020/2021 survey and 59,840 pounds of honey harvested (average 191.8 pounds per beekeeper, 31.9 pounds per hive) in the 2019/2020 survey.

### Hive losses

State wide hive loss was 33.7% between April 2021 and April 2022 (summer: 5.7%, winter: 28.0%). This was 10.2% lower than the previous season where respondents reported a 43.9% loss (summer: 9.2%, winter: 34.7%) between April 2020 and April 2021.

The most commonly reported causes of summer loss were queen loss/failure (11.2%), varroa mites/viruses (4.6%), unknown (4.6%), environmental factors (4.0%), and robbing (2.4%). Two hundred fifty-one (76.3%) respondents reported no summer losses.

The most commonly reported causes of winter loss were varroa mites/viruses (19.5%), starvation (18.2%), environmental factors (17.0%), unknown (16.1%), and queen loss/failure (12.5%). One hundred twenty-one (36.8%) respondents reported no winter losses.

Table 2: Average losses by county from April 2021-April 2022

County	N	Summer Loss (%)	Winter Loss (%)	Total Loss (%)
Androscoggin	14	4.0	17.6	21.6
Aroostook	3	10.0	15.0	25.0
Cumberland	87	8.6	28.5	37.1
Franklin	6	11.1	38.9	50.0
Hancock	17	1.2	20.5	21.8
Kennebec	27	6.7	26.0	32.7
Knox	16	1.4	34.2	35.6
Lincoln	28	3.6	23.7	27.2
Oxford	11	1.8	56.4	58.2
Penobscot	23	10.1	38.5	48.6
Piscataquis	1	0.0	50.0	50.0
Sagadahoc	17	6.2	14.8	21.0
Somerset	16	4.5	23.2	27.7
Waldo	16	13.3	56.6	69.9
Washington	3	16.7	16.7	33.3
York	41	6.7	32.6	39.3

### Pest and Diseases

Varroa mites/ viruses: Over eighty percent (81.2%) of respondents monitored for Varroa mites. Of those that monitor for mites, 67.0% did so using alcohol rolls, 49.2% using a sticky board, 24.2% using visual survey and 14.8% using drone brood survey. Many beekeepers (45.1%) that report monitoring for varroa using more than one method.

Beekeepers report using screen bottom boards (19.8%), brood disruption (7.9%) and drone brood removal (3.3%) as part of their varroa mite management strategy. The most common miticides used were Formic Pro (formic acid, 46.5%), Apiboxal vaporization (oxalic acid, 38.3%), Apivar (amitraz, 18.8%) and Apiguard (thymol, 16.7%). Thirty-nine beekeepers (11.9%) reported no varroa mite management.

Other Pests/Diseases: Most respondents (95.4%) report using no treatments, 4.3% used Fumadil-B and 0.3% used Terramycin.

## MSBA Board

Upcoming Board Meeting: Nov 17 (7-9 pm)

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## President's Message



You would think that the longer you keep honey bees the easier it should get. Right? It's true that you're better able to make good decisions based on experience, like which mite treatment to use when, or how to lessen the chances of swarming. But even the most seasoned beekeepers will lose colonies over winter or witness a vast cloud of bees leaving their hive at some point. The more time you spend with bees the more accomplished you'll get but that's not always enough. Many of us believe we can manipulate them to do what we want, but in reality we need to observe and understand what they are trying to do and then figure out how to support them in their

efforts. Without the knowledge that comes from continued learning about bee behavior and biology – information which often changes as a result of scientific research – we will not be fully prepared to deal with all aspects of beekeeping.

Beginner bee school is important but the learning shouldn't stop there. Webinars produced by educational organizations can greatly expand our knowledge base, and in-person speakers at club meetings are an excellent resource. Attending MSBA's all day Annual Meeting coming up in Augusta on Saturday, October 15th will provide an opportunity to learn from some of the leading lights in the national beekeeping community. Details can be found under the Education page menu on the website. A note about the price: the registration fee is \$35\* (after October 5th it goes up to \$45). MSBA does not profit from that number; it simply covers the cost of food, venue and speakers' fees. The "raffle auction" (you buy tickets and use them to bid on items) is the



Photo courtesy of SCBA

fundraising portion of the event, with proceeds used to fund MSBA's operating expenses. \*If you aren't a member of MSBA, an additional \$15 membership dues must be paid unless you come as a current member's guest.

I'd like to thank all of you for being members of MSBA. For the first time membership has topped 1,000 people, and we hope everyone is finding our newsletters and webinars helpful in becoming better beekeepers.

