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The Bee Line

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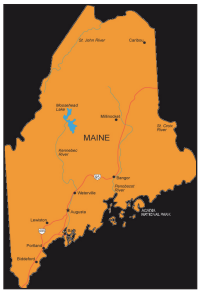
2018/2019 Beekeeper Survey Summary

by Jennifer Lund



For the past three seasons, beekeepers have reported their losses and management practices via an online survey administered by the Maine State Apiary Program. This data has been important for identifying trends, recognizing when and how losses occur, and determining where to focus education and outreach activities in the future.

A summary of the 2018/2019 survey was reported in the last issue of the MSBA Bee Line. This report is a more in depth look at some of the trends in losses, Varroa monitoring, and Varroa control over the last three seasons.

There were 172 respondents (representing 1122 hives) in the 2016/2017 survey, 212 respondents (1156 hives) in the 2017/2018 survey, and 360 (1915 hives) in the 2018/2019 survey. Overall losses were 45.0% in 2016/2017, 43.4% in 2017/2018 and 45.2% in 2018/2019.

The counties with the average highest losses from 2016-2019 were Aroostook (79.7%), Washington (78.3%), Androscoggin (60.7%), and Oxford (54.3%). The counties with the lowest average losses between 2016-2019 were Waldo (23.9%), Hancock (28.4%), Piscataquis (29.6%), and Lincoln (30.6%) (Table 1).

Table 1: Hive Losses by County

	2016/2017		2017/2018		2018/2019		2016-2019		
County	N	Loss (%)	N	Loss (%)	N	Loss (%)	Summer Loss (%)	Winter Loss (%)	Total Loss (%)
Androscoggin	7	52.7	9	26.4	13	88.7	6.3	54.5	60.7
Aroostook	1	100	5	72.7	7	77.6	12.7	67.1	79.7
Cumberland	57	47.8	57	40.9	94	54.6	7.4	39.1	46.4
Franklin	4	43.5	3	16	4	71.4	5.6	28.9	34.4
Hancock	9	50.1	9	24.6	16	25.9	2.7	25.7	28.4
Kennebec	13	53.9	19	43.8	26	30.4	5.1	31.6	36.8
Knox	3	3.0	12	38.9	20	38.2	13.4	22.8	36.2
Lincoln	2	75	11	46.2	34	26.2	3.8	26.9	30.6
Oxford	7	69	11	48.7	21	52.2	7.1	47.3	54.3
Penobscot	22	63.8	22	53.4	36	31	3.4	37.3	40.8
Piscataquis	1	50	1	0	4	44.4	7.4	22.2	29.6
Sagadahoc	6	62.5	9	50	10	27.7	9.6	27.9	37.5
Somerset	5	85	2	100	13	36.4	0.0	46.0	46.0
Waldo	8	65.2	9	21.9	15	23.9	6.3	17.6	23.9
Washington	1	94.1	5	89.7	9	60	11.3	67.0	78.3
York	26	64.7	28	47.9	38	38.6	7.4	35.4	42.8

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Varroa mites and their associated viruses were the number one reported cause of winter hive mortality in 2016/2017 (29.7%) and 2018/2019 (26.7%). It was the second reported cause in the 2017/2018 survey (21.7%). Beekeepers not monitoring for Varroa experienced higher average losses than beekeepers who did monitor (Table 2). Beekeepers using alcohol washes as their monitoring method experienced lower losses than those using other methods (bottom board drops, sugar shake, drone brood inspection, visual inspection, etc.).

Table 2: Losses experienced by beekeepers using different methods to monitor for Varroa mites.

	Overall		No Varroa Monitoring		Varroa Monitoring		Alcohol Wash		Other Monitoring Method	
Year	n	%	n	%	n	%	n	%	n	%
2016/2017	172	45.0	77	45.8	95	44.6	19	39.0	76	49.7
2017/2018	212	43.4	74	59.9	136	38.8	40	28.0	96	47.5
2018/2019	360	45.2	119	47.1	236	44.6	112	38.0	124	51.0

Beekeepers that treated for Varroa mites experienced lower losses than those who did not treat (40.3-43.9% vs 76.2-76.3%) (Table 3).

Strategies to control varroa mites are often broken up into two categories: prevention and intervention. Prevention measures primarily rely on disrupting the mite lifecycle, slowing mite population growth. These methods are not intended to eliminate all mites in a hive but can maintain mite populations at low levels. Prevention methods include drone brood sacrifice, brood interruption, using screened bottom boards, etc. Intervention methods are used when mite infestations have reached treatment level/threshold and include all the registered miticide treatments.

Beekeepers who used both preventative and intervention control methods (37.5-40.6%) experienced lower average losses than those who used only preventative (81.5-86.7%) or only intervention methods (39.1-47.0%) (Table 3).

Table 3: Losses experienced by beekeepers using different Varroa management strategies.

