

The Bee Line



Newsletter of the Maine State Beekeepers Association | mainebeekeepers.org

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Queen Mandibular Pheromone

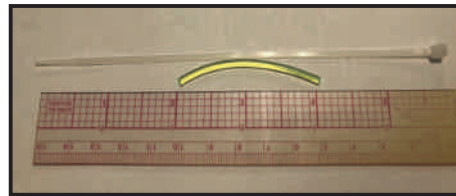
by Carol Armatis

All honey bees have a complex pheromonal communication system possessing at least 15 known glands producing a large array of chemicals. These chemicals are messengers used to elicit a response in other bees. The chemicals are either volatile (gas) or non-volatile liquids. The pheromones can be a single chemical or a mixture of many chemicals in certain proportions. Their functional effect can be temporary on the receivers' behavior, have long-term effects on the physiology of the recipient, or both. The latter is Queen Mandibular Pheromone (QMP) effect.

QMP is secreted by the queen and is one of the most important pheromones in the hive. It will consistently activate 'nursing' genes in workers, calm colonies, reduce stinging behavior, affect social and mating behaviors in all hive members, inhibit the ovary development in worker bees and inhibit queen rearing in the hive, promote stability and calming behavior of a swarm, attract worker bees to the swarm cluster, and help the swarm move to a new nest site.

In 1991, five researchers (K.N. Stessor, L.A. Kaminski, G.G.S. King, J.H. Borden and M.L. Winston) synthesized and patented synthetic QMP. Although the naturally occurring QMP contains over 10

components (probably more by now), the synthetic QMP contains five of the most proven active chemicals in a select ratio: 118 parts of 9-ODA: 50 parts of (-9) HDA: 22 parts (+9)HAD: 10 parts HOB: 1 part HVA. This product is available from Better Bee under the name TempQueen (see picture). The utilizations of synthetic QMP in our apiaries are multiple and will save money, time, and bees. The best part is you purchase it, keep in the freezer for three years and it still works!



*TempQueen with cable tie.
Photo courtesy of Carol Armatis*

The following are practical applications that I have found to work as well as some I haven't tried but come from trusted sources: Randy Oliver's Scientific Beekeeping web site; Dr. ML Winston's book: The Biology of the Bee; and Dr. Clarence Collison's Bee Culture magazine November 2014 article.

I) There is speculation that Synthetic QMP given to an established queen right colony in the spring may decrease the propensity to swarm. This is due to the increased QMP components. I've never tried this but if there is already the preparation, I would not waste the \$5.00; I would split that colony.

II) What if you get a three pound package of bees and you don't want the queen, but you want those bees to stay in your hive and make great comb (after being engorged with sugar syrup). Provide Synthetic QMP,

sugar syrup and some protein. In at least a week, there is beautifully drawn comb ready for that queen cell or mated queen.

III) So, you captured a swarm. How do you get those straggler bees? Use Synthetic QMP on a drawn comb frame with a small dose of lemongrass oil (if you have it, but not necessary). Place near the stragglers and watch them come to the frame!

IV) Queenless and laying worker colonies will benefit from Synthetic QMP until a queen cell or mated queen is available. If the laying worker colony has just a very small cluster of regular capped worker brood, even if there is spotty drone brood, there is hope. Place the Synthetic QMP where the normal worker brood is for a few days, if possible, before placing the mated queen in her cage or placing the queen cell near the capped brood.

V) You just split off five 3, 4 or 5 frame nucs and your ordered mated queens or queen cells are not coming for a week....yikes. Place Synthetic QMP on the frame with the brood. The nuc colony will have sufficient QMP levels to prevent queen cell building.



*Placement suggestion; higher as well
Photo courtesy of Carol Armatis*

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President's Message



Someone sent a message through MSBA's website a few weeks ago saying they'd been keeping bees for three years but hadn't yet managed to get a colony through winter. What are we doing wrong, they asked. I pondered on how to respond; not knowing specific circumstances made it difficult. Later that same day I read a question posed on Northeast Beekeeping's Facebook discussion group: "Has any one decision or person changed the way that you keep bees? If so, what or whom?"

This prompted me to reflect on my early years of beekeeping in the mid-2000s, with the uncomfortable reminder that I too had failed to keep colonies alive on my first three tries. Despite attending a beginner's course and making the acquaintance of a highly experienced beekeeper who was generous with advice and let me come along on inspection rounds, I floundered. Worse, I managed to send all those bees to the hereafter way before their time.

Flipping through journals I've been keeping since Day One, certain entries make me cringe now. On harvesting honey: "The fume board didn't work so well so I used a bee brush. But that made them really, really agitated, plus they were getting onto the frames in the container. When I went to bring it inside for extraction, it was humming loudly...lifted the lid and saw a huge clump of bees hanging off of it." On testing for mites: "I tried with no success to capture enough bees in a mason jar but it was insanity. The bees went crazy..." On seasonal management: "Took the reducer off today as it's in the low 80s" (it was the end of June). On assembling equipment: "Pulled out a frame of brood and it immediately fell apart in my hands – should have used glue."