*Judith Stanton*

### Ten Reasons To Attend The 2022 MSBA Annual Meeting

1. Nationally recognized and well-respected speakers will be presenting
2. After a long hiatus without in-person events, this will be a GREAT OPPORTUNITY to reconnect!
3. Volunteers wearing painter's aprons will sell raffle tickets for oodles of goodies
4. Vendors will be onsite to sell items and have them delivered without shipping cost
5. Jennifer Lund will be giving the State of the State address highlighting trends and observations
6. You will have time to sit, eat and talk bees
7. Blind honey tasting contests are such fun! Enter a small bottle of your honey and taste others'
8. Celebrate those who have been nominated for beekeeper awards
9. It is a premier in-state educational event to enhance your knowledge and awareness as a beekeeper
10. We are over 1000 members strong!





## 2022 EAS Conference

by Janet Anker

The Eastern Apicultural Society (EAS) is a non-profit organization whose members are beekeepers from US states and Canadian provinces on the eastern seaboard. Its mission is the education of beekeepers, promotion of bee culture and bee research, and certification of Master Beekeepers.

EAS's flagship event is a week-long Short Course and Conference that takes place every summer. The week is packed with lectures, hands-on workshops, vendor displays, short courses for beginning and advanced beekeepers, and examinations for those who wish to become EAS Master Beekeepers. There is lots to learn here, no matter how many or few years you have been keeping bees.

This year Ithaca College in Ithaca, NY was the setting for the EAS Short Course and Conference. The Short Course had tracks for Microscopy, Beginning and Intermediate Beekeeping, and the Business of Beekeeping. The Microscopy class especially got rave reviews this year, as attendees were able to use the facilities at Cornell University.

The Conference featured sought-after keynote speakers such as Dr. Tom Seeley, who spoke about behavioral wonders of worker bees, Dr. David Tarpy, who shared milestones in beekeeping and Michael Palmer, who spoke about brood factories. There are tracks in the conference as well. This year's included Train the Trainer, Apitherapy, Hive Product Basics, News from the Lab, Bee Skills and so on. We had the opportunity to learn about the latest research in varroa treatments, bee-lining, historic beekeeping, mead-making, "weird" swarm control, pollen substitutes,

polyethism, how diseases are transmitted among bees, single deep management, candle-making...it's always hard to pick and choose among the many offerings! The on-site apiary provided hands-on demos of queen marking, brood disease identification, how to determine if a colony is queen-right, assessing hive traits for breeding selection, and general Q&A sessions.

The week was not all serious study though. One of the highlights was the annual Honey Show where you can enter your perfect jars of honey, your most imaginative beeswax creation, your best bee gear invention or your perfect bee photos. One of the wax entries made me laugh out loud – somebody sacrificed a smoker to be a mold for their wax sculpture. (I couldn't figure out how they got it out of the smoker though). The Honey Show competition is fierce, and the judging is strict, so if you win a prize, you've done great.



Janet Anker, Lindy Allen and Jane Baxter  
Photo courtesy of Jane Baxter

The EAS conference is a good place to get supplies from your favorite vendors. Order ahead to get what you need and skip the shipping costs. There are smaller, and local vendors in attendance also so you can find some unusual tools and get into some nerdy beekeeping conversations with people from another locale.

Another tradition is for a nearby beekeeping business to host an evening BBQ and tour.

This year Kutik's Everything Bees in Oxford, NY pulled out all the stops – they gave tours of their queen-rearing operation, showed off their octagonal observation hive, and provided fireworks to top off the evening.



View of Kutik observation hive from outside  
Photo courtesy of Lindsey Moroch

There were all sorts of non-bee activities too, such as morning yoga, field trips to the Cornell Botanical Gardens, maps and directions to the many waterfalls and swimming holes for which Ithaca is famous. One evening local beekeepers hosted interested attendees at their favorite restaurants. It was a great way to meet beekeepers from other parts of the continent. The daily silent auctions and the Thursday night live auction were opportunities to pick up a rare bee book, a unique handmade item, or a beautifully hand-painted hive.

Is your appetite whetted to go to an EAS Conference yet? Only 10 months to go 'til the next one! It takes place July 31 – Aug 4, 2023, in Amherst, MA. The Massachusetts team was originally going to host EAS in 2021, so they've been planning for a long time. It's going to be a terrific Conference. Keep an antenna out for registration information in May.



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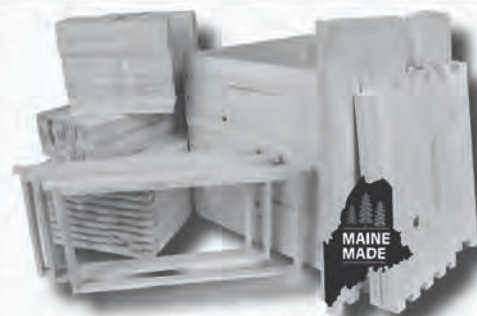


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## Potpourri of EAS Experiences



-During my first year of beekeeping in 2021, I was constantly inundated with new information. Everything was a learning experience and my only goal was to keep my bees alive and to successfully overwinter my two small hives. Mission accomplished.