	Treated for Varroa		Did not Treat for Varroa		Prevention Only		Intervention Only		Prevention and Intervention	
Year	n	%	n	%	n	%	n	%	n	%
2016/2017	137	40.3	30	76.2	5	81.5	99	39.1	38	40.6
2017/2018	187	41.6	25	77.6	3	83.3	140	42.3	44	38.9
2018/2019	314	43.9	35	76.3	7	86.7	227	47.0	87	37.5

Autumn Checklist

•Wise, timely management decisions AND interventions in the fall can contribute to successful overwintering of your hives

•Not so much what we do but WHEN we do it.....

•Anticipate what is going to occur based on what our season has been

•Before extracting, CHECK YOUR HIVES for honey stores. Based on dry conditions in some areas, you may need to supplement bees' food reserves if colonies are light on stores

•Assess amount and position of honey stores

•Evaluate size of population: booming vs struggling

•Verify presence of queen

•Assess hive health

•Evaluate and treat for mites

•Anticipate robbing behavior and act proactively to prevent it

•Place mouse guards and reduce entrances

•Consider the type of winter food stores you will provide for insurance: Mountain camp? Sugar candy pies? Candy boards?

•Provide for ventilation in your hive

•Review your year in beekeeping and think about what you might do the same or differently next year....

Jane

Keeping Time

by Michael Donihue

I attended a conference in Northern Europe this spring and discovered that one of the people seated across from me at dinner was a hobby beekeeper from Estonia. As you might imagine, the conversation at the table quickly turned away from the subject matter of the conference to the challenges of managing honey bees in our two apiaries. This gentleman manages 10 hives that he originally inherited from his father several years ago (his father routinely managed 50). Like me, Varroa destructor is the bane of his beekeeping existence. He now treats in the fall with an oxalic 'steamer' that looks a bit like a cross between a very large hair dryer and hand-held vacuum.

After years of trying various other methods, including 'natural' treatments imported from Russia, he now reports very good success at over wintering his bees. Managing an apiary can be an even bigger challenge for Estonian beekeepers because they are that much farther north than our colonies here in Central Maine. They import queens in the spring from Romania, as local queens are not readily available until late June. His bees forage on raspberry, white clover, fireweed and heather. Linden is the most prized of all honeys in his region, but a good nectar flow is highly weather dependent and only seems to occur every seven years or so. By early September their growing season has ended and many Estonian beekeepers have prepped their hives for winter.

This conversation made me realize how little I know about beekeeping in other countries, yet I was struck by how similar his experience was to ours. So, I decided to do a little research and see if I could learn from, or about, other hobby beekeepers around the globe. Here are a few highlights of what I discovered from parts of the world not often mentioned in beekeeping journals.

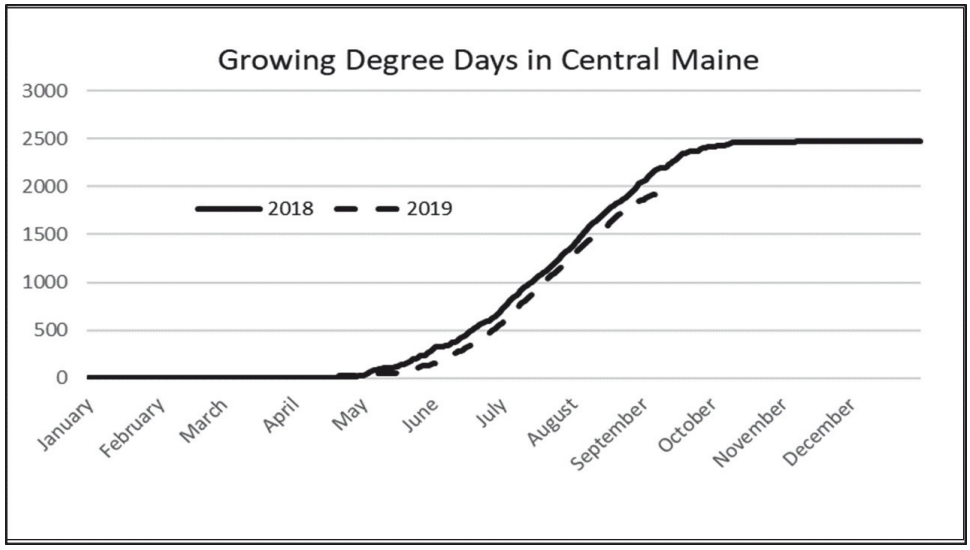
In Ethiopia, honey is a source of national pride with many different local varieties. The Lalibela region, regarded as the Christian capital of the country, is well known for its "white honey" which tends to crystalize quickly. Mar is a healing tradition within the churches of Lalibela where Holy Honey produced by local bees is used in healing rituals. Honey in Ethiopia comes from many different flowers and trees, including Eucalyptus. The flavors of honey in the marketplaces reflect the amount of smoke used at harvest and the method of extraction, in some cases including dead bees on comb is popular. Many people in both rural and urban areas have a bee box or two and top-bar hives are popular. Swarm catching using a hollow log hung from a tree is also common. Ethiopa has a stingless honey bee called Tazma (Apis

mellipodae) that lives in the ground and produces an expensive, strong flavored honey which is used primarily for medicinal purposes. Ethiopia's traditional version of mead is called "Tej" and seems to be popular pretty much everywhere in the country.