I was determined to give it one more try, this time starting with a nuc instead of a package. When I related my 'bad luck' at the pick-up in May, the beekeeper told me that I wouldn't be successful until I committed to doing specific tasks at specific times, on the bees' schedule, not mine. Different times of year to feed, treating for mites based on sampling, putting supers on and taking them off... no procrastinating; no putting off until tomorrow what I should be doing today (or yesterday). That's not easy when work and family and other things

demand your attention, but I found that most of the time you can get pretty close to staying on target. I remember seeing a video of Randy Oliver working hives under a flimsy awning in pouring rain – and vowed never to use the excuse of waiting for perfect weather again.

So the answer to what changed the way I keep bees would be that nuc guy and what he told me. It made all the difference in their winter survival. But what has made me a better beekeeper is continuing to educate myself: through local chapter and state meetings; webinars, workshops, and open hive events; podcasts, online forums and the ultimate in beekeeping education — EAS's annual short course and conference. Learning never stops.

Oh, by the way – that nuc was the last time I ever bought bees.

Judith Stanton



Varroa Sensitive Hygiene

Varroa Sensitive Hygiene is a genetic trait (not a gene) and can occur in ANY race (Italian, Carniolan, Caucasian, or German Black Bee) or strain (Russian, Minnesota Hygienic Line, VSH line from Italian and Carniolan races, and Buckfast).

To learn the history of the discovery, the research and how the trait can be used in everyday apiaries, I suggest going to Dr. John R. Harbo's YouTube video before you spend \$50 on that mated queen: "Breeding and Testing Varroa Resistant Bees" or just search "Dr. John R. Harbo" and get all the videos. Another option is go to his website: www.harbobeecompany.com.

-A note from Carol Armatis



Bees of Maine

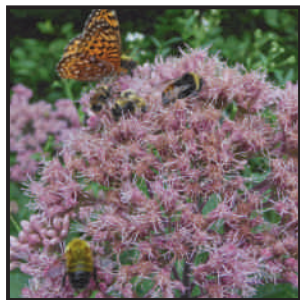
by Jennifer Lund

Nearly 4,000 bee species have been identified in the United States. In Maine, there are more than 270 species of bees, representing six families. Below we will explore the types of bees found in Maine and learn about their biology, foraging preferences and nesting requirements.

Family Apidae (Bumble, Carpenter, Cuckoo, and Honey Bees)

This is a very diverse family containing many of the most recognizable species of bees. Members of these families display a wide range of nesting, foraging, and social behavior.

Bombus spp. (bumble bees) are medium to large (0.4 to 0.9 inches long) in size, very hairy, and have yellow, white, black, orange or red bands and markings. Bumble bees are generalist foragers; visiting a wide variety of plant species throughout the season. Mated queens, from the previous

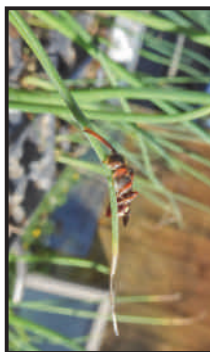


Many different bumble bee species on joe pye weed. Photo courtesy of Megan Leach

fall, emerge from their hibernation site in the early spring to search for a suitable nesting site, usually abandoned rodent burrows, hollow grass tussocks, and cavities in snag trees. Once a site is chosen, the queen builds several wax cups that she fills with nectar, pollen or a mixture of both. The queen lays eggs. After hatching, the larvae

are fed a mixture of pollen and nectar. Once large enough, the larvae pupate and emerge as adults. Once the queen's first batch of daughters emerge, she no longer participates in raising young and focuses solely on egg laying. The colony can grow to a couple of hundred individuals as the season progresses. In the late summer and early fall, the colony produces new queens and drones (males). After mating, the new queens locate a place to hibernate for the winter. The first hard frost kills the colony including the old queen. Check out the Maine Bumble Bee Atlas for more information on the bumble bees of Maine (<https://mainebumblebeeatlas.umf.maine.edu/>)

Nomada spp. (cuckoo bees) do not construct their own nests but lay their eggs in nests provisioned by other bee species. When the cuckoo bee larva hatches it consumes the host larva's pollen ball and if present, will kill and eat the host bee's egg and/or larva. Adult *Nomada* spp. come in a variety of different colors and patterns.



Sleeping nomada.
Photo courtesy of Megan Leach

They loosely resemble wasps in that they have reduced body hair, thick or sculptured exoskeletons, and large mandibles. Since they do not care for their own young, female cuckoo bees lack pollen collecting structures (the scopa). In Maine there are 27 species of *Nomada*.



Nomada
Photo courtesy of Megan Leach

Apis mellifera (western or European honey bee) is the only species of *Apis* found in Maine. Originally from Eurasia, the western honey bee is not native to Maine. With human aide, the western honey bee is now found on every continent except Antarctica and is the primary species maintained by beekeepers for honey production and pollination.