So, as the spring rolled around my mentor, who is a strong advocate for EAS, suggested I think about attending. Now a second year beekeeper, I sensed there was much that I could gain from attending the 2022 EAS program, so I registered. My overall goal for attending the EAS short course was to simply soak it all in. I wanted to confirm my understanding of what I already knew about beekeeping, deepen my knowledge in areas where I am beginning to feel comfortable, and start to learn about other aspects of beekeeping that I have not yet experienced. Did I accomplish my goals for attendance at EAS 2022? The answer is a resounding yes!

I've learned that there is a deep wealth of knowledge in the beekeeping community. I mainly went to lectures from the intermediate track and they were all relevant to aspects of beekeeping that I am experiencing in my small apiary of six hives. Just a sampling of some of the information that I learned:

- Various techniques for splitting your hives
- Different swarm prevention methods that beekeepers use
- Backyard queen rearing methods and how you can modify an old refrigerator as a tool for the process
- Alternative hive forms that are used throughout the world
- How to make soap using beeswax and honey

-What precision beekeeping is and how to utilize it to minimize resource consumption and maximize productivity

But most importantly I learned that beekeepers are a very friendly crowd who are willing to share their knowledge with others. I had some really meaningful conversations with complete strangers while in the airport, waiting between sessions, and over meals with new friends. There is an unending opportunity to deepen your craft whether you have kept bees for two years or twenty years.

Ten out of ten - recommend!

Robin Sawyer

Listed below is a compendium of random items that Maine beekeepers gleaned from the EAS presentations. There are all sorts of things to learn at EAS!

-Using bricks on top of the hives. If the hive is queenless, lay the brick vertically. If the hive is queenright, lay the brick horizontally. By a quick scan, you can see which hives need more attention the next time you visit.

-How to light a smoker! Keep puffing and packing it with fuel until it is full. It will stay lit with minimal further puffing.

-The new tests for very hygienic bees and progress towards more mite resistance bees and behaviors was very exciting and promising.

-Looking at bees under a microscope, especially the differences between the workers and queen anatomy, was very cool.

-To stop a swarm from taking off, spray it with cool water.

-Enjoyed the interesting tour of Kutik's



View of Kutik observation hive from the inside  
Photo courtesy of Lindsey Moroch

-The best thing was the fabulous microscopy class. Not only did I learn a great deal, I also got to work with the very knowledgeable and personable Dr. Debra Delaney.

-The thing that I learned at EAS that has stuck with me most is the carbon dioxide regulation that Dr. Tom Seeley talked about. I am amazed that the bees can tolerate so much higher levels of CO<sub>2</sub> than we as humans can do and also that they regulate it even when it is difficult for them to maintain temperature in the hive as a result of the regulation.

-Learned how to graft larvae for queen-rearing

My first experience at EAS was one which revealed a community of people who are friendly, fun loving as well as highly intelligent. People from all levels are just bursting to share all of what they know about beekeeping...and then some! The best times I found were at breakfast when you could listen to the chatter of what everyone learned or had seen the previous day—sharing insights including fun, yummy places to dine locally. There are also a lot of really interesting and intelligent State Apiary inspectors out there! Some came all the way from Texas to attend! Of course, the state of Maine would have the funniest and best stories for sure!

-The absolute highlight of my three short days at EAS was the queen rearing course. It was well structured, with true cutting edge experts and researchers in queen rearing studies. The networking was a blast. I'm very pleased as I gained hands-on experience with scientists, and developed connections and resources from across the eastern seaboard.

Lastly, I learned an obscure fact (at least to me) that forager honey bees can sometimes get stuck on common milkweed and as a result perish from starvation! Who knew!

*Continued on page 7*

Continued from page 6

### Potpourri of EAS Experiences...

Here is a sneak peek at Dr. Tom Seeley's next book, which is about the wonders of worker bees. For fascinating details about these, and many other wonders, keep an eye out for the book and/or come to the MSBA Annual Meeting in October to hear from Dr. Seeley in person.

#### *Avoiding asphyxiation*

Worker antennae have CO2 sensors. When the CO2 level exceeds 2% they ventilate the hive. The only other insect with CO2 sensors is the mosquito, which they use to find us!

#### *Sizing up a home site*

Bees enter, walk around, go out, go back in, repeat this with ever enlarging circuits inside. They judge the size by walking the property, not by sight.

#### *Piping Hot Bees*

A bee needs to warm her thorax to 95F to be able to fly with a swarm. When they've chosen a site, scouts "worker pipe". This stimulates warm-up activity. The piping sound is produced by contracting both sets of flight muscles.

#### *Messenger bees*

In an observation hive with marked young bees, those that contacted the queen walked excitedly and widely around the brood nest. (He traced their path on the glass wall of the hive.) Those that did not contact the queen did not walk all around the brood nest.

#### *Movers and shakers*

Shaking bees grab another bee (anywhere) and shake up and down for 1-2 seconds. Shaking is considered a signal to prepare for activity. Shaking of queens before swarming and virgins before mating flights increase dramatically. The first foragers out in the morning will first shake other workers and only later do waggle dances.

