

The Bee Line



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October/November 2021

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2020/2021 Honey Bee Survey Results

by Jennifer Lund

Demographics

388 respondents, representing 2,688 hives. Most (98.0%) identified as backyard/hobby beekeepers (<30 hives) and 93.9% have their apiaries registered with the state of Maine. Most (70.6%) are also members of a beekeeping organization (MSBA, local MSBA chapters, EAS). Respondents keep bees for a variety of reasons, the top of which are hobby/enjoyment (89.4%), to help the bee population (66.3%), and bee product production for personal use (63.0%). The average number of years of beekeeping experience was 7.7 years (range 1-65).

Table 1:
Beekeeping
experience.

Years Beekeeping	N
1 to 3	135
4 to 6	128
7 to 9	31
10 to 20	65
21 to 30	16
31 to 40	7
41+	6

Practices

Participants started colonies by splitting already existing hives (42.7%), buying nucs (41.5%), and/or buying packages (35.1%). 19.1% reported collecting swarms to start new colonies.

Most beekeepers (82.4%) provided supplemental food to their hives during the 2020/2021 beekeeping season. About a third (31.9%) used sugar syrup to boost food stores and encourage comb building. 54.3% beekeepers used either fondant,

candy boards or dry sugar for supplemental winter feeding. About 21.2% of respondents reported using pollen patties or pollen substitute. Sixteen percent of respondents use Honey Bee Healthy, Hive Alive or essential oils as feeding stimulants. Less than 1% of respondents rented hives for pollination of agriculture. The 388 participants reported approximately 33,845 pounds of honey harvested (average 86.1 pounds per beekeeper, 14.6 pounds per hive). Participants reported approximately 59,840 pounds of honey harvested (averages 191.8 pounds per beekeeper, 31.9 pounds per hive) in the 2019/2020 survey, and 35,003 pounds of honey harvested (average 97.2 pounds per beekeeper, 18.3 pounds per hive) in the 2018/2019 survey.

Hive losses

State wide hive loss was 43.9% between April 2020 and April 2021 (summer: 9.2%, winter: 34.7%). This was 8% higher than last year where respondents reported a 35.8% (summer: 9.7%, winter: 26.1%) loss between April 2019 and April 2020.

The most commonly reported causes of summer loss were queen loss/failure (13.9%), varroa mites/viruses (10.6%), environmental factors (7.2%), robbing (4.6%) and unknown (4.1%). Two hundred sixty-seven (68.8%) respondents reported no summer losses.

The most commonly reported causes of winter loss were varroa mites/viruses (32.2%), environmental factors (18.8%), unknown (17.5%), queen loss/failure (12.6%) and starvation (11.1%). One hundred fifteen (29.6%) respondents reported no winter losses.

Table 2: Average losses by county from April 2020-April 2021.

County	N	Summer Loss (%)	Winter Loss (%)	Total Loss (%)
Androscoggin	12	0.9	64.0	64.9
Aroostook	9	9.5	31.0	40.5
Cumberland	86	14.9	42.8	57.7
Franklin	6	0.0	29.2	29.2
Hancock	21	3.2	13.4	16.7
Kennebec	39	5.8	35.7	41.6
Knox	25	11.8	41.8	53.6
Lincoln	36	7.2	39.1	46.4
Oxford	15	6.4	46.2	52.6
Penobscot	33	12.1	20.3	32.4
Piscataquis	10	4.3	28.3	32.6
Sagadahoc	16	9.2	41.5	50.8
Somerset	12	4.3	31.4	35.7
Waldo	18	11.9	34.3	46.3
Washington	9	13.8	22.4	36.2
York	40	9.3	43.3	52.6

Pest and Diseases

Varroa mites/viruses: Over three quarters (78.4%) of respondents monitored for Varroa mites. Of those that monitor for mites, 59.0% do so using alcohol rolls, 53.1% using a sticky board, 24.3% using visual survey and 17.0% using drone brood survey. Many beekeepers (42.3%) that report monitoring for varroa using more than one method. Beekeepers report using screened bottom boards (19.6%), brood disruption (7.0%) and drone brood removal (1.5%) as part of their varroa mite management strategy. The most common miticides used were Formic Pro (formic acid, 44.8%), Apiboxal vaporization (oxalic acid, 39.9%), Apivar (amitraz, 13.6%) and Mite-Away-Quick-Strips (formic acid, 12.9%). Forty-two beekeepers (10.8%) reported no varroa mite management.

Other Pests/Diseases

Most respondents (94.9%) report using no treatments in their hives, 4.1% used Fumadil-B and 1.0% used Terramycin.