Honey bee on dandelion.
Photo courtesy of Megan Leach

In Maine there are approximately 1,200 registered beekeepers who maintain nearly 10,000 hives. The western honey bee is eusocial, meaning they have a single reproductive individual (queen) and the non-reproductive workers cooperate in caring for the young. Western honey bees have developed complex methods of communication between individuals using pheromones and the dance language. A single colony can house tens of thousands of individuals made up of three casts; the queen, workers and drones. Worker bees are the most commonly recognized members of the honey bee hive and the most abundant, making up around 99% of the individuals in a hive! They are female and responsible for all the activities in the hive, including foraging, cleaning, brood care, and guarding. Workers have modified ovipositors (egg laying structures) they use to sting. Drones are the male bees in a colony. They are larger than workers, are bullet shaped, have very large eyes and number in the low 100s. They have one job, to mate with queens from other hives. Since they do not have an ovipositor, drones are incapable of stinging. There is one queen

per hive. She is the only fertile member of the colony, laying between 1,000 and 2,000 eggs a day during spring and summer months. They have longer abdomens and smaller wings than worker bees. After emerging as an adult, the queen will take a mating flight, return to the hive and not leave again unless accompanied by a swarm.

Family Megachilidae (Leafcutter and Mason Bees)

Most Megachilids are solitary, where each female constructs and provisions her own nest. Their nests are typically divided into cells and each cell is provisioned with food (pollen and nectar) and an egg. Adult females are moderately sized and have rows of hairs under their abdomens called scopa that are used to collect pollen. In Maine there are approximately 49 species, representing eight genera. Of these, *Osmia* spp. and *Megachile* spp. are the most common.

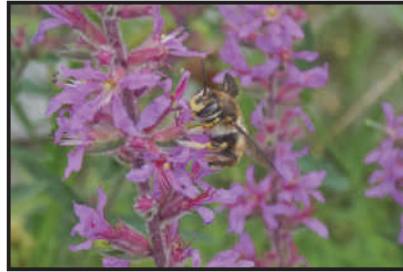


Leafcutter bee on lavender.
Photo courtesy of Megan Leach

Not all Megachilids found in Maine are native to the United States. The European wool carder bee (*Anthidium manicatum*, EWCB), is originally from Europe, Asia and Northern Africa. It was first discovered in New York State in the early 1960s and is now found throughout the US and Canada.

The EWCB is large (0.43–0.67 inches long), black with yellow spots, and has dusky wings. They are known as “carder” bees because they scrape hair from leaves such as lamb’s ears and use it to line their nests. Male EWCB are territorial and can cause

problems for Maine’s native bees by aggressively chasing other pollinators from their territories, monopolizing foraging resources and sometimes lethally injuring them.



Non native wool carder bee.
Photo courtesy of Megan Leach

***Osmia* spp.** (mason bees) are 0.2 to 0.8 inches long and often metallic blue, or blue-black. They have round, broad heads and abdomens. *Osmia* are early spring generalist foragers, making them important fruit tree pollinators in many areas. They nest in pre-existing cavities (hollow plant stems, abandoned beetle tunnels, gaps in bark, artificial nesting blocks, etc.) and use mud or chewed plant tissue as dividers between cells. *Osmia* are very docile and rarely sting when handled. In other parts of the United States several species of *Osmia* are commercially grown to provide pollination for fruit and nut production.



Osmia on *Salix* sp
Photo courtesy of Megan Leach

To gather the *Osmia*, artificial nesting sites are placed in areas where *Osmia* populations are high. Once the tubes are filled with *Osmia* pupa, they can be transported as intact nests (tubes, blocks, etc.) or as loose cocoons to orchards in need of pollination.



*Osmia*_Long_Pond
Photo courtesy of Megan Leach

***Megachile* spp.** (leafcutter bees) are 0.4 – 0.8 inches long, gray to brown in coloration, and often have abdominal stripes. They have stout bodies with flattened abdomens, are moderately hairy and have large mandibles. Leafcutter bees use them to cut leaves and flower petals to wrap brood in. Wrapping their brood in leaves protects larvae from predators/pathogens and prevents the desiccation of their food supply. Some species nest in pre-existing cavities (hollow plant stems, abandoned beetle tunnels, gaps in bark, artificial nesting blocks, etc.) while others in burrows in the ground.



Leafcutter on false indigo
Photo courtesy of Megan Leach

Megan studied bees for her master's degree at the University of Maine and began photographing them while doing field work. Photographing insects, and in particular bees opened her eyes to the many different species flying around and she's been working to increase her knowledge even after completing her thesis and degree. She shares her work through her website, instagram and facebook pages to increase visibility of native bees, other insects, plants, and habitats in Maine.

Website: <https://www.beesofmindme.com>
Instagram and Facebook @beesofmind
(<https://www.instagram.com/beesofmind/?hl=en>,
<https://www.facebook.com/BeesOfMind/>)

A Few Good Queens

by Mike McNally

This article is not going to be a review of queen breeding using grafting techniques, elaborate selection of donor queens, selection of queen cell building hives and queen cell finishing hives. I am a big believer in the KISS system of doing things (Keep it Simple Stupid).

As the title suggests, a *few* good queens, not, a *lot* of good queens. Prior to being a beekeeper I bred and raised racing pigeons. I bring this up since I think it will be easier to demonstrate where to find and how to get good honey bee queens by using a few guiding principles that I used during my pigeon racing days.