## Notes from a New Beek: Second Deep Tilting Platform

by Dick Vermeulen

After completing bee school I received my first beautiful nuc on May 7th of this year. Sixty pounds of sugar was fed out to them as they inhabited a reasonably good looking home. I was very excited to see if I could be a beekeeper and lend a hand instead of get in their way. The first 10 frame deep ran out of room on June 2nd and I added the second deep. My queen was laying well and the population was expanding nicely. When I lifted my second deep off my one and only hive the last week of June something had definitely changed. At bee school Lincoln showed us a two level hive stand so you can tilt the second deep on to a platform and avoid lifting the box. I didn't need that! How heavy can it be...50 pounds? I am not that weak. I can lift it – no problem. Well you know I did lift it, I had to put it someplace, so down it went on top of my inner and outer covers already on the ground. That was pretty easy going down and not killing any bees. Putting the hive back together I now have to bend over and lift the 50 pound box up into place and not crush any bees! Did the box get heavier sitting on ground? OK, maybe that two level hive stand is not such a bad idea after all!

Seasoned beekeepers know frames run front to back – so if you place the tilting platform on the side of the hive and tilt the box in that direction – all the frames will mush together and you are going to kill some bees and get a head bump or two. Being a newbeek I didn't realize that until after I built my platform, installed it on my hive stand and opened the hive. I was able to twist the second deep around 90 degrees until I could set it down on the platform and have the frames hang vertically. The bees

were happy I didn't kill any – this time. But I thought a redesign could result in a better solution that only required the box to be tilted, land squarely and have the frames hang correctly.

My new idea for the platform places it on the front of the hive. I can pry the back end of the second deep apart and rotate it forward on to the platform and be done. By rotating on the front edge of the box, I lift half the weight. Easy to scooch it forward 6" to give more room to inspect the bottom deep without bumping into bees on the bottoms of the frames in the tilted box. Perfect.



Well maybe not! If I had remembered anything from my physics courses I should have known that when you place a 50 pound load out on an unsupported beam solidly connected to the bottom box, that simply rests on the hive stand it rotates. As I was setting the second deep down on this newly designed platform the back end of the bottom box began to lift and the whole colony started to fall forward. I caught it in time and pushed it back. That would have caused more than a one or two head bump disaster. This better idea will shortly be going into my kindling pile.

I have come to the conclusion that moving some heavy boxes around is part of the beekeeper's craft. I need to learn how to do it efficiently and minimize the amount of bending over. Back to my first platform design and dusting off the Bowflex and bicycle trainer. Yep, not that strong. If you ask the bees what I am doing, I am sure you would get some interesting answers. I think they might ask me to just build blue bird houses and leave them bee.

Save  
the  
Date

# October 15, 2022

9 am - 5 pm (registration begins at 8 am)

## MAINE STATE BEEKEEPERS ASSOCIATION ANNUAL MEETING

University of Maine at Augusta  
46 University Drive, Augusta, ME

Sponsored by Kennebec Beekeepers Association

**Dr. Lewis Bartlett**

**Dr. Thomas Seeley**

**Jennifer Lund, Maine State Apiarist**

### MSBA Annual Meeting Program

- 7:00 - 8:00 Vendor set up
- 8:00 - 8:50 Registration/Coffee/Vendors/Raffle ticket sales
- 8:50 - 9:00 Welcome by MSBA President, Judith Stanton
- 9:00 - 10:30 **Dr. Lewis Bartlett:** "How do bees wash their hands? Hydrogen Peroxide in the hive." Bees work very hard

to try and keep their hive clean and disease free, especially when it comes to protecting their precious and vulnerable larvae. In this lecture, we'll cover some of the unique biology honey bees have that helps them protect against bugs both small and big, and new research updates from my lab group on how honey works so well as an antimicrobial.

- 10:30 - 10:45 Break

10:45 - 11:30 **Dr. Thomas Seeley:** "Behavioral Wonders of Honey Bees." Four to five short stories about honey bee behavior will be shared based on a chapter from a book which has been submitted for publication titled *Bee Works: Solving 20 Mysteries of Honey Bee Behavior*.

- 11:30 - 12:00 Business Meeting

- 12:00 - 1:15 Lunch

- 1:15 - 1:45 **Jennifer Lund:** State of the State address

- 1:45 - 2:00 Break; Last raffle ticket sales

2:00 - 3:30 **Dr. Lewis Bartlett:** "Managing parasites in the hive: old techniques and new frontiers." New studies on how best to beat parasites in the colony are coming out every year – what basic principles can we always rely on, what works where and what doesn't, and what new efforts are on the horizon? We'll focus on new updates about organic and synthetic Varroa control, EPA labels, oxalic acid, and small hive beetles

- 3:30 - 5:00 Honey Tasting awards, raffle and close

**Dr. Thomas Dyer Seeley** is the Horace White Professor in Biology in the Department of Neurobiology and Behavior at Cornell University. He is the author of several books on honey bee behavior, including *Honeybee Democracy* and *The Wisdom of the Hive: The Social Physiology of Honeybee Colonies*. He was the recipient of the Humboldt Prize in Biology in 2001 and currently resides in Maine.