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Upcoming Board Meeting: Nov 18 (7-9 pm)

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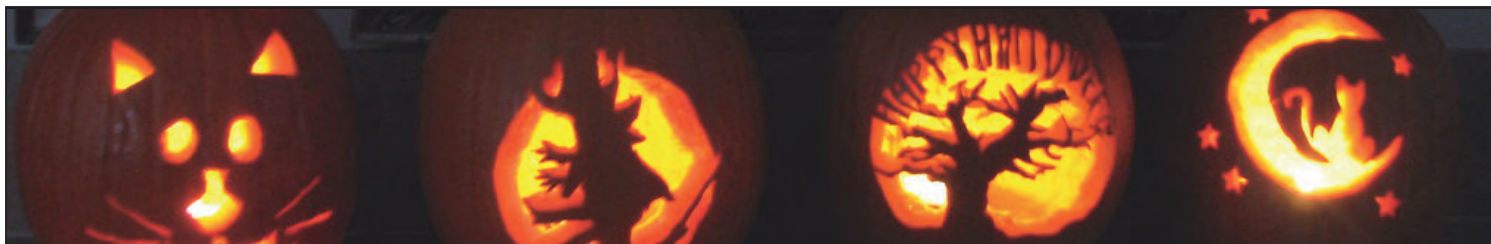
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President's Message



We all get asked the same questions from non-beekeepers: Do you ever get stung? What do the bees do in winter? Have you seen that hive where you turn a spigot and the honey just flows out? But when we meet a fellow beekeeper, it's always "how many hives do you have?"

Lately I've been asking myself how many hives are actually enough. After peaking at 20 a few years ago I've been shrinking my numbers to what I consider to be the ideal amount of six to eight. It's taken a few years of combining strong colonies in the fall and not replacing winter losses. My bees are textbook healthy now and even though plenty of time is still put into them, I enjoy every minute spent with my bees. It's become more relaxing and fun again, and I still pulled a ton of honey this summer.

We advise newbees to begin with two colonies, which makes sense: you can compare them against each other, exchange frames of food or brood, donate nurse bees or transfer foragers by switching positions. But beginners can be overly optimistic, especially if their colonies get through the winter – easy peasy! Another nuc is ordered, a couple of splits made and before you know it there's a half-dozen hives in the back yard. After doing well in the early stages of keeping bees, former MSBA Beekeeper of the Year Mike McNally felt confident about taking on more colonies, but admits his apiary may have multiplied a bit too fast. "It's easy to get carried away by a little success and take on more than you can handle." Experience finally caught up with his zeal over time and he's struck a balance by selling nucs in the spring.

Unless you're looking to build up a pollination or honey operation quickly, most veteran keepers agree that it's best to increase gradually while you concentrate on observing and learning the art and science of beekeeping. The ultimate goal is to have healthy, strong colonies. They are the ones that will draw out frames at lightning speed during a good nectar flow, and fill them with way more honey than less robust hives. Those supers of comb can then be used the following spring for swarm prevention or honey production. Erin Forbes, former president of both MSBA and Eastern Apicultural Society, grew her Overland Honey business up to 70-100+ hives, but these days is managing about 20 hives plus 20 or so nucs reared from her own queens. She told me "I am really liking this number of colonies. Having downsized, I have plenty of equipment for anything I need and I can always easily scale back up." Erin imagines there might be a time when she cuts down even further to five to eight colonies if life gets particularly demanding. "I've always said that's a reasonable number of colonies – enough to make it worth having good equipment for extracting, etc, but not so many that it takes more than a few hours to do everything that needs to be done."

I canvassed a few MSBA board members about their experiences with large numbers of hives. All of them have full-time jobs and hold positions with local bee clubs. Jane Dunstan's goal is to stay at around 20 primarily by equalizing. But after discovering multiple colonies staging what seemed like a coordinated master plan of swarming this past spring, it took 18 splits to thwart them. Some nucs were sold but ten grew into full-size hives, leaving her with a total of 30 – foiled again by the bees! She says "I manage to overwinter 95-100% of my hives, so with swarm control management I end up increasing each year." Jane definitely sees herself eventually cutting back to only four to six hives.

Sheri Zimmerman has 13 colonies of her own and also manages Kennebec Beekeepers' seven club hives at the Viles Arboretum in Augusta. She's not looking to increase, saying "I'm ok with the number I have now. I like keeping hives at different locations to compare how they do with different forage and microclimates. If it becomes a chore then I have too many, and it won't be relaxing anymore."

With 45 hives (down from 56) Keith Kettelhut barely has time to work his own bees. He's on the go before work, after work, and on weekends, doing both capture and cutout removals of honey bee swarms and also every variety of wasp and hornet you can think of. Until recently he took care of CCBA's club hives. Cutting back to 20-30 colonies is his short term goal. He believes that you become more pragmatic when you get into a double-digit number of hives, spending "less time trying to keep bees with 'bad genes' alive...survival of the fittest and keep those genetics spread out as much as possible. Move splits to other yards to spread survival traits to the bee gene pool." Keith noted that "once you accumulate more than ten hives it gets to be a bit of work."