Belgium and the Netherlands seem to be the pigeon racing capitals of the world. Race results are reported and announced over radio and TV. Champion birds are as famous as Secretariat is to horse racing. The pigeon journals are full of beautiful pictures and high price tags for grandchildren of these champions.

Several people that I raced against were absolutely enthralled with these genetic lines. They would not consider racing anything else. At that time about 30+ years ago I did not have hundreds or thousands of dollars to spend on these beautiful imported pigeons. What I did have was an ugly looking dark checked cock bird with a band number 1929 on his leg. It matched the year of the great depression. After studying my records I realized that he was never first back on the short easy races. However, throw in greater distances, headwinds, rain and sometimes snow he would be there. He was a stayer!!!

Each fall our club held its big money race. We each selected two to three young birds from our special breeding pairs that we put up for auction. We donated the birds to the club and as members we bid on each bird with the highest bidder taking home and training that bird to their loft. These birds all had special ID bands placed on them when just six to seven days old, making it impossible to cheat. I was new to the pigeon racing game but not to genetics and breeding, so my entry was a young bird from the ugly dark checked cock mated to a fast middle distance grizzled hen. The youngster turned out to look very much like the mother. Because I was new to the sport I think most of the club members thought that the youngster would be mediocre at best. The bidding was low and you were allowed to buy back your own bird, which I did at a bargain price.

The youngster was a hen and her training went well. I entered her in three prep races and in each race she kept getting closer and closer to being my top bird back to the loft. I usually entered about 15-20 birds in each race. On the day of the big event I was feeling very hopeful. It was a 250 mile race and the release point was out of Quebec Canada. Since I had a lot of confidence in the breeding I bet her across the board. She won!!!

The next year was tough. I lost the mother and daughter to hawks in the spring. I was devastated. I still had the old ugly cock and ended up mating him to another middle distant hen. This one unfortunately looked like Dad. Anyway this youngster went to a club member and would be trained and flown out of his loft. After talking to my friend I found out the bird had already flown twice and was first back to his loft once and second the other time. We decided to share in the betting and split the winnings if any. We bet her across the board. She did not win the race but was second. Unfortunately for the owner of the winning pigeon, not a dime was won since not a nickel was bet on that bird. Yup, we won most of the money.

When I checked with my friend in the spring and inquired about this young hen I was dumbfounded to find out he had given her away. When I asked why, he said because she was not from a well known breeding line. This was after beating every other bird in his loft. Imagine, you have a pigeon in your loft that can fly a hole in the sky and you give it away because you don't know or like its breeding. This brings me to my point of this long winded story. Don't fall in love with a name, a line, beauty or anything else. Establish your criteria and work towards that goal.

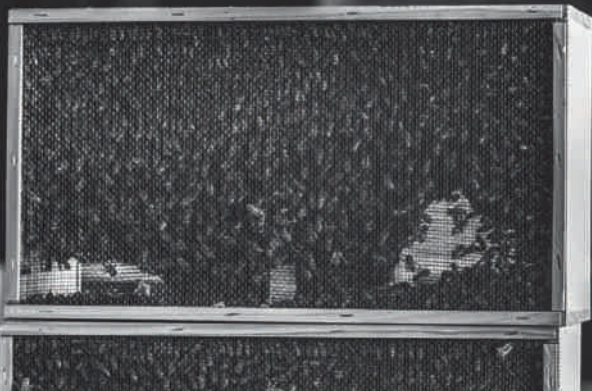
When considering honey bees the number one goal in my opinion is winter survivability. Do you own a hive or hives that have survived the winter? If so the queens in these hives are the ones you should consider taking splits from or raising new queens. For many people the next consideration would be honey production but for me, it is temperament. If they are nasty it will take most of the fun out of keeping bees. If you have multiple hives that made it through winter, the next consideration would be honey production. This is usually closely related to brood pattern and disease resistance.

Moral of the story: look in your own backyard first. It is okay to try different strains of bees but don't put all your eggs in one hive. Make your breeding selection based on your results not on looks or advertising hype. Who knows, you may develop your own line of super mutts. After all, aren't most beekeepers just mutts...



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Free to Bee You and Me: Telling the Stories of Maine Beekeepers

by Lily Gehrenbeck

Matthew Scott

For about 40 years Matthew Scott worked for the State of Maine, and as a biologist working for the Department of Fish and Wildlife and the Department of Environmental Protection, beekeeping was never a part of his day job. In fact, he described beekeeping as a “sort of avocation” that he “never let up.” But looking at what he has accomplished over 56 years of beekeeping, it could be said that his work as an apiarist has been somewhat of a second career.