**Dr. Lewis Bartlett** is a faculty research scientist at the University of Georgia between the departments of Entomology and Ecology. He works on infectious disease and parasite control alongside honey bee biology and health. He has worked with and kept bees for over ten years across the UK, California, and Georgia. Some of his recent research includes the effect of pesticide exposure on bee health, new parasite controls, crowding of honey bees, and the mechanisms bees use to keep themselves clean.



Maine State Apiarist and Bee Inspector **Jennifer Lund** will present "State of the State" in which she will share what she has observed in her hive inspections throughout Maine over the past year and also discuss the beekeeper survey results. Jen earned a master's degree in Entomology from the University of Maine, where she was a research technician before becoming the State Apiarist. She has almost 20 years of entomological experience.





## SLATE OF BOARD CANDIDATES



*President:*  
*Judith Stanton*

Judith is currently president of MSBA, serving previously on the board as vice president, at large director and chapter representative, as well as secretary and VP for Sagadahoc County Beekeepers. She has been keeping bees for 16 years and sells honey through local shops. An active mentor and troubleshooter to other Harpswell beekeepers, she also does frequent honey bee programs for children in schools and summer camps. Judith is retired from a career in advertising and graphic design, and serves on the board of Harpswell Community Garden.



*Vice President:*  
*Jane Dunstan*

Jane is currently MSBA vice president and editor of The Bee Line newsletter. She became intrigued with honey bees 15 years ago during a renovation project in her 1778 farmhouse. In addition to keeping 33 colonies, making soap, and cosmetics, Jane has mentored many new beekeepers. When not caring for her remaining 5 geriatric llamas, 5 cats, and 45 chickens, she works as an emergency room nurse. Jane is the director of Knox-Lincoln County Beekeepers Bee School, teaching beginner and intermediate classes.



*Treasurer:*  
*Keith Kettelhut*

Keith is the past president of Cumberland County Beekeepers Association and was named MSBA's 2017 Beekeeper of the Year. A resident of Durham, he has been keeping bees for 12 years and runs 55 hives. Keith is an active member of the Swarm Team, and has been very involved with education and outreach with regard to honey bees and other flying insects. A satellite communications engineer working for WMTW TV-8, he operates and maintains their satellite truck. Keith is also a scoutmaster for Boy Scout Troop 109 in Lisbon Falls.



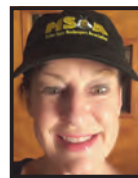
*Secretary:*  
*Thalassa Raasch*

As a teenager Thalassa apprenticed with a commercial beekeeper in Minnesota. After settling in Maine, she embarked on her own bee business called "Keepers" which provided hive management services across southern Maine, and produced "Little Dude" honey. For the past two summers she has worked as Asst Apiary Inspector for the Maine State Apiary Program. She has presented a variety of talks and workshops about bees and beekeeping, most recently for Girl Scout Troop 1209 in Oxford, for a francophone club at the Audubon, and for the Penobscot Beekeepers Assn.



*At Large Director:*  
*Timothy Moran*

Tim joined the New York City Beekeepers Association in 2010 to learn about honey bees. First he made a top-bar hive, an experience which led him to the Langstroth hive. Under the tutelage of Hyro Hoxha, an Albanian beekeeper, Tim learned much more about the mechanics of the beekeeping year. He has attended Eastern Apicultural Society's conference several times with his brother, a beekeeper for 24 years. Tim's wildflower honey won 4th prize in blind jar tasting in 2016, and 5th prize in 2017. Having spent many Septembers visiting Vinalhaven, Tim and his wife Tina settled in Rockland in 2018. The joined the Knox-Lincoln County Beekeepers and he became an At Large Director in 2020. This will be his second three-year term.



*At Large Director:*  
*Meg Pratt*

A beekeeper since 2005, Meg has kept bees in different parts of the country. She is a past vice president of her bee club in North Carolina, where she was educated by Dr. David Tarpy, and became a Journeyman Beekeeper through the University of North Carolina. She expanded her knowledge and training through the

University of Florida Master Beekeeper Program with Dr. Jamie Ellis. Meg and her husband live in Augusta where they maintain large vegetable and wildflower gardens. They have a registered Monarch Waystation on the property, tagging monarch butterflies on their yearly migration. She is a practicing medical provider in the community. Meg is a skilled spinner, quilter and does various kinds of needlework.



*At Large Director:*  
*Alex Bradstreet*

Alex is a part time beekeeper with 16 colonies and a slowly growing honey business. He is a member of Waldo County Beekeepers, and served on the MOFGA Common Ground Fair planning team for four years. He has also served on a team for the Sheepscot Lake Association, evaluating proposed changes to management of the dam on the lake to allow native Maine alewives to migrate up into the Sheepscot river. He works in IT, writing and editing nonfiction technical and business documents. These include marketing and awareness documents, training guides, and technical and functional requirements documents.