I stumbled upon a report that in Berlin, local officials are soliciting round-the-clock help from swarm-catchers (schwarmfänger) to help manage a dramatic increase in swarms resulting from a surge in popularity of beekeeping. With an estimated population of more than 10,000 colonies in the city, hives are now common not just among homeowners and apartment dwellers, but also on office buildings and hotel rooftops. As a result, the Berlin Beekeepers Association has raised concerns over a lack of adequate bee habitat and sources of nectar and pollen in the city. Swarms in doorways, city parks, and on parked vehicles are increasingly common throughout the year. Observable climate change and environmental threats to honey bee health has led to a huge increase nationwide in membership in the German Beekeepers' Association.

Beekeeping is also popular in Japan. Their native honey bee, Apis cerana japonica, is not as productive as Apis mellifera in terms of honey production, but is preferred by many hobbyists interested in natural beekeeping. Similar to the Western honey bees, the Japanese honey bee also does a waggle dance to indicate nectar sources. The Japanese honey bee has good mite resistance but is not as easily domesticated as our Western honey bee. Swarm catching is a common practice in rural areas by beekeepers interested in managing native honey bees. Beekeeping using traditional Western practices – Apis mellifera in Langstroth hives – is popular because Western honey bees are easier to manage and obtain a sizeable honey crop. However, the scourge of beekeepers in Japan is the Japanese Giant Hornet (Vespa mandarinia) which can decimate a strong Western honey bee colony in a matter of hours. Japanese honey bees have evolved defense strategies against the Giant Hornet that Western bees have not, so you generally don't find wild swarms of Apis mellifera in Japan. Beekeepers in Japan, like their U.S. counterparts, are concerned about the growing use of neonicotinoids which has reportedly tripled in the past 15 years as both homeowners and commercial growers use it to control cockroaches and other pests.

Here in Maine as the beekeeping year comes to a close, good management practices in October and November are critical to successfully over wintering a colony. Despite a month-long treatment using HopGuard II in August, we had a varroa mite explosion in our apiary in early September and decided to follow up with an oxalic acid drip. The question on most Maine beekeepers' minds this time of year is when to batten down the hives for the winter. I'm going to continue to calculate growing degree day (GDD) totals for the year and watch for a plateau toward the end of October as a sign that the growing season has come to an end and it's time to put a homasote board beneath our hive covers and an insulating wrap around the outside in preparation for the winter months ahead.



Overwintering Hives

by Mike McNally

It has become a cliche to say “ask 100 beekeepers about beekeeping and you will be given 110 different answers”. I have been a beekeeper for about 10 years and if you had asked me each year how to overwinter bees you would have been given 10 different answers, depending on the year and my success or lack thereof, from the year before.

Beekeeping is an evolving hobby as we continue to be influenced by legal changes, research articles, education, other beekeepers, etc. It is ironic that bees have been in existence for some 40 million years and have done pretty well on their own. It has only been in the last few hundred years that we have been helping out, also known as interfering, manipulating, making errors and painting ourselves into corners. Unfortunately it now appears that our interference is a must in order for the bees to survive.

The following is my opinion on how to overwinter bees. These are the top 10 items as beekeepers we must address to optimize winter survival.

1. Control Varroa Mites
2. Hive Ventilation
3. Control Varroa Mites
4. Mouse Guards
5. Control Varroa Mites
6. Fall Feeding
7. Control Varroa Mites
8. Hive Wraps
9. Control Varroa Mites
10. Other Hive Manipulation

Yes, I am being sarcastic however if you do not control the varroa mite population the rest is all for naught. In the next day or two I will be treating my hives with Formic Pro. I have used Formic Pro for the past two years and have generally been happy with the results. This past year I managed to get six out of eight hives through the winter and the year prior to that, seven out of eight. A careful post mortem was performed on the two deadouts that I had this past winter and it appeared both expired as a result ot queen issues. Last fall I applied Formic Pro at the beginning of the last week in August. Three to four days later the temperatures reached into the high 80s to low 90s. This was above the recommended 50 to 85 degree range. It was my thought process at the time that if something happened to some of the queens there would be plenty of time for the affected hives to make new ones. This apparently did not happen. As a result, this year I am treating later but using the alternate method of one Formic Pro strip followed by another strip 10 days later rather than two strips at a time for 14 days. Hopefully this will be less harsh on the queens. I use Oxalic Acid Vapor in the spring of the year on varroa mites. I create a nuc with the old queen and open brood only along with shaken nurse bees. I treat this immediately once with OAV. The other part of the split with capped brood I treat with OAV once 25 days later. At that point it is open brood only making the treatment very effective. I also treat again with OAV late fall, usually in November when I think there is no capped brood in the hive.

The next most important issue after mite control is ventilation and control of humidity inside the hive. The winter cluster produces a lot of moisture. This moisture either needs to escape out of the hive, be absorbed or both. I use homasote boards while others have used wood shavings for moisture absorption. The homasote board is placed on top of the inner cover with the notched side down while the notched side is up on the inner cover. This creates a neat little trough for moisture escape. The homasote board itself is great at absorbing moisture. As a little side note, three to four years ago I unintentionally failed to put a fiber board on three nucs. All three were dead after the winter's first cold snap. I also drill a ⅝” hole in the upper left corner face of all my brood boxes and honey supers for additional ventilation.