Matt was first introduced to the honey bee through his undergraduate entomology classes. As his interest grew he began beekeeping as a hobby, and eventually got in touch with Harold Swan, a formidable figure in Maine beekeeping. He and other knowledgeable beekeepers became mentors for Matt as he developed his own knowledge and skills as a beekeeper. At that time, there was a Maine beekeepers organization, but as Matt describes, it was an organization that lacked organization. Matt's issues with the group stemmed from the fact that, while they would have picnics and gatherings, there was little science involved, science that could go towards improving Maine beekeeping. So, in 1976 he volunteered to help reorganize and legitimize the association. He helped ferry the “tea and coffee class” that was the Maine Beekeepers Association through incorporation, the process of becoming a

nonprofit, and its journey to becoming the Maine State Beekeepers Association that we know today. Matt continued to work with the MSBA, writing articles for newsletters, attending beekeeping conferences, and giving lectures on bees all over the state, all while keeping up his own “backyard beekeeping.” The number of his colonies has fluctuated over the years; today he manages six hives at his home despite the loss of child labor when his two oldest sons went off to college. He remained an educator and throughout his career, he has mentored new beekeepers. He has yet to stop and has no plans to. As someone who learned his craft by talking to experienced apiarists and asking questions, Matt believes in the value of mentorship.

Mentorship is not the only way Matt continues to educate and stay engaged. While he is not as involved with the MSBA as he once was, he continues to give an occasional lecture and write the occasional historical document. In fact, in my research, his writings were some of the only records I could find of Maine's beekeeping history. There is a lot to be learned from Matt about

beekeeping, specifically how it and Maine have changed. One way he has seen Maine beekeeping evolve is the access new beekeepers have to eager mentors. He describes beekeepers and Mainers back in the 50s and early 60s as more withholding and protective of their bees and their knowledge. Today, not only is there a greater number of knowledgeable beekeepers, but they have an ever-growing enthusiasm for education and knowledge sharing.

In the short time I spent with Matt, I was amazed at how much he had to tell me, both about himself as a beekeeper and the community he helped build. It was clear to me that he pays attention. He keeps a watchful eye on his bees as time spent with the hive is an opportunity to observe and analyze the bees' behavior. I note this because I believe it to be an important part of his role as a beekeeper and because I believe it to be emblematic of his relationship to the greater beekeeping community.

In the articles following this one, I will continue to tell (a small portion) the stories of beekeepers whose contributions to Maine beekeeping have been just as unique and valuable as Matt's. I hope you continue to join me in getting to know just a few of these incredible people.

EAS is seeking nominations for the 2021 Divelbiss Award. This award is presented to the person or couple who has, over the years reached out to the non-beekeeping public to explain the value of honey bees in our lives. Nominations and letters of support should be emailed to: Secretary@easternapiculture.org.



The Mann Lake EAS Master Beekeeper Scholarship is awarded each year to a worthy young individual between the ages of 18 and 25 (or veterans up to the age of 30) with an interest in honey bees and beekeeping.

For more information and scholarship application please visit the EAS website: easternapiculture.org. Deadline for both: April 30, 2021

Tips and Tricks

by Jason Peters

Checking on your bees during the winter

Winter is the time for beekeepers to take a break, reflect on the past season and prepare for the upcoming one. However, it can also be a stressful time for people anxious about how their bees are doing. Managing your bees well during the active beekeeping season ensures that you're sending healthy bees into winter with their best chance of survival. Although you may be curious as to how they are doing, it is not advisable to open them up during the winter months as this introduces unnecessary stress to the colony which can be detrimental to their health. There are many ways of checking on the bees without disturbing them.

Visual Signs of life include:

- Bees taking cleansing flights on warmer days.
- Defecation on the front of the hives, landing boards and snow.
- Dead bees in front of the hives after a snowfall.
- Upper entrances often have frost early in the morning from moist warm air leaving the hive which will melt after the sun warms up the hive.
- Melted snow around the entrances or rings of melted snow around the hives.



Bees on recently fallen snow.
Photo courtesy of Jason Peters

Other things that you can do to determine colony status:

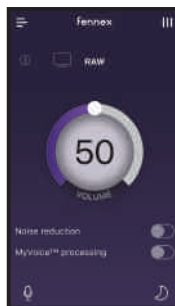
- Place your ear up to the entrance and lightly tap on the hive will elicit a response from the bees and they will often start making noise as the cluster is disrupted.

It is recommended that you wear a veil when performing this task.

- Look directly into the upper entrance with a flashlight, you will often see movement (especially on warmer days).
- Use a stethoscope; when placed on the hive allows you to hear the bees fairly well.

Some of the newer ways of determining if your colonies are alive and well and where they are situated in the hive may include the use of different technology:

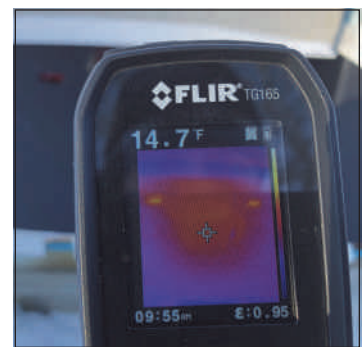
- A cheap infrared digital thermometer pointed into the entrances will give you a good indication of colony status.
- A few years ago, I discovered that there are Hearing Control or Hearing Aid apps available for free. These work very well when used with headphones or ear buds. Place the microphone portion of your phone near the hive entrances and turn the volume up. Some of the more popular free apps are Fennex, Oticon ON, Resound, TruLink, Petrallex and Earshot. We have had great results using Fennex with headphones and can check all of our hives in relatively short period of time. With the volume turned up, you can really hear them well and can even hear differences between each colony (maybe useful for determining issues).