## Bad News Bears Part II

by Mike McNally

"Marc, be careful, there are many bears in this section of the woods." That was me warning my old college friend to be vigilant. We were deer hunting last fall north of Ashland in Aroostook County. Marc had worked more than 30 years for the railroad in Connecticut. He was not totally deaf but close. He had cochlear implants in both ears and his eyesight was only slightly better than his hearing. I felt because of his diminished hearing and eyesight he needed to be extra careful.

A few minutes earlier we had dropped off Gary, my cousin's husband and retired Forest Ranger on a nearby ridge. Marc was dropping me off on the other side of the same ridge from Gary and then he headed for a deep gully that split the ridge. As we parted company I again warned him to be careful of the bears. He sniped back "they are more afraid of you than you are of them." As it turned out I should have been warning myself rather than Marc. We were to meet back at the truck at noon.

Do you ever get the feeling that something is watching you but you can't put your finger on it? In this case I was fairly certain what may have caused me to be hyper alert. A short time before I had spied the back of what appeared to be a very large black bear. At first I thought it was a moose but as my eyes focused I realized it was a bear standing on a log and as fast as it appeared it disappeared. This is what I have come to expect seeing a bear in the Maine woods. These sightings are usually accidental in nature and occur when deer hunting. I have never had the desire to hunt or shoot a bear but I have always enjoyed seeing them in the wild.

Anyway, I was on high alert and started looking behind every tree to be sure more bears did not lurk nearby as I slowly hunted my way through the woods. About a half hour later while peering through the trees I stopped short. Noooooo!!! It couldn't be!!! Another bear??? It was standing with its front paws on a downed log staring straight at me. At this point it was time to follow the recommendations of the Maine Inland Fisheries and Wildlife when coming face to face with a bear in the woods. Hold your ground. Do not turn your back to them. Do not run. This may invoke the predator/prey response. Do not stare (it represents a challenge). Make a lot of noise and finally do not play dead when confronted by a black bear (fight it with everything you can: sticks, stones etc.) but that should only be done if the bear becomes aggressive towards you. This is just the opposite when confronted by a grizzly bear (play dead, curl up in a fetal position, put your hands behind your neck to protect your neck and face). Since Maine has only black bears and no grizzlies then one should follow the prior recommendations.

After holding my ground, not running, facing but not staring at the bear and yelling HEY HEY HEY loudly the bear did not move. Oh good Lord, what to do next!? Many websites recommend you try to make yourself look as large as possible so I unzipped my jacket, grabbed my coat edges and spread my arms and yelled HEEEEY as loudly as I could. OMG!!! What followed was the most frightening four seconds of my life. Instead of running away, the bear charged right directly at me. It came off the log running at warp speed. Bears can run more than 35 m.p.h. I was hoping for a bluff charge. No such luck!!! I begged that the bear would veer but it did not. Fortunately I was deer hunting and armed. By the time I realized I had to defend myself the bear was already half the distance to me from where it started about 60 yards out. As the adrenaline surged and my pulse rate hit 200, I went into self preservation mode. Pulling my gun up I had decided on a headshot but at the last split

second changed my mind fearing the shot might glance off the skull, enraging the bear even more. A high straight on chest shot seemed the best choice.

Moment of truth, BANG!!! The shot stopped the bear in its tracks and caused the bear to veer to its right. One more jump and the bear was gone. It was only 15 feet away when I fired, less than one jump by the bear and less than one third of a second to cover that last 15 ft. A second or two later I was shaking like a leaf, hyperventilating and feeling like I was going to pass out. However I did manage to get another round in the chamber. It took me more than ten minutes to move from the spot I was standing and when I did I immediately glimpsed "black" through the bushes. As I made my way around the brush tangle I realized that the bear had collapsed and died after its last jump. Still, that last movement by the bear, had the trajectory been straight, would have taken my legs out from under me or worse.

A quick examination of the bear revealed that she was a sow likely with older cubs but no cubs were found nearby. Her underside showed sparse hair, likely a result of nursing cubs earlier in the year. My first thought was to get to hell out of the woods and just leave the bear behind but my integrity as a sportsman did not allow me to do so. It was considered a legally harvested game animal. As such it was my responsibility to field dress the animal; get it out of the woods and register it at the nearest game inspection station. This accomplished, I next called my family telling my wife she was nearly a widow and my kids fatherless. After a lengthy discussion it was decided I would drop off the bear at a local taxidermist for processing. He indicated he knew of families that could benefit from the meat.

Many are probably asking, what does any of this have to do with honey bees? Bear populations in Maine seem to be continuing to rise and as a result beekeeper bear interactions will increase. Our tendency is to

*Continued on page 11*



Continued from page 10

### Bad News Bears...

protect our hives and bees. I'm sure many of us wouldn't hesitate to try chasing off any bears caught in the act. DON'T!!! Unless you are well protected inside of a vehicle. Remember, a bear can run away from you at 35 mph but can also run towards you at the same speed.