Cold!!! What about the cold???? I hear you. Again, in my opinion, ventilation and control of moisture is more important than the winter cold. Bees can tolerate cold fairly well but add excessive moisture and it is almost certain death for the hive. I do paint my hives a dark color to take advantage of solar heat absorption but I have found little difference in hive survival whether wrapped with insulation or tar paper or not.

My next step in winter prep I'm sure will be controversial. I remove my entrance reducers completely and replaced them with ½ “ hardware cloth, 1 ½ “ X width of the entrance. This is folded in and wedged into the entrance opening. This prevents mice and shrews from getting in. It also improves ventilation and allows the bees to easily remove their dead on mild days. My job of cleanout is also easier. To reduce the opening simply place an appropriate sized wooden block on the landing board in front of the entrance. This idea was borrowed from Michael Palmer. The ⅝” vent holes are also covered with the same size hardware cloth and stapled in place. The bees can come and go but the varmints are prevented entrance into the hive.

Finally, to feed or not to feed? That is the question. I have not fed sugar syrup in the past two years unless it was an emergency situation. New and recent research suggests that feeding sugar syrup may be detrimental to honey bee longevity. Sugar syrup does not contain two important phytochemicals that are found in honey, p-coumaric acid and quercetin, both ubiquitous in nature. Both play a vital role in turning on the honeybees' immune system, allowing the bees to better fight the deleterious effects of pesticide toxicity. In the case of p-coumaric acid, it is necessary in order to suppress worker bee development of queen characteristics, i.e., laying workers.

Jumping to the other side of the aisle, it is difficult to dispute the good results of bulk sugar syrup feeding in the fall, both by Paul Kelly from the University of Guelph, Ontario, and Ian Steppler the Canadian Bee Blogger.

Ask me again next year my opinion on successfully overwintering bees. I am sure it will have changed.

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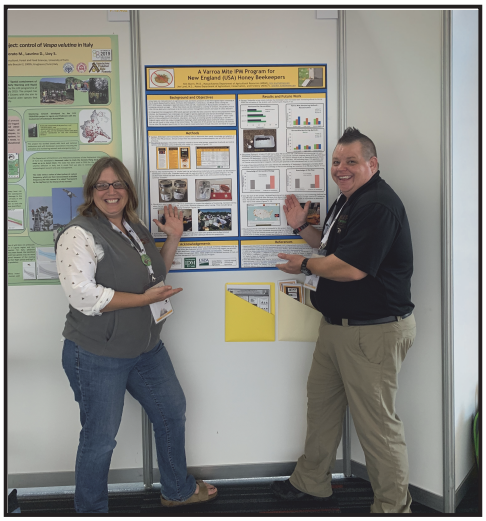
Apimondia

by Jane Dunstan

The 46th International Apicultural Congress was held September 8-12 at the Palais des Congres de Montreal. The conference venue was large and expansive and host to thousands of participants from all corners of the globe. I was most intrigued by the many languages spoken by those in attendance.

The conference officially began on Sunday evening with welcome addresses and a performance by an Inuit band called the Jerry Cans, known for their throat singing. The Scientific Program was designed around general symposiums or topics: for example, Detection and Prevention of Honey Fraud, Recent Advances in Honey Bee Biology, Impact of Pesticides on Bees, Apitherapy, Honey Bee Genomics, Status and Conservation of Pollinators, to name just a few. Each day, the morning sessions began with a keynote speaker followed by presentations throughout the day by scientists and researchers. Each presenter had approximately 15 mins (some had 30 minutes) to present the topic of their research, their hypothesis, the methods of the study and the outcomes, both predicted and actual. Attendees could move among the different topics to attend presentations of interest. Presentations occured throughout the day in two hour blocks of time with the formal day ending at 5:30 in the afternoon. There were opportunities to attend special workshops which were held during the week. Several of the workshop sessions included honey crystallization and defects, prevention of allergies and practical uses of bee venom, practical uses of "soft" beehive products and others.

Poster presentations were available for viewing with a new display of posters which often corresponded to the symposia theme for that particular day.



A Varroa Mite IPM Program for New England (USA) Honey Beekeepers. Poster presentation prepared by both Kim Skyrm, PhD and our own Jennifer Lund.

The vendor area, which was called ApiEXPO was home to almost 200 international vendors. Unlike vendor areas that we are most familiar with where you can buy the products that are displayed, these vendors primarily showcased their products in elaborate displays with a large open area where you were encouraged to sit and talk with them.

Russian musicians and exhibitors in native dress

Many vendors had a host of products available for sampling. The array of different honeys from around the world was impressive, each with their own distinctive taste and texture.