Fennex hearing aid app.
Photo courtesy of Jason Peters

- Bore Scopes/Inspection Cameras are something that can be used to look inside the hives to determine cluster size/ location and the amount of food stores available. These are available on Amazon and are relatively cheap. They connect to your Smart Phone and allow you to get a detailed look into the hive with minimal disturbance.

- Thermal imaging cameras are also a great option as they become more affordable. These are very useful as they can show cluster size and location which can help diagnose issues without disturbing the bees at all. Using a thermal imaging camera is a quick way of checking if you have many hives. We use a FLIR TG165 which is a stand-alone unit but they are also available for smart phones at a much lower cost. Two popular brands are FLIR and Seek.



Checking colonies with a thermal imaging camera. Photo courtesy of Jason Peters

Once you have determined that the colony is alive, it is a good idea to perform periodic checks to determine how much food is available to them. Hefting or weighing your hive will give you a good indication of whether or not you need to take action and add supplemental or emergency food. We try to manage our bees in a way that helps prevent us from having to disturb them until spring when we perform our first checks. However, there are circumstances where despite our best efforts, we may not have had the opportunity to provide enough food in the fall. In this case there are a few options one can choose from such as winter patties, candy boards, fondant and dry sugar which can all help prevent starvation in the event that there is not enough food stored in the combs.

If you manage the bees well and keep them healthy throughout the season, you can be confident that you are sending healthy bees into winter with their best chance of survival.



Ask A Master Beekeeper...

During the winter months what are the things you do to prepare for spring?

This is the time of the year to keep an eye on the openings of your hives. Don't let them become covered over with snow. I move the snow from the front to the sides, for added windbreak and insulation value. You need to keep the openings clear so you maintain the chimney effect where the air comes in the bottom and removes the moisture out the top vent/escape holes. It is still too early to be concerned about food shortages, so be patient and sit in your easy chair and read all you can about the girls; the honey bees. However, be aware of the locations the articles are intended for. It is easy to be led astray reading articles intended for midwestern or southern states. If the areas aren't comparable with our cold, wind and more importantly, moisture, they are only articles of interest and not to be considered for our area, northern New England. We have a very unique area in which to keep honey bees. *Larry Peiffer*
EAS Certified Master Beekeeper

I look at the bees by yard and decide on the goals and missions for the yard this coming year. For example, the home yard needs to make some honey this year. There are 13 colonies there so a very reasonable goal is 350 lbs. I want five nucs to take into next winter. What needs to happen for that goal to be achieved? The list of things to do and get is made now, and includes anything major I need to do for the electric fence. As much as anything, it is thinking about what I'm going to do and when I'm going to do it. *Andrew Dewey, Master Beekeeper*

The winter is actually very good for me. I catch up on beekeeping repairs I might need to make, sharpen the hive tools, clean the smoker, oil the ratchet straps and so on. It is also the time I prepare new equipment for use next year. I did not have a great comb honey year last year but I still need to clean up and re-wax the comb honey supers. I have heated spaces where I could paint if I needed to but painting is a job I despise so I might slap on a coat in April. January and early February are good times to make sure you have your spring sugar ready to go. Candy boards are nice if you have the time. If you are going to use pollen substitute it is a good time to order it. If you think you are losing colonies, January is a good time to get on the list for a new package or two.

Rick Cooper, Master Beekeeper

I need to relocate about 12 hives. When would be the best time to do this: now while bees are clustered or the first thing in the spring before they begin to fly?

The best time of the year to move hives is in the early spring. This is when the hives are at their lightest and easiest to double strap and lug away. If seals are broken in the process and oftentimes do, it isn't as critical in the spring. Any other time to move and they are much heavier, active, or need to be left alone through the winter months. To move hives now isn't advised as you can split clusters and they might not come back together again, which could doom the whole hive. It is also likely to break most all of the propolis seams and cracks and chill areas in the hive. I wouldn't recommend moving them any earlier than you would install a package or nuc into full equipment, unless you are moving them to Florida.

Larry Peiffer,
EAS Certified Master Beekeeper

I don't want to disturb the cluster this time of year. I'd move the hives in late April. *Andrew Dewey, Master Beekeeper*

Relocating hives is always a tricky situation. If you try to relocate them now during the

cold and jar the hive where the cluster might break apart they may not be able to reform the large winter cluster they need to survive. If you are only moving a few feet and you have a hive carrier just remember to be very gentle. The bees will more than likely do better being moved closer to Spring but most definitely before they start flying and begin orienting to the current location. Also, spring days tend to warm up some so that even if jarred, the cluster will be warm enough during the day to reform.

Rick Cooper, Master Beekeeper

There is great confusion regarding the use of pollen patties. My understanding is that when you opt to use pollen patties, it is important to continue offering them until natural pollen is available, but don't begin using pollen patties too early otherwise colonies will quickly and prematurely brood up. Would you please discuss both the use of pollen patties and timing of placement?