As your own apiary grows, just keep in mind that more hives doesn't only involve additional inspections. There will be more assembling and maintenance of equipment, mite monitoring, swarm and disease control, honey extraction, feeding, etc. And you'll be putting a heavier burden on your back, so don't forget to "lift with your legs, not your back!"

Judith Stanton



Slovenian Beekeeping with AŽ Hives

by Suzanne Brouillette

In last month's newsletter I wrote about the history of the Slovenian AŽ hives. In this article, I will discuss how to manage them. There are many ways to keep these hives but they must always be under cover and not out in the open like Langstroth.



Left: My bee house in NH, new structure.
Right: Using an existing structure.

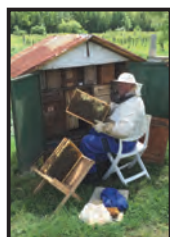
The management of these hives is done from the inside and/or from behind with no lifting except for one frame at a time. This is the major attraction to using these hives. It allows children, older people and handicapped persons to be beekeepers. Your bee house or stand can be built based on what your needs are. You can have an extraction area, sleep with your bees or use it as a guest house! The "house" idea makes it possible to do whatever you want! The transport systems are used to collect various nectar flows and are usually extracted on site.



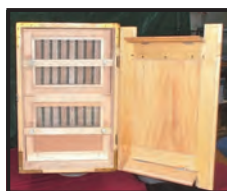
Left: Transportation System
Right: Simple hive stand

AŽ hives have either two or three levels. The lower deep is for the queen and brood, the top deep is utilized for honey frames with a queen excluder in between. Since there is a limited amount of space you will

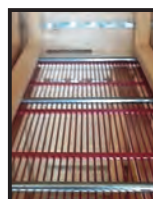
split your hives more often. This is actually a good thing for a brood break and also a great way to increase hives in your apiary rather than to always buy bees. These hives do require more management, however with everything all located in one place, it is much easier. Plus, working inside and out of the elements is so much nicer and the bees are generally calmer.



The hives are comprised of 10 frames in each level, which sit on three metal bars and are held with proper bee space by the metal spacer bars in the back and also on the inner screens. There is a queen excluder between the deeps.



The AŽ frames are concave top and bottom which allows for easy sliding of the frames on the metal bars. The design also prevents the bees from propolizing the frames to the bars.



The size of the frames is also different from other hives. It is recommended to go into your AŽ hives every 10-14 days to make sure the queen has enough space and they are not becoming honey bound. One management tool I use quite often is that I will locate the queen and set her aside, then move two to four frames of brood upstairs and put new frames or drawn comb downstairs. After doing this once or twice, you will need to make a split. I made 10

splits this spring with a few frames of brood, a capped queen cell and a couple frames of honey and pollen. You can use an American extractor 6/3 or 8/4, which means the basket holds 3 Lang deeps or 6 Lang mediums. The AZ frames will fit. I have a Maxant that works very well.

There are also some accessories that I use all the time. The bee table is great for cleaning off the frames or for installing a package. The hive stand is helpful keeping the frames in a safe place. Smoke sticks are another nice accessory rather than using a big smoker! They are made from compressed wood and are wonderful.



The big question is, do bees overwinter better in the AŽ hives? The answer is both yes and no. The house definitely protects your hives from the weather but you still have to manage for the basics: ensure there are enough bees for a healthy cluster, there are adequate honey stores, low varroa counts and plans to control moisture. After all this, you only need to place a two inch piece of open cell foam in the back, keep back vents open and you are ready for winter.

For more information on starting with the AŽ Slovenian hive, I recommend purchasing the book "AŽ Beekeeping with the Slovenian Hive" by Janko Bozic. He is one of Slovenia's top beekeepers and a professor at the University of Ljubljana. It is the only book written in English!

All photos courtesy of Suzanne Brouillette

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Keeping Time

by Michael Donihue

It's a boomerang swarm! At least that's what I called it when I sent an email to Jane Dunstan this summer asking if she'd ever heard of such a thing. While I had never witnessed it, apparently it's not all that unusual for a colony to change its mind and return back to its hive after taking off.

I get swarms every year despite my best efforts to prevent them by splitting, adding supers and trying all sorts of traps. I've stopped getting upset about swarms as a result – one of the luxuries of hobby beekeeping. This swarm happened on a hot day this past June as we were enjoying a visit from our son and his wife in the backyard of our home. It's always an amazing sight as a freight train of bees pour from a hive and head straight to their usual landing spot at the top of our 30 foot Tamarack (*Larix laricina*) at the edge of the apiary. I went back to check on the swarm later that afternoon and noticed that it was gone. Looking over at the apiary I found it bearded on the front of the hive it had come from working its way back inside as night began to fall.