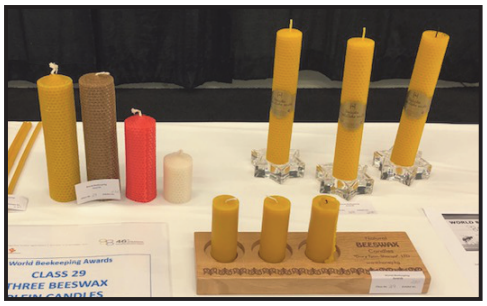
I was most intrigued, and hesitant, with the samples of propolis and pollen which you were encouraged to sample as health related products in the form of tinctures or solid ingredients. To purposely illustrate my naivete with these related products, I came upon a booth where a gentleman wanted very much to explain to me about the value of bee bread that was produced for human consumption, not for the bees. He stood there with a spoon of solid, small beads in varying colors and wanted me to taste it. I was hesitant but did not want to appear rude so took one tiny bead and placed it on my tongue which I promptly removed. It was bitter and strong tasting and I wondered hours later, what I had actually tasted!

Tanzania vendor who talked about the log bee hives which are hung from limbs in trees for protection from honey badgers.

Within the ApiEXPO was the display of international awards for mead, metheglin, melomel, honey, liqueur, creams and lotions, baskets, beeswax candles, art and a host of items in other categories.

Many samples were automatically disqualified for further judging due to one of four reasons: honey adulteration, presence of pesticides, presence of antibiotics and HMF, hydroxymethylfurfural, which is a product which results from the breakdown of fructose, which is formed slowly during storage and/or quickly when honey is heated.

I spoke with an Apimondia staff person who explained that each product is sent to a laboratory and tested for honey adulteration, pesticides and antibiotics. If found present in the samples, the entrant is then made aware of what was found. There were numerous presentations during the week on honey adulteration and honey fraud.



The presentations were generally interesting from the vantage point of becoming more aware of the ongoing research in the field of honey bees in so many areas. I don't believe I came back with one very specific plan or strategy that I would implement tomorrow based on the presentations.

I found the keynote address by Dr. Thomas Seeley on Darwinian beekeeping to be fascinating. The basic tenet is that bees are the best beekeepers and proponents of his theory allow the bees to use their beekeeping skills fully. He compared their original environment (genetically adapted to their location, habitation in small nest cavities, frequent swarms, nest entrance high off the ground, diverse pollen sources etc) to our current circumstances where bees are not always genetically adapted to their current residence, live in crowded locations in super sized nest cavities, with entrances low to the ground and often with non diverse pollen sources to forage from.

He offerd some suggestions on how best to adapt current practices to this model, perhaps a topic for a future article.

Marla Spivak gave an excellent presentation on Breeding Honey Bees for Disease and Mite Resitance. She discussed how bees select for colony health and the tenet of social immunity; how social insects keep their colony healthy. The Care and Kill strategy she discussed was based on a study performed on ants. Honey bees' hygienic behavior is seen in the detection and removal of disease in the colony.

My hope is to share some of the notes and information which I gleaned from the many presentations I attended. It was an enjoyable yet exhausting escape into the international conference of Apimondia.

Mites, Camera, Action...

by Patrick Hurley

My name is Patrick Hurley and I am a fourth year undergraduate student at the University of Maine. This past summer, I had the opportunity to work as a part of the Sweet Spot Project's Sustainable Food Systems Research Collaborative, a USDA funded research project through the UMaine Honors College. This project focuses on beekeeping and maple syrup production in Maine, aiming to better understand the production and marketing challenges and opportunities for small and medium-scale beekeepers and maple syrup producers. My research topic for the summer was varroa mite treatments.

Two popular mite treatment choices for hobbyists, sideliners, and commercial beekeepers alike are formic acid and oxalic acid. I worked with Lincoln Sennett of Swan's Honey to explore a new approach to these treatments. Our study involved 72 colonies in two yards with three different treatment groups, all in Monticello. We tested whether treating back-to-back with formic and then oxalic might be more effective than just formic alone. Below is a general timeline of our treatment schedule.

Photo courtesy of Patrick Hurley

For formic acid, we used Mite-Away-Quick-Strips and for oxalic acid, we used the ProVap 110 by OxaVap. Formic acid treatments last for seven days with MAQS. Our findings from using MAQS support previous information in the literature that found formic acid treatments, particularly MAQS, are effective against mites but can be very stressful on the colony and the queen especially. A total of five hives in both yards lost their queens during the formic acid treatment. Most, if not all, open brood was killed during the first three days of treatment and queens started to lay again on day four or five after treatment, with very few starting again on day three.

It takes about 11-12 days for an adult worker bee to hatch out after the cell is capped. It takes about eight to nine days for a cell to be capped once the egg is laid. If day one is the start of the formic treatment, then there won't be uncapped brood until day four or five, and that brood won't be capped until about day 12. By treating with oxalic acid on day 11 or 12, there is a chance to target both the mites that survived the formic treatment within capped cells and emerged after MAQS were removed, and the few mites that may have survived the formic treatment in the phoretic phase. The phoretic phase lasts from five to 11 days and since formic delays brood development and egg laying, cells won't be capped until day 12 or 13, increasing the likelihood that those phoretic mites will be killed by the oxalic acid before they can crawl into a cell about to be capped.