Yes, the timing of using pollen patties is important. They should not be used anytime before natural pollen comes into the hive from the bees foraging. Initially, early pollen was used when splitting for increases and preparing hives for early pollination jobs. Full hives are needed for pollinating orchards and such, and without early pollen, they don't build up quickly enough. Now with the use of so many chemicals, pollen patties are often times used to supplement the diet of the honey bees to insure a healthy diet. Pollen patties might be considered from early spring when the bees forage to perhaps into October when we stop feeding syrup. This is also when natural indigenous pollen is not so prevalent. I would not recommend trying to feed them in the months between fall and early spring.

Larry Peiffer,
EAS Certified Master Beekeeper

When I first started keeping bees, I was told that added pollen wasn't needed in Maine. In other words, bees have been doing fine

for years without pollen patties. With that as my starting mindset, I give pollen patties about six weeks before I want the bees built up for the late spring flow. I start them with one half pollen patty and one half winter patty at a time, continuing with both up until the start of the spring flow, checking on the patties once a week. More supers than I think will be needed are placed for the flow, a week or two before the flow starts. I do not want to split until the flow is over; for me in my location an early swarm means no honey production from that colony.

Andrew Dewey, Master Beekeeper

I like pollen patties. There are several formulations out there that are pretty good at supplying bees protein. I believe in all my learning one dose of pollen is all that was ever recommended. If given at the right time it will stimulate brood rearing by a couple of weeks and will provide for much stronger hives in late April or early May when fruit trees come into bloom. Strong hives make for strong pollination. To all of

you that have followed me over the years you know my date for this application is cast in poetry; March 15th "the Ides of March". Pollen patties should be placed directly above the cluster.

Rick Cooper, Master Beekeeper

Do you have a beekeeping question that you would love to see addressed? Email your questions to rmlamas1@gmail.com



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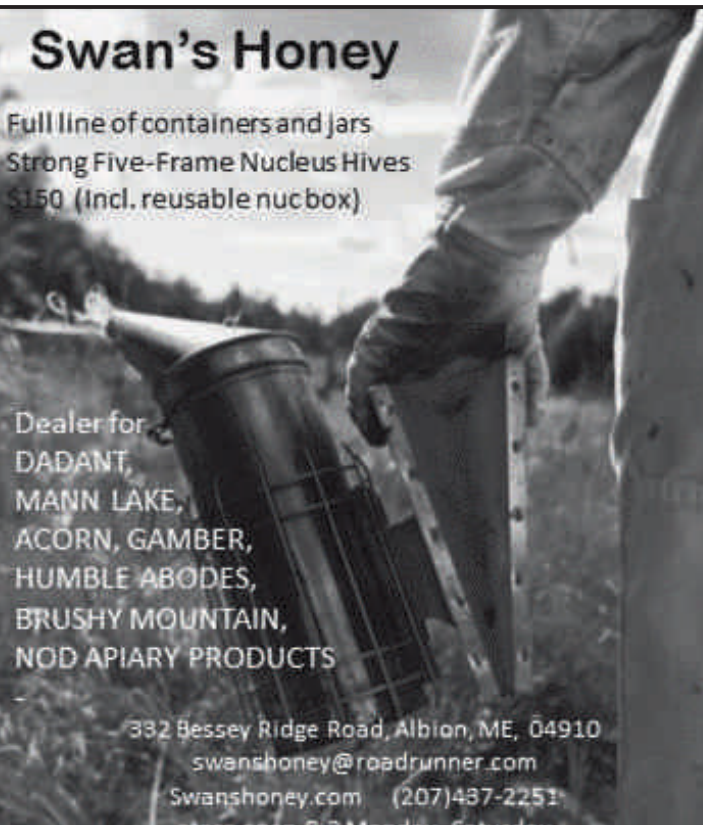
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The Adorable Custom of "Telling The Bees"

by Kaushik Patowary
April 23, 2019

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<https://www.amusingplanet.com/2019/04/the-adorable-custom-of-telling-bees.html>



The bee friend, a painting by Hans Thoma (1839–1924)

There was a time when almost every rural British family who kept bees followed a strange tradition. Whenever there was a death in the family, someone had to go out to the hives and tell the bees of the terrible loss that had befallen the family. Failing to do so often resulted in further losses such as the bees leaving the hive, or not producing enough honey or even dying.

Traditionally, the bees were kept abreast of not only deaths but all important family matters including births, marriages, and long absence due to journeys. If the bees were not told, all sorts of calamities were thought to happen. This peculiar custom is known as "telling the bees."

Humans have always had a special connection with bees. In medieval Europe,

bees were highly prized for their honey and wax. Honey was used as food, to make mead—possibly the world's oldest fermented beverage—and as medicine to treat burns, cough, indigestion and other ailments. Candles made from beeswax burned brighter, longer and cleaner than other wax candles. Bees were often kept at monasteries and manor houses, where they were tended with the greatest respect and considered part of the family or community. It was considered rude, for example, to quarrel in front of bees.