Jane's advice was quick and direct (as usual) – “Don't wait... this was a gift” – followed by detailed instructions for splitting the hive. It turned out that this was the easiest split I'd ever done and while it took about a month or so for them to get 'queen right' this colony is now really strong as I begin my fall preparations for the winter ahead.

I witnessed a similar phenomenon a couple of weeks ago. While I didn't see the swarm leaving the apiary this time, I did notice a very large stream of bees noisily making a

bee line across our back yard and heading directly into one of our other hives as if being sucked in by a vacuum. This was a hive that I had just removed a super of comb honey from the previous day. Since I had replaced the shallow comb super with an empty medium super with drawn out foundation (and didn't have any additional spare equipment) I didn't split this colony. It seems perfectly content and hasn't swarmed again as near as I can tell.

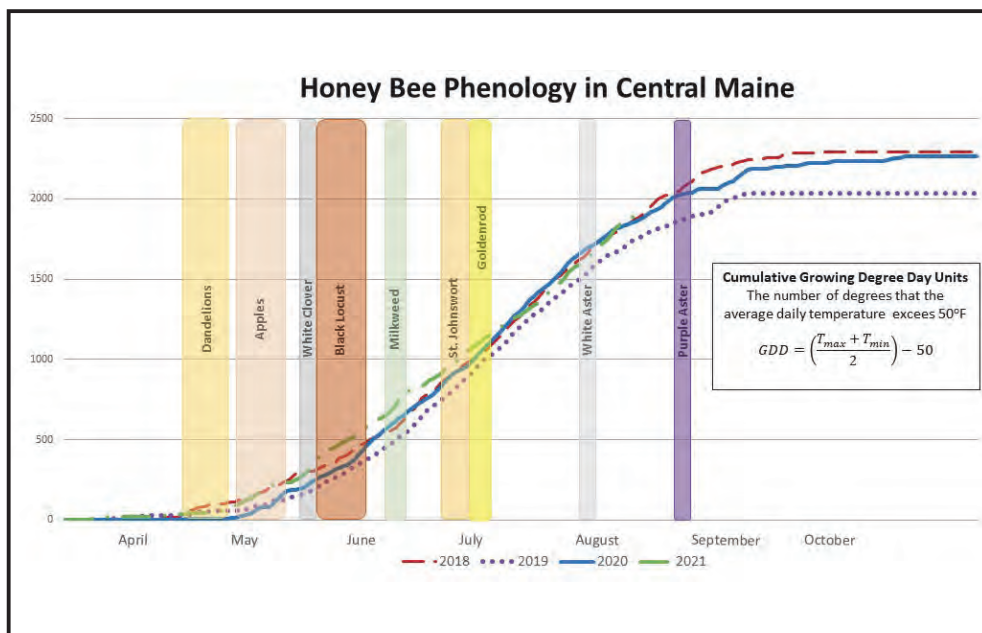
I did some searching and found a couple of blog posts about 'boomerang swarms'. Jane's thought was that either the queen didn't leave with the initial exodus, or she left but did not arrive at the first destination, or she didn't survive the flight, or the swarm simply returned for some unknown cause. Whatever the reason, in my case it was indeed a gift.

So once again, I learned something new from my bees.

I've still been doing my phenology – watching the weather and keeping track of what's blooming – and have just about completed my fourth year of tracking

growing degree days at our home here in central Maine. Despite extended dry periods this year, we didn't suffer from a dearth because our operation is small and we've planted so many honey bee friendly plants designed to bloom in succession throughout the spring and summer. As a result, the drought that hit so much of Maine this summer hasn't been much of a factor for us. There are lots of goldenrod and fall asters in the neighboring fields right now and once again I extracted 10 gallons of honey in July to go with the comb honey I harvested and left at least another 10 gallons across our four hives for winter stores.

It did seem to be a much hotter summer, however. Beginning in May, all of our fruiting trees, berries, white clover, and flowering plants seem to produce blossoms about two weeks earlier this year. June and July in particular had the highest cumulative total of growing degree days among the four years I've been keeping track. As we head into September things seem to have returned to about normal in terms of the total number of growing degree days for 2021.



Rendering Beeswax

by Jane Dunstan



The picture in my mind's eye is crystal clear. Mounds of wax cappings in a large tray mixed with honey, bee parts, and numerous serrated knives

with sticky handles resting in the decapping trays. Honey was drained into five gallon buckets and set aside to rest for four days before bottling. Spun frames were placed back into the honey supers to be placed above the inner cover for the bees to clean dry before they are placed in storage for next year's harvest.