Alcohol washes were done before any treatment, after the formic treatment, and again after a full brood cycle, about a month

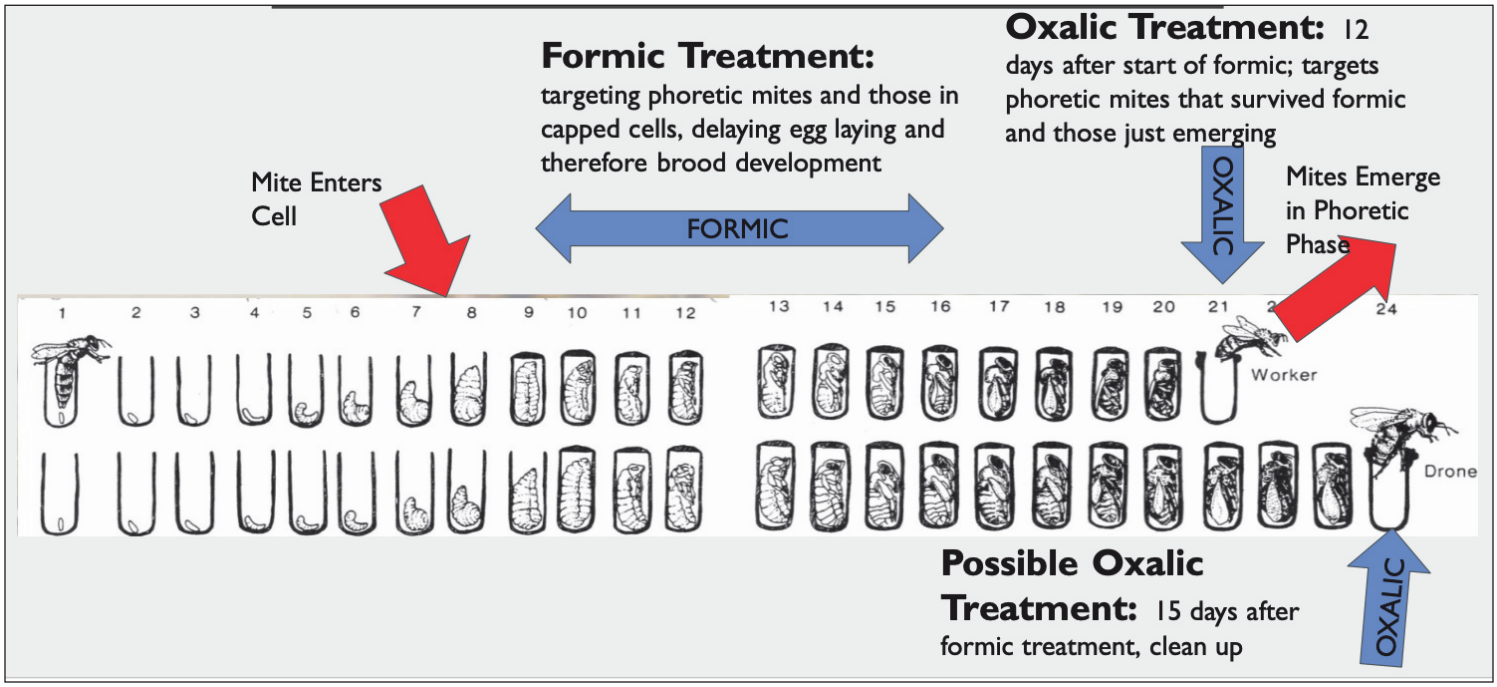


Photo courtesy of Patrick Hurley

later to compare infestation levels during treatments. Based on what we found during initial hive inspections, colonies were put into three groups. Those that swarmed recently and had no capped brood were put in the oxalic only group. All other hives in Yard A were put in the formic and oxalic group. Lastly, all other hives in Yard B were put in the formic only group to have a baseline to compare to.

Photo courtesy of Patrick Hurley

We also found the Provap 110 to be a very easy and quick tool for applying oxalic acid vapor, however it is expensive. We found that even without brood, multiple oxalic treatments are necessary to bring mite levels down below treatment threshold. As for the FA/OA treatment group, the consecutive treatments were not as effective as we had hoped, however there were still some positive results. The results from the FA only group suggest that formic acid alone was a more effective treatment than combining formic acid and oxalic acid, however I believe there are more factors at play. Since all of the FA/OA colonies were in Yard A and Yard A contained more than just the experimental hives, it is likely that mite drifting and robbing influenced the infestation levels. The additional oxalic treatment given to this group did cause a further decrease in the infestation levels after the MAQS treatment. While this decrease wasn't very substantial, it suggests that in a more isolated yard where mite drifting is not a concern, oxalic acid has the potential to knock mite levels down even further after a formic treatment. Furthermore, since there is a gap in the treatment timeline where mites can emerge after the oxalic application, an additional application on day 12-15 after formic treatment may have better efficacy.

Moving forward, we plan to sample the colonies in all three treatments again in the beginning of October to see how infestation levels change with more time post-treatment. I will also be presenting these results at the MSBA meeting in October and continuing to work on the study as a part of my Honors Thesis. Feel free to email patrick.hurley@maine.edu with any questions, comments, or concerns!