Now for the rest of the story. When I met up with my hunting companions at noon Gary told me about encountering a sow with two half grown cubs. She was herding them away from Gary and was acting as a rear guard pushing the cubs well out in front of her. It was only a few minutes later when Gary heard a single shot ring out. The cubs must have gotten by me without me seeing them and I inadvertently stepped between mother and cubs. Never a good place to be. A few days later the taxidermist called me to say the sow had been previously wounded by an arrow that had passed through her. It was an old wound not from last year. She certainly would not have had a high opinion of people. I regret terribly shooting this bear but felt there was no other choice,

My take away? If your hives are in danger, protect them with electric fencing. If you have a high probability of coming face to face with a Maine black bear consider carrying an air horn and bear spray. We have invited Jennifer Vashon, Maine's bear biologist as a guest speaker for our club in September, (Sagadahoc County Beekeepers Association). If she has additional recommendations I will pass them along.

## Tips and Tricks

by Jason Peters

### Hive Inspection Cover Cloths

Hive inspection cover cloths are used when performing inspections or harvesting honey. These cloths are usually constructed with heavy cotton canvas (18oz/ #8 duck canvas works well) and are weighted to ensure that the cloth stays in place while inspecting the hive.



Photo courtesy of Jason Peters

To use: drape the inspection cloth over the hive after removing the cover. Simply fold back to inspect or remove frames. The cloth keeps the remaining portion of the hive covered and dark helping to keep the bees calm and prevents other insects from entering the hive or setting off robbing. Using an inspection cloth also reduces the number of bees on the top bars, helping prevent the crushing of bees when

replacing boxes and supers. These can also be used as a temporary cover after clearing bees from honey supers or moving frames of honey from the hives to empty boxes for transport. They also work well as a back-up if your smoker goes out.



Photo courtesy of Jason Peters

Tip: leave the cloth in place for a few weeks below the telescopic or migratory cover. The bees will thoroughly coat it with propolis making it more rigid which helps prevent fraying and will keep it from blowing off during inspections.



Photo courtesy of Jason Peters



## WEBINARS

**October 26th 7 pm "Bears and Bees"** with Jennifer Vashon, State Black Bear and Canada Lynx Biologist from Maine Department of Inland Fisheries and Wildlife. Jennifer will discuss the bear population in Maine, conflict management and specifically why and when bears and bees collide. She will provide recommendations for beekeepers.

**November 15th 7 pm "Winter Honey Bees: Biology, Production and Importance of Early Varroa Control"** with Gard Otis, retired Professor Emeritus of Behavioral Ecology and Apiculture at the school of environmental sciences, University of Guelph, Ontario



## Ask A Master Beekeeper...

### How much do you reduce your entrances this time of year?

My traditional wooden hives get a standard entrance reducer on the smallest setting. My poly hives have built-in mouse guards and I do nothing to further reduce the entrances. The entrance on my Warre hive is reduced to about 1" as is the entrance on my long deep horizontal hive.

*Andrew Dewey, Master Beekeeper*

I'm on the larger notch now and will go smaller as nighttime temps dip into the low 50's. *Peter Richardson, Master Beekeeper*

We typically install our metal mouse guard/entrance reducers now if they are not on already. *Mark Cooper, Master Beekeeper*

I typically pull my honey supers off on Labor Day weekend or the following weekend. The day after I pull off the honey supers, I reduce entrances, insert bottom board insert and apply my first mite treatment. (This year I used Hopguard or Apilife Var).

*Erin MacGregor Forbes, Master Beekeeper*

**Do you manipulate your hives in the fall in order to place brood in the bottom boxes and all honey frames in the top box or do you simply allow the bees to establish their layout going into winter?**

I do not manipulate the brood in the fall. I run most colonies as single deeps so N/A to them. Colonies are visually inspected for stores the first week of September and fed 2:1 sugar syrup to get to wintering weight. Nucs made up in July for overwintering are likewise treated. They are poly nucs and overwinter in a 6 over 6 configuration. They've been getting syrup since made up. I switched from 1:1 to 2:1 mid-August.

*Andrew Dewey, Master Beekeeper*

I used to manipulate them but stopped a few years ago. I decided I'd let the bees figure it out themselves. I do put in the bottom board insert to reduce cold air infiltration and encourage them to move down. *Peter Richardson, Master Beekeeper*

We rarely reorganize hives going into winter unless we are combining some.

*Mark Cooper, Master Beekeeper*

I do not manipulate hives at all in fall, except to remove empty boxes at the top (this fall nearly all supers were totally empty). I let the bees use the fall flow to settle themselves in their winter configuration.