For some beekeepers, the lament is "what am I going to do with this wax?" For others, there is sheer delight in rendering wax in preparation to use in pouring candles, making creams and lip balms and a host of other craft related items.

Beeswax is flammable. For melting wax, it is recommended to use a double boiler so the pan which holds your wax is never in direct contact with flame or the stove top itself. Secondly, this is a messy process. In the end I have more wax on my floors than you can imagine so I have resorted to using a plastic drop cloth or large cardboard pieces on my floor in the immediate work area. For me, this beats using a credit card to scrape hardened wax droplets from my hardwood floors.

You will need the following supplies:

- Old pots which you will configure into a double boiler system. The pots can be stainless steel or aluminum but preferably not iron.
- Cheesecloth or an old sweatshirt
- Large rubber bands
- A container to place wax into (milk or juice cartons, plastic bowls, non stick baking pans, old muffin tins, etc

-To begin, place outer boiler/pot on the stove with a small amount of water in it, enough to engulf the bottom third of your inner pot. Next add wax AND water to your inner pot... yes water. Use more water than wax.



You will melt the wax in the water in the inner container which now sits inside the larger outer boiler pan. I have also placed



the wax cappings in a panty hose leg or cheese cloth before immersing it into the water. When the wax melts in the cheese cloth or panty hose, any foreign material (bee parts, bugs, hive debris) is kept within the cloth/hose. Once the wax has melted into the water bath, remove the cloth/hose which now has the debris in it. Wax melts at 143° F. Resist the urge to overheat or reheat wax as it will lose its aroma.

-Remove the inner pan with the melted wax and water from the heat source and let it cool.

-Once cooled, remove the solid wax block. The water and residual honey from the cappings can be discarded.

-When you examine the solid wax piece, you will note debris on the bottom which will

be filtered out once wax is remelted and filtered.

-You are now ready to remelt your block of wax without water. Simply place the hardened wax into another clean container and place into the double boiler again for remelting.

-While the wax is melting, place several layers of cheese cloth or sweatshirt material (fuzzy side UP) over the carton which you have selected to use and secure with rubber bands or clips. Allow the material or cheese cloth to sag in the center to accommodate the liquid wax. Place your container on newspaper or plastic for drips or spills.

-Once melted, carefully pour your liquid wax into the cheese cloth. You will see remnants of debris collect in the cloth which you can remove later and use for fire starters in your wood stove.

- Allow wax to harden. If you find there are still minute specks in the wax which you don't want to have in your wax, simply remelt and filter again. I found that filtering the first time through the sweatshirt material was by far a better filtering system.



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MSBA VIRTUAL ANNUAL MEETING OCTOBER 16, 2021

Join us for a morning of learning at this year's virtual Annual Meeting. Presentations by Dr. David Tarpy of North Carolina State University and Massachusetts State Apiary Inspector Paul Tessier will focus on honey bee queens and queen issues that affect hive management. State Apiarist Jennifer Lund will provide an overview of what she's observed during hive inspections throughout the state over the past season, as well as a summary of the annual Maine Beekeepers Survey. A short business meeting and elections will be held during the event, along with raffles and a silent auction. The program is listed below and will include short breaks.

The raffle and auction portion of the meeting is MSBA's only fundraising effort, from which proceeds are used to support beekeeper education and promote honey bee awareness in Maine. The revenue also helps fund our Bee Line newsletter, website and webinars on timely topics that are all free of charge for members. With that in mind we ask you to consider a suggested donation of \$10 to help offset the cost of this year's speakers.

*You must be an MSBA member to attend.

MSBA ANNUAL MEETING PROGRAM

- | | |
|----------|---|
| 8:30 AM | Welcome |
| 8:35 AM | Jennifer Lund, Maine State Apiary Inspector <i>"State of the State Address"</i> |
| 9:00 AM | Dr. David Tarpy, University of North Carolina <i>"The quality of commercial queens"</i>
Diminished queen quality and reduced longevity is a major problem experienced by beekeepers. This presentation explores the good news and the bad news when it comes to buying queens in the apiculture industry. |
| 10:30 AM | Business Meeting |
| 11:00 AM | Paul Tessier, Massachusetts State Apiary Inspector <i>"Practical Queen Management"</i>
Paul will discuss how to identify queen problems and techniques to fix them. |

Online registration will open soon, or print and mail in form below.