The practice of telling the bees may have its origins in Celtic mythology that held that bees were the link between our world and the spirit world. So if you had any message that you wished to pass to someone who was dead, all you had to do was tell the bees and they would pass along the message. Telling the bees was widely reported from all around England, and also from many places across Europe.

Eventually, the traditions made their way across the Atlantic and into North America. The typical way to tell the bees was for the head of the household, or "goodwife of the house" to go out to the hives, knock gently to get the attention of the bees, and then softly murmur in a doleful tune the solemn news. Little rhymes developed over the centuries specific to a particular region. In Nottinghamshire, the wife of the dead was heard singing quietly in front of the hive—"The master's dead, but don't you go; Your mistress will be a good mistress to you." In Germany, a similar couplet was heard—"Little bee, our lord is dead; Leave me not in my distress."



A widow and her son telling the bees of a death in the family. Painting by Charles Napier Hemy (1841–1917)

Telling the bees was common in New England. The 19th century American poet John Greenleaf Whittier describes this peculiar custom in his 1858 poem "Telling the bees."

*Before them, under the garden wall,
Forward and back,
Went drearily singing the chore-girl small,
Draping each hive with a shred of black.*

*Trembling, I listened: the summer sun
Had the chill of snow;
For I knew she was telling the bees of one
Gone on the journey we all must go!*

*And the song she was singing ever since
In my ear sounds on:—
"Stay at home, pretty bees, fly not hence!
Mistress Mary is dead and gone!"*

In case of deaths, the beekeeper also wrapped the top of the hive with a piece of black fabric or crepe. If there was a wedding in the family, the hives were decorated and pieces of cake left outside so that the bees too could partake in the festivities. Newly-wed couples introduced themselves to the bees of the house, otherwise their married life was bound to be miserable.

If the bees were not "put into mourning," terrible misfortunes befell the family and to the person who bought the hive. Victorian biologist, Margaret Warner Morley, in her book *The Honey-Makers* (1899), cites a

case in Norfolk where a man purchased a hive of bees that had belonged to a man who had died. The previous owner had failed to put the bees into mourning when their master died, causing the bees to fall sick. When the new owner draped the hive with a black cloth, the bees regained their health. In another tale, an Oxfordshire family had seventeen hives when their keeper died. Because nobody told them about the death, every bee died. There are plenty of such tales in Morley's book.



*Telling the Bees, by Albert Fitch Bellows.
circa 1882*

The intimate relationship between bees and their keepers has led to all sorts of folklore. According to one it was bad luck to buy or sell hives, because when you sell one, you sell your luck with your bees. Instead, bees were bartered for or given as gifts. If bees flew into a house, a stranger would soon call. If they rested on a roof, good luck was on its way.

But the relationship between bees and humans goes beyond superstition. It's a fact, that bees help humans survive. 70 of the top 100 crop species that feed 90% of the human population rely on bees for pollination. Without them, these plants would cease to exist and with it all animals that eat those plants. This can have a cascading effect that would ripple catastrophically up the food chain. Losing a beehive is much more worse than losing a supply of honey. The consequences are life threatening. The act of telling the bees emphasizes this deep connection humans share with the insect.

Queen Mandibular Pheromone

continued from page 1

VI) When I use queen cells or mated queens of different races (Russian queens to Caucasian or Italian colonies), I will use synthetic QMP. I will get shorter duration of rejection and higher acceptance after five days. Why? My hypothesis is the bees are seeing more QMP than the queen cells or mated queens in cages, so they are calmer and stable. Also, this requeening process sometimes requires two or more pieces of Synthetic QMP if the colony to be requeened has > 10 frames of bees.

VII) Here's an interesting tip from Randy Oliver's web site that will avoid Small Hive Beetle infestation in mating nuc colonies. When the queen is removed from the nuc the number of SHB explodes. However, if a synthetic QMP is tacked to the top bar of the middle frame and the queen cell is placed below the bar, the beetles do not cause problems and the queen emerges and mates well.

VIII) I did an experiment in 2020 with a four year breeder queen in hopes of getting one more year of genetics and no supersedure. I placed her, along with frames of her brood and drawn comb PLUS two Synthetic QMP in a 5-frame nucleus colony. It worked from June through August. At that point her egg laying showed too many drones and in September got four supersedure cells...Another day in the bee yard.

I hope this has expanded your options for your apiary...Your bees will thank you.



The 2021 MSBA webinar series is about to begin!

Mark your calendar for March 13, 2021 at 7:00 pm



"Finding Your Queen and Requeening Your Hive" with Karen Thurlow

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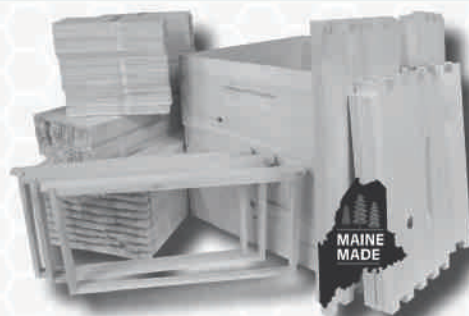


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