Attention All Beekeepers In Maine

PCBA Beekeeping Symposium on Sat, Nov 16th

Penobscot County Beekeepers Association (PCBA) would like to invite you to join us.
We will feature the following guest speakers:
Ian Steppler, Tucka Saville and Jennifer Lund.

Venue: Hampden Academy located at 89 Western Ave. Hampden, ME

We are planning an all day catered event and will be providing lunch for those who pre-register. Cost is $25.00 per person. There are several local restaurants if you choose to register at the door on the day of the event.

If you have any questions, you may contact PCBA at PCBAMaine@gmail.com or contact Peter Cowin (207) 299-6948, Jason Peters at (207) 735-5780

Raffle items and donations from individuals as well as business are both welcomed and appreciated. In return business cards, small signs or banners can be placed for recognition of your donation.

The Horizontal Langstroth

by Thomas Norgang

Going sideways instead of up!

One of the first decisions required by a new beekeeper is what kind of hive you will choose to keep your bees in. When I attended KLCB's Beginners' Bee school it was recommended that we start with a standard Langstroth style hive and I believe that was very good advice. The Langstroth hive is probably the most popular and common type of beehive in North America. For a beginning beekeeper, Langstroth hive equipment is readily available and the vast majority of publications and Internet sources refer to Langstroth style hive management strategies.

However as time passed I was often reminded of the humorous (but possibly true) remark I first heard in those early days of beekeeping school: "All beekeepers have bad backs...or will." A full deep box of honey can weigh about 100 lb. and each hive inspection involves "boxes off and boxes back on". With this in mind, I recently became intrigued with several articles I found referring to the horizontal hive or Long Langstroth hive which has been popular in Eastern Europe for many years.

My four standard hives and my new Long Lang hive at the end. Photo courtesy of Thomas Norgang.

The Long Langstroth design is basically a long chest type box that contains 32 standard deep frames. Think of three deep Langstroth boxes set side-by-side rather than stacked one on top of another. It is placed on a raised stand set to a height that is about waist level. Now here is the great part: when you're doing inspections you never lift more than the weight of one single deep frame! So my back immediately cheers and votes "Yes!"

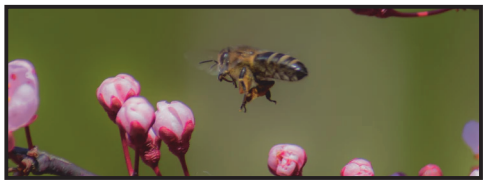
The top cover is hinged and I use three standard inner covers on top of the 32 deep frames. Photo courtesy of Thomas Norgang.

When inspecting you only need to remove the inner cover over the frames you want to see. The bees always seem to concentrate their brood in the first ten frames on the right (near the entrance) so it usually is easy to find the queen! Photo courtesy of Thomas Norgang.

However, as we all know, the benchmark for any type of beekeeping hive in Maine is "Can you overwinter bees in it?" Through an Internet search this summer I came across Caroline Abbott's website (https://www.abbottsustainablefarms.com/long-langstroth-hive). She is a beekeeper in Michigan (ahh, a beekeeper with winters similar to Maine!) and on her website she discusses her experiences keeping and managing Long Langstroth hives. Her site also provides an excellent set of free plans and building photos for making your own Langstroth hive. At the time I had four strong standard Langstroth hives and I had promised myself that I wasn't going to add any more hives. I couldn't stop thinking about that horizontal hive design. I had the plans, the boxes were not getting any lighter and then I captured a swarm from one of my hives! So I temporarily put the swarm in a single deep, built a Long Langstroth hive and in July I transferred the bees to their new home.

Here is a view of the entrance with a metal mouse guard in place. I modified Caroline's plans to include a screened bottom board with two separate inspection boards, one on each end, to check for mite drops and to see where the cluster is in winter. Photo courtesy of Thomas Norgang.

The bees are doing great right now and I will soon be preparing the hive for winter. I plan to use an alternate top cover for the winter that will allow me to utilize three quilt boxes above three feeding shims. I'll also add extra insulation to the outside for overwintering. It will be an adventure and I hope to be able to post some successful results next spring.



October 12, 2019

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

2019 MSBA Annual Meeting

Brunswick High School,
116 Maquoit Rd, Brunswick, ME

Sponsored by Sagadahoc County Beekeepers

Dr. Jamie Ellis

Dr. Frank Drummond

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, David Spicer
9:00 - 10:30	**Dr. Jamie Ellis:** *"What is killing our honey bees and what can we do about it?"*
10:30 - 10:45	Break
10:45 - 11:30	**Dr. Frank Drummond:** *"Wild Blueberry Pollination-Honey Bees, Native Bees, and Clonal Self-Importance"*
11:30 -12:00	Business Meeting
12:00 - 1:15	Lunch
1:15 - 1:45	**Jennifer Lund:** Beekeeping in Maine
1:45 - 2:15	UMO Research Assistants Patrick Hurley: *"Mites, Camera, Action…* Adele Wise: *"Bees Aren't The Only Workers…* Ruli Setiawati: *"A Penny for Your Honey…*
2:15 - 2:30	Break; Last raffle ticket sales
2:30 - 4:00	**Dr. Jamie Ellis**: *"Honey Bee Biology"*
4:00 - 5:00	Honey Tasting awards, raffle and close