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Dr. David Tarpy
North Carolina State University

Dr. David Tarpy is a Professor of Entomology and extension specialist in honey bee biology and beekeeping at North Carolina State University. He maintains a website dedicated to the dissemination of information and understanding of honey bees and their management, spearheads numerous extension projects (such as the 2005 New Beekeeper Cost-sharing Program that created hundreds of new beekeepers within the state), and launched the Beekeeper Education & Engagement System (BEES)—an exciting online learning resource for knowledge and understanding of bees and beekeeping. His research interests focus on the biology and behavior of honey bee queens in order to better improve the overall health of queens and their colonies. Specific research projects include understanding the effect of multiple mating on colony disease resistance, using molecular methods to determine the genetic structure within honey bee colonies, and determining the regulation of reproduction at the individual and colony levels. His work has provided some of the best empirical evidence that multiple mating by queens confers significant benefits to colonies through increased genetic diversity of their nestmates, particularly through increased tolerance to numerous diseases. More recently, his lab group has focused on the reproductive potential of commercially produced queens, testing their genetic diversity and mating success in an effort to improve queen quality.

Paul Tessier
MA State Apiary Inspector

Paul Tessier started in 2017 with MDAR as a Seasonal Apiary Inspector in the Apiary Program. His family has been beekeeping for the past seven years and has a small sustainable apiary in Dighton, MA. He is not only knowledgeable about honey bees and beekeeping in Massachusetts, but also passionate about providing support to beekeepers. Paul transitioned to Full Time Apiary Inspector this past March.

Jennifer Lund
Maine State Apiary Inspector

Jen has a master's degree in entomology from the University of Maine in Orono. She was hired as the Maine State Apiarist in 2016 and is passionate about honey bee health and helping beekeepers succeed. In addition to inspecting "a couple of thousand" hives, Jen also provides between 40-60 extension and outreach programs for beekeepers, schools, community groups, conservation groups and the general public each year. Her love of science and data has expanded the Apiary Program's participation in survey and research initiatives. Maine currently participates in the National Honey Bee Health Survey and the National Exotic Bee and Wasp Survey. In collaboration with the Massachusetts Apiary Program, Jen was awarded a grant to develop and distribute varroa mite educational materials and free mite wash jars to beekeepers in Maine, greatly increasing the adoption of monitoring by beekeepers across the state. In her spare time, Jen manages several hives of her own on her farm in Argyle Township.



Dr. David Tarpy
Professor of Entomology



Paul Tessier
MA State Apiary Inspector



Jennifer Lund
Maine State Apiary Inspector

Photo courtesy of Michelle Peters

SLATE OF BOARD CANDIDATES



Judith Stanton
President

Judith is the current president of MSBA, serving previously as vice president, at-large director and chapter representative, and in board positions for Sagadahoc County Beekeepers. She has been keeping bees for 16 years and sells honey through shops. An active mentor and troubleshooter to other local beekeepers, Judith also does honey bee presentations at schools and children's summer programs. She is retired from jobs in advertising and graphic design, and is on the board of Harpswell Community Garden.



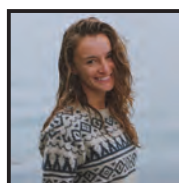
Jane Dunstan
Vice President

Jane became intrigued with honey bees during a renovation project in her 1778 farmhouse in 2009. In addition to keeping 30 colonies and making products of the hive, she is a mentor to new beekeepers and promotes stewardship and education. Jane is past president of KLCB and the current director of KLCB Bee School. In addition to teaching classes (beginner and intermediate levels), she is serving as the MSBA vice president and editor of MSBA's newsletter The Bee Line.



Keith Kettelhut
Treasurer

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 thirteen years and runs 50 hives. Keith is an active member of the swarm team, and has been very involved with education and outreach. He is a satellite communications engineer working for WMTW TV-8. Keith is also a scoutmaster for Boy Scout Troop 109 in Lisbon Falls.



Thalassa Raasch
Secretary

Thalassa became involved with honey bees as a teenaged apprentice to a commercial beekeeper in Minnesota. After settling in Maine Thalassa embarked on her own solo bee endeavor operating a business called "Keepers" which provides hive management services, live colony removals, and bee hive tours. Her personal apiaries in Portland and Brunswick produce "Little Dude" honey. This past season, Thalassa was the Assistant Inspector for the Maine State Apiary Program.



Lynne Lindsey
Director

Lynne, a retired nurse, recently relocated to Washington County from the midcoast area and has been a beekeeper for six years. While actively pursuing new learning opportunities for herself, she has also been a mentor to new beekeepers. Lynne previously served two years as secretary of the Knox/Lincoln County bee club. Additional hobbies include gardening and stained glass.



Thomas Bartlett
Director

Thomas, a member of the PCBA, has been keeping bees for 10 years and has five hives in Bangor. In addition to raising bees, he is a master gardener, founder of GEMS and former gentleman farmer who raised sheep. Thomas is currently studying to become a Master Beekeeper and believes his involvement as a board member will afford him the opportunity to contribute his knowledge and experience to assist others in the greater MSBA membership.