*Erin MacGregor Forbes, Master Beekeeper*

**I would like to relocate several hives. When is the best time (temperature wise) to do this?**

The major thing I want to do (besides move the hive) is not disrupt the bee cluster. So if I were moving the hives a short distance, I'd do it on a warmish November or December day, after screening the bees in at dawn.

*Andrew Dewey, Master Beekeeper*

The best time to move hives is the spring. The hives are lighter and the hive has time to recover from any lost foragers or a damaged queen.

*Peter Richardson, Master Beekeeper*

Cooler the better for closing in to move. If it is a short move across the yard then cool rainy day or two after helps cut down on drifting back to old location.

*Mark Cooper, Master Beekeeper*

When I move hives in the fall, it depends on how far I am moving them. When moving between yards I typically either move them before the mite treatments or afterwards. Any date is fine so long as it is done early in the morning or in the evening and the bees are shut in. When moving within a yard, I like to wait until flying season is mostly done. I plan to move within yards on Thanksgiving weekend, as by then the forage season is generally over. Generally the temperatures are moderate enough to keep the bees in the hive, but not so cold that that cluster can't be disturbed. In this case I like to move the bees in the morning so they have the warmer daytime temperatures to reorganize after the disturbance of moving.

*Erin MacGregor-Forbes, Master Beekeeper*



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## VARROA: FIGHT THE MITE

by Jane Dunstan

In the **FIGHT THE MITE** series various components of Varroa mite management are examined. This issue uncovers *evaluating the best miticide to use based on temperature, presence and/or absence of brood as well as honey supers, and colony phase.*

When we become ill with a bacterial infection, it is crucial that the correct antibiotic is prescribed. In certain situations cultures are obtained to narrow down and/or verify that the most sensitive antibiotic is selected to combat the existing organism. Some antibiotics have specific instructions as to when to take them and whether they should be taken with or without food. These parameters are purposely outlined to provide for the highest efficacy of that antibiotic.

Much the same decision making occurs when contemplating treatment for your colonies. In many ways there are more considerations which need to be explored when choosing a miticide. Please don't rely on what your neighbor does or what you might have come across on the internet. The beekeeping industry has developed algorithms which address the most important variables of temperature, presence/absence of brood, whether honey supers are on or off and where the colony is with population and purpose.

Formic Pro and MAQS are both miticides which require consideration of temperatures. If you apply them above the recommended temperature range, there may be both queen and brood loss. It is **imperative** that you look at extended forecasts to determine when the temperatures will be far from the highest extreme.

If mite counts are above threshold in June, July and August, consideration must be given to the miticide which can both permeate caps and be applied when honey supers are on. There are truly few options here with these parameters when we peruse through our miticide toolbox. As fall honey supers are removed, the bee populations are slowly decreasing as the queen reduces her egg laying at the same time the mite populations are increasing. This colony phase offers more options for treatment.

For colonies that survive the winter with strong, healthy, robust clusters, it is vital to assess for mite infestation in the spring. This should be done prior to colony buildup and the application of honey supers in order to select the appropriate miticide.

In August, the 8th edition of the *Tools for Varroa Management Guide* was released. According to Matthew Mullica, Senior Project Director, he states "This is a major


revision to the Guide, which was last updated in 2018, and represents the latest state of the science on best management practices and registered products for controlling varroa."

Over an eight month span of time, an impressive cast of characters, including our own Jennifer Lund, participated in this endeavor. In the land of health and medicine as well as in keeping bees, we strive to implement "best management practices" whether for human beings or insects. This guide has all the tools one could possibly need to fight the mite. Please take the time to review it. Download it to your desktop or phone. Have it readily available. We have all the necessary tools, equipment and knowledge to control varroa.

The full guide can be downloaded at the Honey Bee Health Coalition's website: [https://honeybeehealthcoalition.org/wp-content/uploads/2022/08/HBHC-Guide\\_Varroa-Mgmt\\_8thEd-082422.pdf](https://honeybeehealthcoalition.org/wp-content/uploads/2022/08/HBHC-Guide_Varroa-Mgmt_8thEd-082422.pdf)



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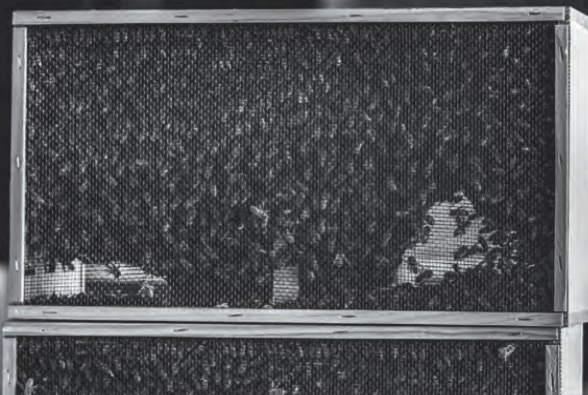
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\*Memberships are for one year from the date of receipt, include a subscription to MSBA's bimonthly newsletter *The Bee Line*, and are a prerequisite of attending the MSBA Annual Meeting.



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