Registration for 2019 MSBA Annual Meeting

NAME/S _____

STREET _____ TOWN _____ STATE _____ ZIP CODE _____

PHONE _____ EMAIL _____

Before October 5 _____ @ $35.00 each Total: $ _____

After October 5 _____ @ $45.00 each Total: $ _____

I am bringing _____ guests (included above)

2019 MSBA Membership is required to attend the Annual Meeting; please submit membership dues if necessary.

2019 MSBA Dues: New ☐ Renewing ☐ Current ☐

Single Membership _____@ $15.00 each Total:$_____

Household Membership _____@ $22.50 each Total:$_____

Total Registration and Membership Enclosed $_____

Please make check payable to MSBA and mail to:

MSBA Annual Meeting
c/o Daniel Dolan
2 Blueberry Lane
Brunswick, ME 04011

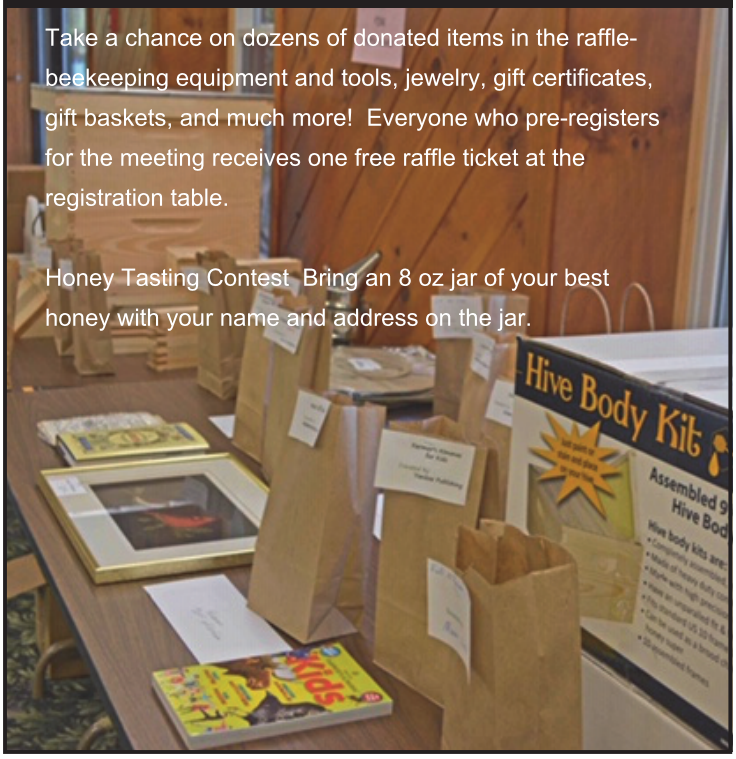
Early Bird Registration Deadline: October 5, 2019

Chapter(s) you are a member of:

_____

_____

Join us for the fun! Great items to be raffled! Participate in the Honey Tasting Contest!



Take a chance on dozens of donated items in the raffle- beekeeping equipment and tools, jewelry, gift certificates, gift baskets, and much more! Everyone who pre-registers for the meeting receives one free raffle ticket at the registration table.

Honey Tasting Contest Bring an 8 oz jar of your best honey with your name and address on the jar.

Maine State Beekeepers Association

THE BEE LINE | Newsletter of the MSBA

Jane Dunstan, Editor
612 N. Newcastle Road
Newcastle, Maine 04553

mainebeekeepers.org

mainebeekeepers.org

Join the Maine State Beekeepers Association today — via the MSBA website or this snail mail form!

LAST NAME _____ FIRST NAME _____ MIDDLE INITIAL _____

STREET _____ CITY/TOWN _____ STATE _____ ZIP _____

PHONE _____ CELL _____ EMAIL _____

Membership Type*	Cost
☐ Annual Individual	$ 15.00
☐ Annual Family	$ 22.50
☐ 5-Year Individual	$ 68.00
☐ 5-Year Family	$ 100.00
☐ Lifetime Individual	$ 180.00
☐ Lifetime Family	$ 270.00
☐ Extra Gift Contribution	$_____
Total Payment	$_____

*Membership is per calendar year (**not** pro-rated) and includes a subscription to *The Bee Line,* the MSBA's newsletter. **Current membership is a pre-requisite for attending the MSBA Annual Meeting.**

Current Age	# of Years Beekeeping	Most # of Hives	Current # of Hives

PRIVACY POLICY: Member information *will be* provided to other MSBA Members unless specified otherwise here: ☐ No, please do *not* share my contact information with other MSBA Members.

Please make check payable to:

Maine State Beekeepers Association

Send to:

Keith Kettelhut, *Treasurer*
189 Auburn Pownal Road
Durham, ME 04222

treasurer@mainebeekeepers.org
207-926-5554

HONEYBEES NEED YOU!

This is a ☐ new / ☐ renewing membership (check one). How did you find out about the MSBA? _____