Peter Richardson
Director

Peter, an EAS Master Beekeeper has been keeping bees since 2008. He regularly mentors "newbees" and has taught beginning beekeeping at the Cumberland County Extension office for several years. When not in the bee yard, Peter serves as treasurer and chair of the finance committee overseeing the Good Shepherd Food Bank and enjoys travel, reading, community volunteering.



Kevin McDonnell
Director

Kevin has kept bees for five years in Kennebunkport. He shares 11 hives with his daughter and also mentors several new beekeepers. Kevin is currently enrolled in the Cornell Master Beekeeper program and participates in the sentinel apiary program. Other interests include volunteering on his town's zoning Board of Appeals, lobstering, traveling and learning Spanish.



Tips and Tricks

by Jason Peters

Build an Escape Tower!!!

The thought of clearing bees from multiple honey supers to harvest some or all of your honey crop can be daunting and overwhelming. With so many options to choose from it is often difficult to know which is best. Creating an "Escape Tower" or "Super Tower" is an easy, cheap and passive way to clear multiple supers even if they are coming from multiple hives within the same yard.

Equipment Needed:

Bottom Board

Empty Deep Box

Bee Escape (we use Triangle/ Quebec style escapes)

Tight fitting top cover

Masking Tape



The bees will move down through the stack and exit the empty deep. As they exit the "Escape Tower", they realize that it is not their home and will orient back to their original hives. Remove the supers two to three days later.



Important note: Bees will not abandon brood so if a queen has had access to lay in any of the supers, this method will not work. To prevent this and other issues, we use queen excluders anytime that honey supers are in place with all of our production



colonies as well as our nucleus colonies which often share supers in common. This prevents queens from having access to those combs which helps reduce pesticide exposure to our wax as well as wax moth and small hive beetle issues.

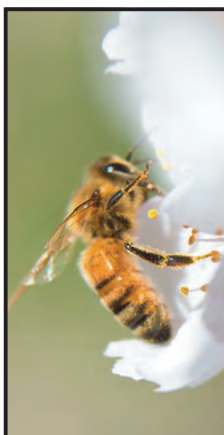
Photos courtesy of Jason Peters

Save
the
Date

October 16th
MSBA Annual
Meeting



Choose a level spot in your bee yard and set-up the bottom board, empty deep box and set the bee escape on top making sure that it is oriented the correct way (triangle/ maze facing down). Remove the supers from your hives and place them onto the bee escape making a tower of supers. Place the tight-fitting cover directly on top of the stack and use the masking tape to seal any cracks to prevent robbing.



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Ask A Master Beekeeper...

When colonies are not weak but simply smaller than ideal going into fall, I struggle with the decision to combine them. Any advice?

I often reduce a smaller colony to a nuc if I think it is otherwise in good shape. But, the advantage to combining is that if the small colony is small due to a weak queen, a nuc may not survive. At least you save the bees when you combine. *Peter Richardson, Master Beekeeper*

Ugh. A situation I hate. If the colony has sufficient stores to have a reasonable chance, I call it an experiment and test of my beekeeping skills to get it through. I take a thorough look at the colony to see why it is weak. If I can't determine why but conclude it is basically healthy, I take some consolation in knowing that by calling it an experiment, I've taken myself off the hook. I baby it some, give it extra food and move it to the head of the wrapping list. If the queen doesn't perform next spring, she'll be replaced as soon as local queens are available. But, if I have another colony in the same condition, basically healthy but not as strong as I'd like, combining is more prudent and less chancy. If nothing else, it is consistent with "take your losses in the fall." *Andrew Dewey, Master Beekeeper*

It is useful to differentiate between a weak colony, which is usually attributed to a below-average queen that has been established as weak over the season and a small colony. Late season nucs are generally small, and weather conditions like last year's drought can result in a small colony that is otherwise strong. As long as

they have enough food, a colony with a strong queen can survive in a nucleus colony but it is best to insulate it well. I like to cut 1 1/2" rigid insulation and duct tape it to cover the sides, and add homasote and reflectix insulation to the top. If the front of the colony has a southern exposure, I'll leave it open to the sun. *Phil Gaven, Master Beekeeper*

Smaller colonies are tough to get through the winter. Tony Jadcak used the phrase "take your losses in the fall" and I still believe that is the best practice. Pick the best queen you have between the two colonies and kill the other. Unite the colonies using the newspaper method and hope to have a colony to divide come spring. *Rick Cooper, Master Beekeeper*

What do you like your colonies' composition to look like in mid-October?

I like to see the brood nest in the bottom boxes with honey on the outside frames. In the upper boxes, I like to see many frames of capped honey and middle frames with some room for laying. The top box I want full of honey. *Peter Richardson, Master Beekeeper*

In a traditional double deep scenario, I'd like the bees covering both sides of six frames, in the lower box, and the upper box full of honey. In a single deep, I want to see the bees covering both sides of six frames and the other frames full of honey. As mid-October is still early enough to process feed for storage, I'll give them another gallon of 2:1 syrup and make a note to check on their food supplies in early February. *Andrew Dewey, Master Beekeeper*

Whether a colony is in a 5-frame nuc, a single hive body, or a double deep with a medium left on, I like to see the top 1/2 to 2/3 filled with honey, and a colony that is occupying the bottom third. I've had luck overwintering each of those configurations so I've stopped thinking about it in terms of bees covering frames or total weight in honey but rather in a proportion to the total

hive space. If they have extra, empty space, take it off before Halloween. *Phil Gaven, Master Beekeeper*

I really want to see my bees mostly in the bottom box. I want the top box with at least eight frames of honey and any brood in the lower half of the middle frames. It is very hard to get hives to look like this these days but heavy syrup feeding after meds come off can help. *Rick Cooper, Master Beekeeper*

When honey supers are removed, there are always frames with uncapped honey. I usually spin them out and feed it back to the bees in freezer bags with slits when food is scarce. Are there other means to deliver nectar to bees?

I save the frames in a covered tote after 24 hours in the freezer to kill wax moths. I store the tote in my unheated bee shed. I usually hold them until early spring for feeding back to the hives. When I do so, I put the frames in a super above the inner cover so they don't lay there. *Peter Richardson, Master Beekeeper*

My hives seem to always have several frames with both capped honey and uncured nectar. For those frames, I'll spin out the nectar first, drain the extractor, then uncap and harvest the finished honey. My favorite feeder for thick fall feed (either nectar or 2:1 syrup but DON'T mix the two or it will ferment) is a Quail waterer housed in a deep hive body on top of the inner cover. They can take down a half gallon of feed a day till the temperatures start to dip into the 40s. *Phil Gaven, Master Beekeeper*

When I have uncapped honey or partially filled frames, I consolidate those frames in supers and put them in a chest freezer that I keep just for bee-related stuff. The supers can be put on hives as extra resources if needed or can be put on colonies in the spring below a super of drawn comb. The nectar filled super helps keep the queen from going into the empty drawn comb. *Carol Cottrill, Master Beekeeper*

I have never spun out the nectar intending to feed it back. If there is uncapped honey that I don't want to include in my honey, it does not get extracted, but instead goes with the wet frames back on the hives for cleaning. I put an empty super between the inner cover and the super with the wet frames so the bees recognize the frames as a nectar source that is not in their hive and move it into the hive. *Andrew Dewey, Master Beekeeper*

Your method of getting nectar back to the bees is about as good a method that I know of. You can place frames in supers and put the supers above the inner cover but it is hard to divide up nectar for all your hives. Whatever one does they should not leave frames out against the barn wall for the bees to rob out. Yellow jackets, bumble bees and assorted other bugs will arrive at the feeding station. *Rick Cooper, Master Beekeeper*

VARROA: FIGHT THE MITE

by Jane Dunstan

This month we will examine the I of **FIGHT THE MITE**: *Ignore the temptation to wait until you see mite damage.*

What specifically is meant with the reference to mite damage? Mites are widespread in the colony. Even if alcohol washes result in a zero mite count, they are present in the brood and the colony. Especially during the fall months colonies will become heavily infested with mites as honey bee population decreases and mite population increases.

Signs of progressive varroosis include:
-phoretic mites visible on the honey bees.
When this occurs the colony's health is severely compromised and the likelihood of

that colony surviving a winter is slim.
-chewed down brood is evidenced when nurse bees attempt to rid the colony of larvae which has been parasitized by the mite during its development
-deformed wing virus is easily recognized in a colony. Young bees are born with crippled, deformed wings. They rarely live for more than a few days crawling on the frames or on the outside of the hive.
-small population size and spotty brood
-sunken brood is characterized by larvae slumped on the bottom side of the cell.
-decrease in the life span of the honey bee during spring, summer and fall months

The ultimate signs of mite damage in a colony is a reduction in population and colony health. Be regimented in your hive management strategy and perform alcohol washes routinely to assess mite thresholds and treat.

An ounce of prevention is worth a pound of cure...

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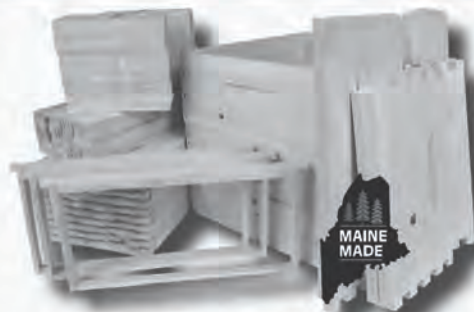
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